



The University of Mississippi School of Law

The National Center for Remote Sensing, Air, and Space Law

Informational resources on the legal aspects of human activities using aerospace technologies

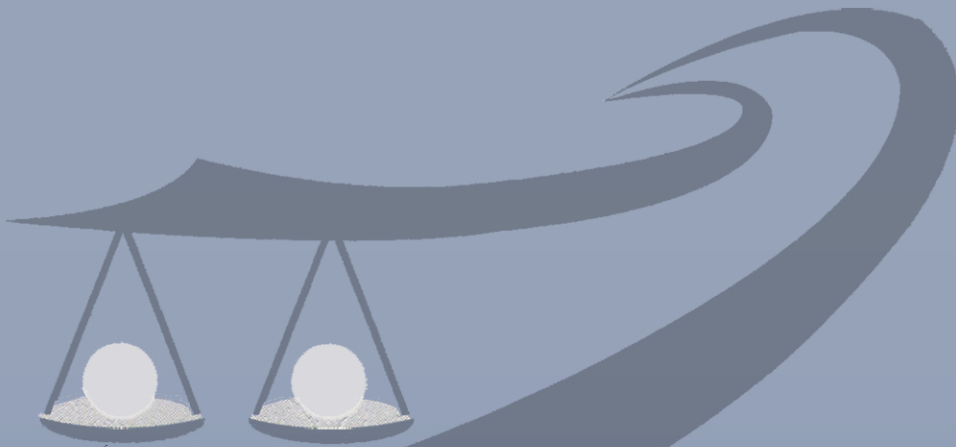
Space Law: Selected Documents 2010

Volume 2: International Space Law Documents

Compiled by P.J. Blount

P.J. Blount, editor

Joanne Irene Gabrynowicz, editor



A supplement to the Journal of Space Law

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National Center for Remote Sensing, Air, and Space Law

Founded in 1999, the National Center for Remote Sensing, Air, and Space Law is a reliable source for creating, gathering, and disseminating objective and timely remote sensing, space, and aviation legal research and materials. The Center serves the public good and the aerospace industry by addressing and conducting education and outreach activities related to the legal aspects of aerospace technologies to human activities.

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Dedicated to

Yuri Alekseyevich Gagarin
(1934-1968)

In honor of the fiftieth anniversary of his becoming the
first human to enter space during the April 12, 1961
flight of the *Vostok 1* spacecraft.

"Law must precede man into space."

- Andrew G. Haley, *Space Age Presents
Immediate Legal Problems*, 1

PROCEEDINGS OF THE FIRST COLLOQUIUM
ON THE LAW OF OUTER SPACE 5 (1959)

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Volume 2: International Space Law Documents

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Selected Space Law Documents: 2010

Volume 1: National Space Law Documents

Volume 2: International Space Law Documents

Foreword

by

Joanne Irene Gabrynowicz

This compilation of space law documents for the year 2010 was gathered primarily from postings placed on the aerospace law blog, *Res Communis* from 1 January through 31 December 2010. *Res Communis* is hosted by the National Center for Remote Sensing, Air, and Space Law (Center) at the University of Mississippi School of Law. The postings are supplemented with materials from other sources that were published within 2010, but which were not published on *Res Communis*.

The blog's name, *Res Communis*, is taken from the Latin legal term *that means, in part, "things common to all; that is, those things that are used and enjoyed by everyone."* *Res Communis* is also a fundamental principle that provides a major part of the foundation of the international space law regime. The name was chosen because of its specific relevance to space law and to express the Center's intent that the blog provide the aerospace law community with a reliable, timely source of legal materials.

The annual compilation is a special supplement to the Journal of Space Law, the world's oldest law review dedicated to space law. The Journal of Space Law, beginning with the first volume published in 1973, is available on line at the Center's website, <http://www.spacelaw.olemiss.edu/>, and through HeinOnline, <http://heinonline.org/>.

This year's compilation is in two volumes: national space law documents and international documents. This demonstrates that the body of space law is growing in size and complexity. As these volumes go to press, important changes are occurring in the U.S. space program, including the historic final *Shuttle* launch. Changes are also occurring in a number of other national programs. Together, these will impact a number of international cooperative projects. On the private and commercial side of space activities, legal actions, investments and activities are expanding. It can be expected that space law will continue to change for the practitioner, academic, and government lawyer. The reader can find updated material on an on-going basis at <http://rescommunis.wordpress.com/>.

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Statement of the G-21 on Prevention of An Arms Race in Outer Space

Mr. President,

I have the honour to deliver the following statement on behalf of the Group-21.

The role of space technology in our day to day life has become pervasive. Never before have information, communication, banking, economic transactions, navigation, and even political and strategic decision-making been so dependent on space-based technologies, which are themselves witnessing rapid growth.

2. The Group reiterates that outer space and other celestial bodies are the common heritage of mankind and must be used, explored and utilized for the benefit and interest of all mankind in a spirit of cooperation. The Group reaffirms that the exploration and use of outer space and other celestial bodies shall be for peaceful purposes and shall be carried out for the benefit and in the interest of all countries, irrespective of their degree of economic or scientific development.

3. The Group stresses that the growing use of outer space increases the need for greater transparency, confidence building measures and better information on the part of the international community. The Group believes that all States, with major space capabilities, have special responsibility to contribute actively to the objective of the peaceful use of outer space and of the prevention of an arms race in outer space and to refrain from actions contrary to that objective and to the relevant existing treaties in the interest of maintaining international peace and security and promoting international cooperation.

4. The Group recognizes that prevention of an arms race in outer space would avert a grave danger for international peace and security. The Group emphasizes the necessity of further measures with appropriate and effective provision for verification to prevent an arms race in outer space in all its aspects.

5. The Group emphasizes the importance and urgency of preventing an arms race in outer space. In this regard, the Group is deeply concerned over the negative implications of the development and deployment of anti-ballistic-missile defense systems and the pursuit of advanced military technologies capable of being deployed in outer space which have, inter alia, contributed to the further erosion of an international climate conducive to the promotion of disarmament and strengthening of international security.

6. The Group of 21 stresses that all countries bear a responsibility to refrain from activities that could jeopardize the collective goal of maintaining outer space free from weapons of mass destruction and all other forms of weaponization so as to ensure that its benefits are available to all.

7. The Group considers that the multilateral disarmament agreements provide the mechanism for States parties to consult one another and to cooperate in solving any problems which may arise in relation to the objective of, or in the application of, the provision of the agreements, and that such consultations and cooperation may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with the Charter.

8. The prevention of an arms race in outer space has assumed greater urgency because of legitimate concerns that existing legal instruments are inadequate to deter further militarization of outer space, or prevent its weaponization. The Group further reaffirms its recognition that the legal regime applicable to outer space does not in and of itself guarantee the prevention of an arms race in outer space. For that purpose, the Group stresses the need to consolidate and reinforce that regime and enhance its effectiveness.

9. In this regard, the Group reaffirms that the Conference on Disarmament is the sole multilateral disarmament negotiation forum of the international

community, which has the primary role in substantive negotiations on priority questions of disarmament. The Group considers that it is time to start negotiation in the Conference on Disarmament on matters related to the "Prevention of an Arms Race in Outer Space".

10. In addition, the United Nations General Assembly resolution 64/28 on "Prevention of an arms race in outer space" further made the following observations with regard to the Conference on Disarmament.

- The CD should complete the examination and updating of the mandate contained in its decision of 13 February 1992 and establish a Working Group during the 2010 Session.
- The CD has the primary role in the negotiation of a multilateral agreement or agreements on the prevention of an arms race in outer space in all its aspects.

11. The Group takes note of the United Nations General Assembly resolution 64/49 on "Transparency and confidence-building measures in outer space activities." The Group, while stressing the priority of negotiation of legally binding instruments on strengthening the international legal regime on Outer Space, recognizes that global and inclusive transparency and confidence building measures, arrived at through broad international consultations, could be important complementary measures.

12. In this regard, the Group welcomes the joint Russian-Chinese initiative of a draft treaty on the "Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects " (PPWT) presented by the Minister of Foreign Affairs of Russian Federation in the Conference on Disarmament on 12 February 2008. This initiative is a constructive contribution to the work of the Conference, and is a good basis for further discussion toward adopting an international binding instrument.

I thank you.

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**Remarks of Frank A. Rose
Deputy Assistant Secretary
Bureau of Verification, Compliance, and Implementation
U.S. Department of State**

**Conference on Disarmament
July 13, 2010**

Thank you, Mr. President,

Mr. Secretary-General,

Excellencies, Colleagues,

I am pleased to be able to join you here today to discuss the new U.S. National Space Policy. This policy, which was released just two weeks ago, is a statement of President Obama's highest priorities for space, and reflects the principles and goals to be used in shaping the conduct of U.S. space programs and activities. This new policy not only provides a foundation for going forward in our exploration and utilization of space, but also is a commitment by the United States to work cooperatively with the international community to preserve space for the benefit of all nations.

In the four years since the issuance of the previous U.S. National Space Policy, a number of developments have changed the opportunities, challenges, and threats facing the international space community. This new policy both accounts for those changes, and reflects the fact that space has become an even more important component of our collective economic and international security.

President Obama's National Space Policy places more emphasis on: expanding international cooperation and collaboration; encouraging responsible action in space; increasing use of commercial space goods and services; strengthening and energizing the U.S. space industrial base; enhancing openness, as well as pursuing new transparency and confidence-building measures; and protecting critical space capabilities.

Today I will highlight a number of aspects of our new policy. First, I will discuss our expanded focus on international cooperation. Second, I will discuss how the transformation of the space environment has led to a greater number of challenges, as well as to a greater need for increased stability in space. Third, I will explain how cooperation can contribute to strengthening stability in space. Fourth, I will explain the implications of our new policy for U.S. positions in the Conference on Disarmament. Finally, I will share our views on how all countries can contribute to preserving the space environment for future generations.

EXPANDED INTERNATIONAL COOPERATION

Mr. President, a key element of the National Space Policy is that the United States will engage in expanded international cooperation in space activities. The United States will work with allies, friends, and partners around the world in enhanced cooperation in space science as well as in human and robotic space exploration. We also will pursue enhanced cooperative programs in the use of Earth observation satellites to support weather forecasting, environmental monitoring, and sustainable development worldwide.

In regard to space exploration, the United States will continue to operate the International Space Station in cooperation with our international partners, likely to 2020 or beyond, and expand efforts to utilize its benefits. The United States also will implement a new space technology development and test program, working with international partners and others to build and test several key technologies that can increase capabilities, decrease costs, and expand opportunities for future space activities.

An additional international initiative includes encouraging interoperability among U.S. and other nation's space capabilities, including continued efforts to ensure the compatibility and interoperability of global navigation satellite systems. Finally, we will work to extend the benefits of space to all humanity by enhancing collaborative efforts to collect and share space-derived information.

TRANSFORMATION OF THE SPACE ENVIRONMENT

Mr. President, the new space policy recognizes the transformation of the space environment as well as the evolution of our utilization of space. When the space age began, the opportunities to use space were available to only a few nations, and there were limited consequences for irresponsible or unintentional behavior. Now, we find ourselves in a world where the benefits of space permeate almost every facet of our lives. The growth and evolution of the global economy has seen an ever-increasing number of nations and organizations using space.

Space capabilities are being used to create wealth and prosperity, to monitor the Earth's environment and its natural resources, and to explore the unknowns of our solar system and beyond. Of equal significance, more nations are using satellites in ways to help maintain international peace and security. These include contributing to increased transparency and stability among nations and providing a vital communications path for avoiding potential conflicts. Furthermore, these space systems allow people and governments around the world to see with clarity, communicate with certainty, navigate with accuracy, and operate with assurance.

The transformation of the space environment also presents challenges. The interconnected nature of space capabilities and the world's growing dependence on them mean that irresponsible acts in space can have damaging consequences for all of us. Furthermore, decades of space activity have littered Earth's orbit with debris. As nations and commercial enterprises continue to increase activities in space, the possibility of another collision, increases correspondingly.

STRENGTHENED STABILITY IN SPACE

Mr. President, these emerging challenges have increased the need for greater stability in space. Our new National Space Policy recognizes that such strengthened stability can most effectively be achieved through international cooperation. Increasing stability in space activities begins first with ensuring the long-term sustainability of the space environment through expanded international measures for orbital debris mitigation. Secondly, it depends on improving our shared situational awareness and understanding of who is using the space environment and for what purposes. Thirdly,

strengthening stability in space can be accomplished through improved information-sharing for space object collision avoidance, and fourthly, through the development of transparency and confidence-building measures to promote safe and responsible operations in space. I'd like to address these four topics next.

1. Orbital debris mitigation

Orbital debris mitigation is essential to ensuring the long-term sustainability of space activities. As Secretary of State Hillary Clinton said in her June 28, 2010 statement on the National Space Policy, "The United States plans to expand its engagement within the United Nations and with other governments and non-governmental organizations to address the growing problem of orbital debris and to promote 'best practices' for its sustainable use."

In addition, the United States will continue to lead in furthering the development and adoption of international standards to minimize debris, building upon the foundation of the United Nations Space Debris Mitigation Guidelines. In collaboration with other space-faring nations, the United States also will pursue research and development of technologies and techniques to mitigate and remove on-orbit debris, reduce hazards, and increase understanding of the current and future debris environment.

2. Shared space situational awareness

The new National Space Policy emphasizes the importance of space situational awareness – or SSA. It instructs U.S. Government departments and agencies to maintain and to integrate space surveillance – that is, the observation of space and of activities occurring in space – with space weather and other information to develop accurate and timely space situational awareness.

The new policy also directs U.S. Government departments and agencies to collaborate with other nations, commercial entities, and intergovernmental organizations to improve our shared ability to rapidly detect, warn of, characterize, and attribute natural and man-made disturbances to space systems. Such improvements illustrate the ongoing commitment of the United States to promoting the safety of flight for all space-faring nations.

3. Improved information sharing for collision avoidance

In order to improve information sharing and help avoid collisions between space objects, the National Space Policy commits the United States to collaborate with industry and foreign nations to improve space object databases. It also encourages cooperation in pursuing common international data standards and data integrity measures.

Additionally, the policy calls for collaboration on the dissemination of orbital tracking information, including predictions of potentially hazardous conjunctions between orbiting objects. This is particularly important given recent collisions, such as the February 2009 collision between a privately operated Iridium communications satellite and an inactive Russian military satellite, as well as a plethora of near-collisions.

As part of an effort to prevent future collisions, the United States has improved its capacity to analyze objects in space, as well as our ability to predict potential hazards to spacecraft. I am pleased to report that, since December 2009, the Joint Space Operations Center at Vandenberg Air Force Base in California routinely screens all active satellites against every object in the satellite catalogue to identify close approaches. The United States also provides notification to other government and commercial satellite operators when U.S. space analysts assess that an operator's satellite is predicted to pass within a close distance of another spacecraft or space debris.

4. Transparency and confidence-building measures

Finally, the policy states that the United States will pursue pragmatic transparency and confidence-building measures – or TCBMs – to strengthen stability in space and to mitigate the risk of mishaps, misperceptions, and mistrust. The United States will seek to ensure that any potential TCBM enhances U.S. and allied security.

PREVENTION OF AN ARMS RACE IN OUTER SPACE

Mr. President, in a departure from the 2006 policy, the new National Space Policy also states that the United States will consider space-related arms

control concepts and proposals that meet the criteria of equitability and effective verifiability, and which enhance the national security of the United States and its allies. This approach is consistent both with long-standing and bipartisan U.S. space policy as well as with the verification standards that the United States has applied to other arms control agreements.

Of particular interest to this body, let me reaffirm that the United States continues to support the inclusion of a non-negotiating, or discussion, mandate in any CD program of work under the agenda item, "Prevention of an Arms Race in Outer Space," known as PAROS. This was the basis of a compromise reached at the CD in May 2009.

CALL TO ALL NATIONS

Mr. President, as a leading space-faring nation, the United States remains committed to addressing the challenges that have emerged as a result of the transformation of the space environment. This, however, cannot be the responsibility of the United States alone. As the first principle of our National Space Policy affirms, "[i]t is the shared interest of all nations to act responsibly in space to help prevent mishaps, misperceptions, and mistrust." The United States calls on governments around the world to work together to adopt approaches for responsible activity in space in order to preserve this right for the benefit of future generations. Furthermore, we urge all nations to conduct these space activities in ways that emphasize openness and transparency.

The United States also calls on countries to recognize and adhere to the principle that all nations have the right to explore and use space for peaceful purposes and for the benefit of all humanity, in accordance with international law. Consistent with this principle, "peaceful purposes" allows space to be used for national and homeland security activities. In this regard, the United States considers the space systems of all nations to have the rights of passage through, and conduct of operations in, space without interference. Consequently, we will continue to view the purposeful interference with space systems, including supporting infrastructure, as an infringement of a nation's rights, and act accordingly.

CONCLUSION

Mr. President, from the outset of humanity's ascent into space, the United States has declared its commitment to enhance the welfare of humankind by cooperating with others to maintain the freedom to use and explore space. President Obama's new National Space Policy renews America's pledge of cooperation in the belief that, with reinvigorated U.S. leadership and strengthened international collaboration, all nations and peoples—space-faring and space-benefiting—will find their horizons broadened, their knowledge enhanced, and their lives greatly improved.

Mr. President, it has been a pleasure to address all of you today about a policy of which I am very proud. As President Obama has stated, this policy is a commitment by the United States to scientific discovery and technological innovation and manifests America's unyielding faith in the future – even during difficult times. Our new policy emphasizes our expanded focus on increased international cooperation, which will contribute to a more stable space environment, but it also calls on all nations to act responsibly to ensure the long-term sustainability of our space activities. The United States looks forward to our future work with all responsible space actors to create a more secure, stable, and safe space environment for the benefit of all nations.

Thank you, Mr. President.

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Conference on Disarmament

13 July 2010

Original: English

Letter dated 9 July 2010 from the Permanent Mission of Canada to the Conference on Disarmament addressed to the Secretary-General of the Conference transmitting the report of a conference organized by UNIDIR entitled “Space security 2010: From foundations to negotiations” held from 29 to 30 March in Geneva

The permanent Mission of Canada to the United Nations presents its compliments to the Conference on Disarmament and has the honour to forward to you, on behalf of the United Nations Institute for Disarmament Research (UNIDIR), “Space Security 2010: From Foundations to Negotiations”. The conference took place on 29 and 30 March 2010 and is the ninth annual conference in a series held by UNIDIR on the issue of space security, the peaceful uses of outer space and the prevention of an arms race in outer space (PAROS).

We would be grateful if this report could be issued as an official document of the Conference on Disarmament and distributed to all Member States to the Conference as well as to Observer States participating in the Conference.

Ambassador
Permanent Representative of Canada
to the Conference on Disarmament
(Signed): Marius Grinius



Space Security 2010: From Foundations to Negotiations

1. “Space Security 2010: From Foundations to Negotiations” is the ninth annual conference in a series held by the United Nations Institute for Disarmament Research (UNIDIR) on the issue of space security, the peaceful uses of outer space and the prevention of an arms race in outer space (PAROS).
2. The purpose of this conference series, in line with UNIDIR’s mandate, is to promote informed participation by all states in disarmament efforts and to assist delegations to the Conference on Disarmament (CD) in preparation for possible substantive discussions on PAROS. Since the first conference was held in 2002, this series has received financial and material support from a number of Member States, foundations and non-governmental organizations, demonstrating the broad political support for these discussions.
3. This year’s conference sought to continue the legacy of the eight conferences that preceded it in broadening and deepening the debate on PAROS and in fostering space security for the future. There is a growing global appreciation of the importance of space-based assets to human security, and thus increasing concern about the need to protect the space environment from disasters and conflict. This year’s conference reflected this new urgency, aiming to provide a strong foundation of knowledge on space security issues in order to better inform and facilitate negotiations on PAROS and on broader questions of space security. The conference was comprised of three main sessions:
 - (a) the unique characteristics of space;
 - (b) latest developments in space security; and
 - (c) negotiations of space security—lessons, models and directions.
4. The conference convened in Geneva, Switzerland, at the Palais des Nations on 29-30 March 2010. The meeting was organized by UNIDIR with the assistance of Secure World Foundation and was supported financially and materially by the Governments of the People’s Republic of China and the Russian Federation, as well as by Secure World Foundation and The Simons Foundation. Conference participants included UN Member States, UN Observers, non-governmental organizations, and civil society from all over the world. The following is a report of the conference.

Opening Remarks

Mr. Sergei Ordzhonikidze, Director-General of the United Nations Office at Geneva

5. The conference was opened with remarks from Mr. Sergei Ordzhonikidze. He noted that the conference agenda captured the multifaceted nature of the space security challenge. Though challenging, the importance of ensuring space security cannot be overemphasized as it is the only global commons that borders every state, and it provides potential for technological advancement, economic prosperity and strategic stability. Space-based assets are critical to national and international infrastructure: they support our communications, medical and public services, police forces and militaries. The United Nations has been at the heart of efforts to build an effective governance structure for space, especially through the Committee on the Peaceful Uses of Outer Space (COPUOS). Additionally, the UN community actively harnesses the powerful potential of space by utilizing it to achieve its development, peace- and security-building missions. For example, satellite imagery is routinely used to monitor natural resources, agriculture and climate change, and to facilitate

disaster-relief and peacekeeping efforts for both developed and developing countries. Most recently, satellite imagery proved essential in supporting disaster-relief services in Haiti after the earthquake of January 2010. It is Mr. Ordzhonikidze's hope that the United Nations will continue to lead the effort in guaranteeing the peaceful and optimal use of outer space for the future.

6. As the peaceful uses of outer space increase, so does their importance to people around the world. And as the world grows increasingly dependent on space, it becomes ever more critical to determine the nature and direction of space security and how best to balance the demands of civil, commercial and military uses of outer space. The increase of space debris and the development of space-related weapon technology threaten space security and increase the likelihood of space becoming a more hostile environment. States must appreciate their shared vulnerability in outer space and understand the mutual benefits of guaranteeing peaceful access to space for all the world's peoples. If not appreciated and understood, stability in space, and thus space-based assets, would be seriously threatened. International law does not prohibit the placement of conventional weapons in outer space. However, deploying such weapons in outer space would inevitably set off a new arms race. The CD is charged to prevent such an arms race in space. When this conference convened in 2009, the CD had just approved a new programme of work. Regrettably, this did not lead to progress. As yet, there is still no programme of work for this year's CD session, which continues to impede substantive work and progress in ensuring space security. Mr. Ordzhonikidze called on CD members to continue working in the spirit of compromise that allowed a programme of work in 2009 in order to achieve these important goals. While the foundations are there, effort needs to be made to move further in the direction of negotiations. The recent bilateral agreement between the Russian Federation and the United States of America to reduce their nuclear stockpiles should be taken as a signal of the growing political will to extend disarmament. Mr. Ordzhonikidze expressed the need to capitalize on this to strengthen norms, institutions and legal regimes concerning space security to demonstrate that the international community takes seriously this shared responsibility.

Session One

The Unique Characteristics of Space

7. Mr. Luca del Monte, Strategy Officer in the Space Security Office of the European Space Agency, began this session with an overview of the basic technical knowledge necessary for understanding the unique environment of space and its security. His briefing addressed orbital mechanics, space safety and security, and space weapons. Beginning with orbital mechanics, Mr. del Monte explained that any object in space near the Earth must keep moving to avoid being pulled down by the Earth's gravity. The lower the object's altitude, the greater the gravitational pull, and thus the faster it must move to resist the pull and stay in space. This is a fundamental element of space physics: at each specific distance from the earth, objects must move at a specific speed to stay in orbit at that altitude irrespective of their mass, size or shape. Another unique aspect is that objects in space do not need constant thrust from engines since there is practically no drag in spaceflight. Most satellites are equipped with engines that only need to be used occasionally to change or maintain orbit.

8. Orbits lie on planes that pass through the centre of the Earth. The angle of this plane with respect to the equator is called its inclination. Orbits are also ellipses. A satellite moves faster when close to Earth, at its perigee, and slower when further away, at its apogee. If one were to draw out the path of a satellite directly below it, this would be its

ground track and would show that half of an orbit lies below the equator and half above. A satellite will fly over all points of the Earth between its minimum and maximum latitudes, which are equal to its inclination. The area on Earth visible to a satellite as it passes over depends on its altitude; satellites at higher altitude can view more surface area of the Earth but in lesser detail. Satellites close to the Earth are affected by atmospheric drag which slows them down and eventually pulls them back to Earth. The lower in altitude a satellite is, the more often it must manoeuvre to maintain its orbit and prevent re-entry.

9. There are several orbital options. Low Earth orbit (LEO) is any altitude up to 1,000km and is used most often for Earth observation, science and telecommunications networks. Sun-synchronous orbit is a specific class of LEO that is almost polar, giving satellites in this orbit very consistent illumination of the surface, which offers the best-quality imaging. Medium Earth orbit is designated from 1,500km to 36,000km and is mostly used for navigation constellations like the US Global Positioning System (GPS). Highly inclined orbits, such as Molniya and Tundra, were first conceived of to image latitudes higher than 60° and are used for Earth observation and telecommunications networks in high-latitude regions. Geosynchronous orbit (GEO), at an altitude of around 36,000km, is one of the most important and crowded orbits. Objects orbiting at this altitude remain fixed with respect to a point directly beneath them on the Earth. GEO is most often used for meteorological and telecommunications purposes.

10. Manoeuvring in space, such as changing the orbit of a satellite, requires expending a significant amount of energy. Because equipping a satellite with a large amount of propellant is expensive and difficult, satellites are typically limited in their manoeuvrability. Changing a satellite's inclination requires much more propellant than changing altitude or orbital shape. Recent advancements in propulsion technology allow more velocity change per unit mass of propellant, but cannot be used to manoeuvre quickly, and thus are limited in applicability. This places important constraints on the ability of space objects to avoid debris, while at the same time placing similar constraints on the development of space-based weapon systems.

11. Mr. del Monte then looked at navigating in space. First, routes in space can be very crowded. Satellites are assigned seemingly large three-dimensional orbital positions since there is a significant amount of inaccuracy concerning their exact location, the locations of objects around them, and the ability to precisely control their position and to manoeuvre to avoid collisions. Second, space weather, particularly radiation from the Sun, can sometimes cause satellite malfunction. Third, near Earth objects, such as asteroids, orbit the Sun in highly elliptical orbits, threatening to cross paths with Earth's orbit. The larger of these objects are a potential collision risk with the Earth itself, while smaller micrometeoroids can damage satellites. Certain measures, such as improved space situational awareness (SSA), have been taken to help mitigate these threats. Fourth, orbital debris—defined as any non-functioning, man-made space object—threatens spaceflight safety. It can be launch refuse, paint flecks or even decommissioned satellites—this orbital trash is generally 42% fragmentation debris, 22% non-functioning spacecraft, 19% mission-related debris and 17% rocket bodies. Debris can be very dangerous due to the sheer amount of it, how fast it travels, and its uncontrollability. Currently, there are 19,000 objects larger than 10cm being actively tracked, 500,000 objects between 1cm and 10cm, and probably millions of particles smaller than 1cm that are not actively tracked. While it is impossible to hide in space, it is difficult to monitor and track everything, especially the smallest particles. Still, attempts are being made by a number of states and the satellite industry to monitor objects and prevent collisions or damage.

12. Debris travels at incredibly fast speeds, around 7–8km/s in LEO, and takes a long time to decay from orbit. If it orbits lower than 600km, it will probably return to Earth in a

few years. At 800–850km, where the highest concentrations of debris are located, decay can take decades. At altitudes higher than 1,000km, it could take hundreds of years.

13. Finally, Mr. del Monte discussed whether space is the ultimate “high ground”. Space does offer imaging and communication advantages, but placing weapons there may be neither feasible nor wise. As is well known, space-based assets are essential to most daily economic activities. They also happen to be extremely fragile. Satellites can be harmed in many ways: through electronic or microwave interference, by blinding or “dazzling” them with lasers, through kinetic strikes or collisions, by attacking the ground-based links with the satellite, or through cyber-attack or nuclear explosions. Since satellites are easily tracked and follow very predictable paths, jamming is a major threat and can be accomplished relatively easily. In fact, it is being done already. One could use ground-based lasers to dazzle a satellite’s sensors or to overheat them, but this requires a higher level of technological capacity. High-power microwave weapons can disrupt or damage electrical systems of satellites. Satellites in LEO can be attacked using direct-ascent, mid-range missiles launched from Earth, while higher orbiting objects can be attacked using space-based or longer-range anti-satellite missiles. Attacking an object in GEO using a missile is now possible for at least eight states, but success would require extreme precision. One could also attack a satellite from a co-orbital position, meaning that a typically smaller object would approach and damage another. These technologies have already been developed, though for peaceful purposes, such as for approaching and docking with the International Space Station. Another destructive device called a “space mine” would essentially lie in wait for a satellite to orbit into it, thereby causing harm. As well, a nuclear explosion at a high enough altitude would generate an electromagnetic pulse capable of destroying satellites that were not heavily shielded. The resulting persistent radiation would continue to cause harm over a long period of time. This could potentially take the world back into the 1950s, as any activities reliant on space-based assets—from banking and communications to navigation and weather-monitoring—would be rendered impossible for years afterward.

14. Mr. Brian Weeden, Technical Advisor at Secure World Foundation, began his presentation by reviewing some basic space physics. First, speed and velocity are not independent variables in space. As Mr. del Monte pointed out earlier, objects orbiting at the same altitude in space travel at the same speed regardless of size, mass or shape. Changing the speed of an orbiting object requires changing its altitude. Second, the lack of atmospheric drag in space means that inertia dominates, and this makes it very difficult for objects to manoeuvre in space. Third, at very high speeds, solid objects behave like liquids on collision—the debris field created by two objects colliding in space can be visualized as the crossing of two high-pressure streams of water. Most of the debris will continue in the same orbits as the parent objects, but will diffuse in velocity and orbital height. Over time it will disperse further and cover a wider range of altitudes and inclinations. Mr. Weeden talked about two particular scenarios where orbital mechanics cause surprising results compared to actions on Earth. For example, if an object is thrown away from a satellite, it will drift away and return to the same place it was released from exactly one orbit later. Also, though it would appear to be the case, it is impossible for a satellite to orbit around another satellite. Both objects must orbit around the Earth, while one appears to orbit around the other as seen from the ground.

15. Discussing different kinds of weapons useable in space, Mr. Weeden explained how nuclear weapons behave differently in space than on Earth. Due to the lack of atmosphere, a nuclear explosion will not produce any blast effects in space. Additionally, a nuclear explosion in space will give off less thermal energy, more high-frequency energy such as X-rays and gamma rays, and a greater amount of prompt radiation than one on Earth. In space, the electromagnetic pulse given off by a nuclear explosion will significantly affect space-based operations. It will cause short-term interference with communications and

long-term damage through the creation of artificial radiation belts and the excitation of the Van Allen belts. Mr. Weeden explained the three general types of potential space weapons: Earth-based weapons that travel through space to targets on Earth, Earth-based weapons that target space-based objects, and space-based weapons that target objects on Earth, in the air, or in space.

16. The first category includes medium- to long-range ballistic missiles. A ballistic missile's trajectory is simply an orbit with its perigee located inside the Earth. Most ballistic missiles have apogees higher than LEO satellites, but lack the velocity to remain in space. Though most do not consider ballistic missiles to be space weapons, they can be used as a basis for developing space weapons since, at a fundamental level, the only distinction between a ballistic missile and a space launch vehicle is thrust and payload. Generally, any ballistic missile could be used as a platform for certain types of anti-satellite weapons (ASATs)—it would need only to be paired with an interceptor payload capable of performing the tracking and terminal guidance functions.

17. The second category of space weapons includes direct-ascent ASATs, lasers, and other directed-energy weapons located on the ground which can target objects in space. A direct-ascent ASAT is a ballistic missile with a "kill vehicle" on top. After the missile burns out, the kill vehicle intersects at a precise time with a satellite's orbit. This kill vehicle must be equipped with tracking, guidance and manoeuvring capabilities. The kinetic energy from the collision will destroy the target, though some concepts have considered using nuclear warheads. Earth-based laser weapons would operate by heating their targets, which causes rupture and collapse of weak structures or can blind or damage sensitive optics. Since laser beams travel at the speed of light, dodging such an attack would be virtually impossible. It has been proven that lasers can be used to dazzle or blind satellites, though destruction is not yet operationally feasible. While dodging a laser attack would be difficult, there are other means of protection. For example, if a target were painted white or were reflective in the frequency the laser operates, it would significantly undermine laser capability.

18. The third category includes those weapons located in orbit that could target objects in space or on Earth: co-orbital ASATs, hypervelocity kinetic weapons and space-based lasers. A co-orbital ASAT would comprise an object already in orbit that manoeuvres or waits to intercept the targeted satellite. Although these could also rely solely on kinetic energy to destroy their target, they would probably utilize other destructive means such as releasing a cloud of metal pellets, delivering an electromagnetic pulse, exploding, or attaching to the target and firing thrusters. Hypervelocity kinetic weapons refers to the releasing of heavy metal rods from an orbital platform that, upon striking Earth with incredible kinetic force, would inflict severe damage. While such a weapon system has been discussed, it has never been developed, tested or deployed due to the many challenges—both technical and cost-wise—of implementation. Space-based lasers could be used to destroy ground targets, nuclear warheads on ballistic arcs or other space-based objects. However, space-based lasers would require an immense amount of energy. Such systems have been theorized and partially developed, but never tested, built or deployed. Mr. Weeden concluded his presentation by describing the "grey areas" of space weaponization. For example, he explained how any antenna converted into a jammer could be used to negate or hinder satellite operations. It is impossible to completely prevent such jamming and very difficult to determine intention when it occurs, especially for satellites in GEO. Another grey area is that most missile defense technology has dual-use potential for space weapons since all kinetic hit-to-kill technology is similar.

19. A participant stated that Mr. del Monte's presentation had neglected to acknowledge the role of the 2007 Space Debris Mitigation Guidelines agreed by COPUOS for mitigating the negative effects of orbital debris. Through national adoption, the Guidelines aim to establish a culture of respect for not creating debris in space.

20. On the question of which space weapons should be of urgent priority to the international community, there was a view expressed that jamming and co-orbital capabilities should be prioritized concerns. Jamming capability is far too easy to obtain and inexpensive to go unconsidered in efforts to mitigate threats. In addition, recent advances in technology to closely approach and even dock with non-cooperative satellites raise concerns. While these technologies have beneficial and benign uses, they are dual-use in nature and therefore should be kept in mind as a potential threat.

21. One participant remarked on how little had changed in the realm of space weaponization and threats over several decades and wanted to know what, in fact, had changed over time. Partly, little has changed because the laws of physics remain the same, constraining certain activities and allowing others. On the other hand, space-enabling technology has developed and spread. What were far-fetched ideas several decades ago have now become more possible via technological advancement. Lasers, for instance, were proposed decades ago, but the first airborne laser interception occurred only a few weeks before the conference.

22. Mr. Ray Williamson, Executive Director of Secure World Foundation, then presented on space sustainability, explained threats to it and examined its future. Space sustainability can be described as “using space in such a way that all humanity can continue to use it for socio-economic benefit and peaceful purposes”. Maintaining space sustainability will require international cooperation, discussion and agreements since space is a global commons. These measures should be designed to ensure that space is safe, secure and peaceful for the long term.

23. Many things threaten space sustainability. The growth of orbital debris and working satellites since the 1960s has caused the space environment to become incredibly crowded, especially in key orbits. Additionally, frequency interference, deliberate or accidental, threatens space sustainability as well. The International Telecommunication Union labours to prevent accidental interference and seeks to mediate interference disputes. Lastly, space sustainability is threatened by natural space weather events like solar flares, which can interfere with satellite operability, especially in GEO.

24. What are some of the steps necessary for ensuring a sustainable space environment? First and foremost, debris generation must be reduced. The COPUOS Space Debris Mitigation Guidelines adopted by the UN General Assembly in October 2007 are a great tool to do so, but remain voluntary. States could also better implement guidelines and regulations on debris creation and mitigation for domestic space launches and activities. Second, efforts should be made to avoid accidental space collisions—such as the February 2009 collision between a functioning Iridium communications satellite and a defunct Russian Federation military satellite—and to prohibit or limit deliberate, debris-generating satellite destruction. Third, a set of international guidelines should be agreed upon to identify best practices in sustainable space operations and activities. Fourth, civil SSA should be expanded and made freely available. This would make analysis by satellite owners and operators of potential collisions possible, which could help identify ways to prevent them. A good example of such a case took place recently when the United States of America warned Nigeria of a possible collision and Nigeria manoeuvred its satellite to avoid it. The third and fourth steps together would establish the beginnings of a space traffic management regime that could ensure the safe and most efficient use of outer space for all players.

25. Mr. Williamson provided an update on where the international community currently is in this space sustainability effort. In 2008, COPUOS established a Working Group that has now drafted a document on space sustainability best practices, which was released in February 2010. Mr. Peter Martinez was elected as Chair of that Working Group. A meeting will take place in June 2010 to identify the Group’s work format and methodology. While

many states are very supportive of the space sustainability effort, they hold diverse views on what it entails. Mr. Williamson also feels there is a general concern among the newcomers to space that they will be left behind by such an effort and will be limited in their space activities as a result.

UN Space Policy—An Integrated Approach

Mr. Ciro Arévalo-Yepes, Ambassador, Chair of the United Nations Committee on the Peaceful Uses of Outer Space

26. In the conference's keynote address, Mr. Ciro Arévalo presented on UN space policy. The UN General Assembly passed a resolution in December 2009 mandating COPUOS to further develop Mr. Arévalo's initiative of constructing an integrated UN space policy.

27. As a result, the policy will be an item on the agenda of the June 2010 meeting of COPUOS. The policy is intended to showcase two aspects of space in relation to the UN system. First, what has the United Nations done for space? The United Nations can be seen as a forum for space governance and it carries out this responsibility in a number of ways: through COPUOS, through multilateral treaties and resolutions, through the Space Debris Mitigation Guidelines and, most recently, through items such as the International Space Weather Initiative. Second, what has space done for the United Nations? This aspect looks at the many ways the United Nations utilizes space in its daily operations. The United Nations is a major user of space with 25 of its agencies and the World Bank system relying on space-based assets to support their activities. Additionally, space enables the United Nations to meet its main goals of peace, security and development.

28. The space arena is rapidly evolving due to globalization, regionalization and privatization. A growing number of actors, both state and non-state, have become increasingly active in space. For example, COPUOS has expanded to include 69 Member States, including the five permanent members of the UN Security Council. Fifty of these members participate in launch activities, nine of which possess national launch capacity. There has also been a willingness from both developed and developing countries to fashion their own space policies, as well as an effort to establish regional space bodies like the Asia-Pacific Space Cooperation Organization and the Asia-Pacific Regional Space Agency Forum. Unfortunately, space resources are limited and crowding brings with it the risk of collisions, congestion and uncertainty about future usability. These challenges have led COPUOS to recognize the need for standards that can guarantee long-term space sustainability and the need to strengthen the international legal regime responsible for space. A coordinated and coherent UN space policy could help guide UN space activities in the face of these challenging circumstances. Such a policy would promote better coordination by addressing the current fragmented nature of UN space activities, would foster orderly and predictable behaviour in the orbital environment, and would create a supportive environment for new space-faring states via regional dialogue.

29. The UN space policy will have six guiding principles. First, activities in outer space should be conducted for peaceful purposes and for the benefit of all mankind. It has become clear that human security on Earth is increasingly linked to a usable and stable space environment. In order to preserve it, any action that might undermine peace and security in space should be prohibited. Thus, the policy would support discussions on PAROS as part of its first guiding principle. Second, space should be used in a fair and responsible manner and in accordance with international law. Third, UN space activities should be coordinated across agencies and departments. Fourth, regional and inter-regional cooperation with

regard to space activities should be encouraged. Fifth, the international community should help all states access the benefits afforded by space. And last, the United Nations should assist states in developing national space policies. There are several ways to bring about a UN space policy, including reinforcing international cooperation at the regional and inter-regional level, strengthening the role of the United Nations by expanding cooperation between UN agencies dealing with space and bolstering the UN Office of Outer Space Affairs, and promoting more dialogue among space-faring states, space-aspiring states, industry and civil society. The UN space policy will be available in all official UN languages at the June 2010 COPUOS meeting.

Session Two

Latest Developments in Space Security

30. The second session began with remarks from Mr. Zhang Ze, Deputy, Director in the Chinese Ministry of Foreign Affairs. He summarized China's view and position on space security and provided an update about the draft Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects (PPWT), originally proposed jointly by China and the Russian Federation in 2008. Thanks to significant technological advances, an increasing number of people have been able to benefit from space and as a result it has become indispensable to human activities. Guaranteeing a lasting peace in outer space is critical to global peace, security, prosperity and development. Yet, since the beginning of human activity in space, a gradual arms build-up has threatened this fragile peace. Other challenges threaten it as well, including orbital debris, the potential of satellite collision and the allocation of scarce orbital assignments. There is no doubt that these problems can be solved, but the international community must prioritize its response. It is China's view that establishing and maintaining a "zero-weapons" space environment should take top priority. Negotiating and signing a new legally binding international legal instrument should be the first item on the agenda of space security for several reasons. First, if just one or two weapons are deployed in space, all of the work done in establishing norms and "soft rules" would be laid to waste. Second, the effort to prevent an arms race in space enjoys overwhelming international support. In October 2009, the UN General Assembly passed the PAROS resolution unanimously, with only two states abstaining. Third, while transparency and confidence-building measures (TCBMs) help to prevent conflict by deepening trust and reducing misunderstandings, they rely on good will and volition to remain intact. A new space treaty would be the best kind of TCBM because it would achieve the same ends, but in a legally binding way. Fourth, the existing international law regime concerning space security is insufficient for PAROS. These instruments, such as the Outer Space Treaty of 1967, play an important role in ensuring peace in outer space, but they have obvious limitations. For example, they only prohibit the placement of weapons of mass destruction in space, but not other weapons. Minor amendments will not address these insufficiencies. Fifth, the basis for such negotiations has already been established over the past 10 years through the work of ad hoc committees and informal negotiations in the CD. Most specifically, the joint effort between China and the Russian Federation has laid a solid foundation for such progress. In 2002, China, the Russian Federation, Indonesia, Belarus, Viet Nam, Zimbabwe and the Syrian Arab Republic presented a working paper proposing the PPWT. In 2006, China and the Russian Federation submitted documents with suggestions on transparency, definitions, existing legal instruments and verification. In February 2008, China and the Russian Federation submitted the first draft of the PPWT, which Mr. Zhang felt is a mature foundation for starting relevant negotiations in the CD.

31. Since proposing the draft treaty, China and the Russian Federation have continued to encourage related discussions. In August 2009, China and the Russian Federation presented a document to the CD responding to the major concerns and comments put forth regarding the PPWT draft, including issues of scope of application, definitions, verification, the right of self-defence, dispute settlement and organization. While the document is not perfect, Mr. Zhang argued that it is still the best option available to the CD. He then reviewed the three main goals of the PPWT: no weapons placed in outer space, no use of force against space objects, and no threat or use of force against space objects. China and the Russian Federation will continue to jointly support PAROS discussions in the CD with a view to negotiating an agreement soon. In that, three things should be kept in mind. First, this project should remain open. Though China and the Russian Federation were first to propose it, they still welcome active participation from any party interested in becoming involved. Any proposal advancing PAROS will be valued and considered. Second, this issue should be marked by parity in negotiations. Third, these negotiations should remain inclusive. Only then will the CD be able to accomplish a PAROS treaty that satisfies all partners. China believes that political will and determination among all CD parties are the most critical aspects necessary to progressing from foundations to negotiations.

32. Mr. Laurence Nardon, Head of the USA and Space Policy Programmes at l'Institut français des relations internationales began her presentation with a brief history of the European draft code that became the basis for the International Code of Conduct. Motivated by the evolution toward space weaponization of the early 2000s, a collaborative European effort succeeded in having a draft Code of Conduct adopted by the 27 European Union member states in December 2008. In seeking to bypass the United States of America opposition under the Bush administration to legally binding instruments and in the hopes of complementing the existing body of space law, the Code of Conduct is not meant to be a formal treaty. While not ideal, this allows progress in the interim before a more binding instrument can be successfully negotiated. The Code is based on TCBMs, specifically the nuclear treaties of the 1970s and 1980s between the United States of America and the Soviet Union, which were meant to reassure international partners. Mr. Nardon presented as a model Lars Höstbeck's typology of space TCBMs, which are based on the various stages of space activity. At the first stage of general space-related activities, TCBMs would include declaring a national space policy, sharing information about planned activities and cooperating with others on space-related projects. At the second stage of launch-related activities, TCBMs include notifying others of launches, giving launch demonstrations and inviting observers to launches. At the third stage of orbital activities, effective TCBMs include engaging in responsible space traffic management, establishing and regularly updating a register of space objects, and participating in a common and accessible space surveillance system. For the fourth stage of spacecraft decommissioning and re-entry, TCBMs include notifying others of re-entry and mitigating debris creation. The fifth stage is arguably the most important, and recommends that all actors completely refrain from harmfully interfering with others' space objects.

33. Mr. Nardon explained the specific structure and timeline of the Code. The Code itself is based on and is meant to complement the existing body of space law. Its general measures and principles include refraining from any activity that might cause damage to space objects, debris mitigation, cooperation mechanisms, and organizational aspects. Since being adopted, EU member states have taken the Code to other space-faring states in bilateral consultations with mixed results. The United States of America and Japan received the Code well; others, those states that favour a legally binding treaty, did not. The most interesting debate prompted by the Code pertained to which actors should be involved in space security discussions. Currently, states still make the decisions, but it is important to consider involving private sector actors that are just as intimately concerned with space

matters. Additionally, with the recent ratification of the Lisbon Treaty, many debated what role the European Union should play in the Code of Conduct.

34. Constructive comments were collected, especially on the organizational aspects of the Code, and Mr. Nardon is optimistic that a “rendezvous clause” will be included in the next draft, which will discuss Code parties returning at a later date to negotiate a formal treaty. In 2010, EU member states will rewrite the Code to integrate these comments in such a way that the overall coherence and core principles of the document will not be lost. The revised Code will then be presented in an international forum to be determined. Belgium, which will assume the EU presidency in the second half of 2010, is very active on space issues and hopes to have the revised draft completed and a conference on it convened by the end of 2010. At that point, any state will be able to join the Code and Mr. Nardon believes it will prove a constructive step forward.

35. A representative for Mr. Philip J. Baines, Deputy Director, Missiles, Space Security and Conventional Weapons, in the Non-Proliferation and Disarmament Division of Canada’s Department of Foreign Affairs and International Trade, presented remarks on his behalf. States, companies and individuals rely on space for diplomatic, defence, development and economic purposes. It was stated that, “A day without space would be a disaster. The next hundred years without space would be a catastrophe”. If the international community does not take immediate collective action to halt the weaponization of space, it will risk losing the myriad benefits from space gained over the past 50 years. China’s ASAT test increased the amount of observable orbital debris by 15%. The United States of America has already demonstrated that a modified hit-to-kill ballistic missile defence interceptor can serve as an ASAT. China, France, the Russian Federation, India and Japan all have research and development programmes for hit-to-kill ballistic missile technologies. As long as nuclear-armed ballistic missiles remain a fact of life, so too will the missile systems to defend against them and so long as these systems exist, so too will the ability to attack satellites in orbit. Much thought and funding has been dedicated to simulating scenarios where military means are used to attain space security. In every instance, the outcome has been the same: witnessing the loss of the use of LEO for the next thousand years. The simulations also show that conflict in space can quickly escalate into nuclear war since so many states rely on satellites for strategic and nuclear stability. Another sobering lesson garnered from these simulations is that deterrence may not apply at all in space.

36. The unique makeup of space war creates a military reality that could easily and accidentally lead to wide-scale destruction. While conventional warfare relies on national human-led command authorities, the inevitably rapid nature of potential space war could lead to automated or pre-delegated protection measures, which would increase the risk of conflicts spiralling out of control at any moment. Military theories have favoured “go big or go early” strategies to avoid the crippling effects to national power that the loss of key satellite infrastructure could cause. This unfortunate truth leads to a pre-emptive posture, especially since reaction times would be too short to allow “human-in-the-loop” command and control structures in the event of space hostilities.

37. These widely recognized dangers have been met with different responses by three different camps: minimalists, maximalists and mediators. As the labels indicate, their proposed solutions espouse varying degrees of action, which are inversely proportionate to the space power of the states sponsoring them. The minimalists believe that the current regime governing space is sufficient and that conventional strategies of deterrence apply just as effectively to the space environment as they do elsewhere. They deny the existence of an arms race in space and feel no urgency to pursue diplomatic solutions that may limit their activities in space. Any new agreements on space should be voluntary and not limit the development of current or future capabilities, including military capabilities. While minimalists prefer capabilities that do not permanently damage space objects and encourage

behaviour that minimizes the production of orbital debris, they desire to keep military options available in the event that diplomacy fails to maintain peace and security in space. Conversely, the maximalists feel the immediate need for a legal regime that will ban the placement of weapons in outer space, the use of force against space objects, and limit certain space activities. In the meantime, these states continue the development of their own ASAT capabilities. The mediators, on the other hand, represent a middle ground and propose a layered approach to space security based on diplomatic assurances, residual deterrence through the availability of electronic warfare within the limits of the Charter of the United Nations, and enhanced surveillance through increased SSA and monitoring capacity. Canada is a mediator and has demonstrated this stance by putting forth a proposal in March 2009 that outlines a clear set of rules, a ban on the placement of weapons in outer space, a prohibition of testing or using ASATs, and a prohibition on using or testing satellites themselves as weapons. Immediately, Canada wishes to see the adoption of a voluntary code of conduct and, eventually, the adoption of a legally binding arrangement. Canada's proposal offers a grand bargain between the other two camps. By maintaining an option to use electromagnetic force, space and national security can be guaranteed without causing irreversible damage in space. Methods of verifying compliance will evolve over time, but it is best to address potential new or emergent threats as soon as possible before a crisis arises and clouds judgment. This third way is likely to fulfil the security needs of every state in a way that is equitable and verifiable. The dark lessons learned from the aforementioned simulated war games necessitate a strategy to avoid conflict that is based on reassurance, deterrence and surveillance. The international community, therefore, must engage in preventive diplomacy to achieve such a strategy before a conflict breaks out and the world loses access to the benefits offered by space.

38. The floor was then opened to discussion. One participant pointed out that space security negotiations do not have to be a zero-sum game. The international community is equipped with a wide array of tools, be they norms, soft law, codes of conduct or formal treaties, which can be used in conjunction with one another to achieve the ultimate goal of a peaceful and stable space environment. Another participant expressed the inability to understand why, if the international community so broadly supports peaceful cooperation in space, it is so difficult to achieve a formal treaty preventing space weaponization. It was clarified that the PPWT proposal is not meant to challenge any state's international position or prowess, but rather to promote peace and security in the space domain; and that the sponsors are willing to engage in a broad and inclusive PPWT discussion—including the possible addition of prohibitions on terrestrial ASATs—on the precondition that all participants agree on the necessity of forging a new legally binding instrument to manage space security. It was further pointed out that due to the collective nature of space security, no one state can be completely secure in space without all others being secure as well.

39. It was observed that the discussion focused only on intentional incidents and neglected to address accidents and inoperable or substandard objects. As privatization continues, the potential for defective satellites to be launched into space and then threaten other space-based assets grows. The international community should also take into consideration building norms, regulations and standards for operating in space apart from security arrangements.

40. The modalities for the proposed EU Code of Conduct were discussed, with an opinion being given that the European Union is avoiding a push for a legally binding agreement because a voluntary agreement would likely be quicker and easier to obtain. One participant noted that even if only some states ratify the Code, it would still provide a normative reference against which space behaviour could be judged.

41. Mr. Victor Vasiliev, Deputy Permanent Representative of the Permanent Mission of the Russian Federation to the United Nations Office and other International Organizations

in Geneva, spoke on TCBMs. Russian Federation believes that TCBMs provide a range of benefits: they eliminate possible threats and overcome challenges to peace, security and stability and thus help to ensure them, they facilitate the management of potentially destabilizing situations and thus help to prevent military confrontations, and they make an overall significant contribution to healthy interstate relations. The current challenges in space, as demonstrated by the February 2009 satellite collision and the threat of debris harming the International Space Station, call for multilateral action in the form of anticipating such accidents, providing early warning and enabling preventive action. TCBMs could be a practical part of this effort by reducing the chance of misunderstanding through better communication and increasing stability in space. The application of TCBMs to space security is not a novel idea. Rather, they have been an important part of the body of international institutions, agreements and treaties regarding outer space for decades and continue to be considered an important part of diplomatic arrangements. Some TCBMs are implemented unilaterally and represent individual political commitments, such as the Russian Federation's pledge to not be the first to place weapons in space. This initiative was supported and replicated by members of the Collective Security Treaty Organization in 2005. On the other hand, existing TCBMs are neither comprehensive nor all-encompassing, either in scope or participation. This is primarily due to the fact that, until recently, only a few states could afford space programmes. Now the number of states with space-related programmes has reached 130.

42. It is important that the international community study the results of the review of possible space TCBMs conducted during 1990–1993 by a UN Group of Governmental Experts (see A/48/305 of 15 October 1993), and also the proposals made by states up to now.

43. For the Russian Federation, TCBMs fall into several categories: measures to enhance transparency of space programmes, measures to expand information available on space objects and measures related to rules of conduct for space activities. These measures could be accomplished in several ways including through exchanging information, conducting visits, notifying, consulting and holding thematic workshops. Information could be exchanged on a state's space policies, its research, the orbital parameters of its space objects and on potentially dangerous situations in space. Visits could be conducted by experts to launch sites, flight command control centres and other space facilities. States could also invite observers to launches and equipment demonstrations. Notification can be given of planned launches, scheduled spacecraft manoeuvres that could come close to other states' spacecraft, unguided space objects' descents and predicted impact locations on Earth and spacecraft returns into the atmosphere, especially those carrying nuclear materials. Consultations could be conducted in order to clarify information provided on space programmes and developments, on ambiguous situations and issues of concern, and to discuss the implementation of agreed TCBMs. Thematic workshops could be held on research and various space issues, could be organized on a multi- or bilateral basis and could include scientists, diplomats, military and technical experts.

44. Russian Federation has proposed the creation of a new process for exchange of information on potentially dangerous situations forecast in outer space. By sharing information on predicted events such as potential collisions, through an agreed format, such events may be easier to avoid. It further may be helpful to establish a new UN Group of Governmental Experts to conduct an in-depth study on TCBMs and produce further recommendations regarding these useful tools. Despite their utility, TCBMs should not distract from the ultimate goal of PAROS. While non-binding TCBMs can act as an important step toward this goal, a new treaty preventing the placement of weapons in outer space would be the ultimate TCBM. In the meantime, TCBMs can facilitate such a treaty-building process and should be seen as complementary to that effort, not as detracting from it.

45. The final presentation of the second session was given by Ms. Laura Kennedy, United States of America Ambassador to the Conference on Disarmament. Ms. Kennedy briefed the conference on the ongoing USA space policy review and on the USA stance toward space security challenges. The recent three-year and one-year anniversaries respectively of the Chinese ASAT test and the Iridium–Cosmos collision highlight the need for the United States of America to work closely with other states to further the interests of peace and security in outer space. The Obama administration is currently reviewing USA space policy. One key element of the review examines how to enhance protection of all space-based assets, whether public or private, against “all hazards”—environmental, accidental and intentional. Another key element assesses a range of options for increasing international cooperation in the realm of space security. This review of cooperation includes “blank slate” analysis of options in several areas:

- (a) the safe and responsible use of space, including the feasibility of equitable and effectively verifiable arms control measures, codes of conduct and other TCBMs;
- (b) potential reforms to the USA export controls governing space-related goods and services;
- (c) development of collaborative international arrangements designed to prevent the spread of dual-use space technology to unauthorized actors;
- (d) a general expansion of cooperation with allies and partners to advance shared security interests; and
- (e) enhanced cooperation with all space-faring states in the peaceful exploration and utilization of space for civil and commercial purposes.

46. Though it is too soon to predict the exact substance of the review, a recent statement made by the USA delegation to the General Assembly of the United Nations reiterated USA commitment to the principles of the 1967 Outer Space Treaty. As the space domain becomes increasingly congested and interdependent, the principles laid out in this regime provide an essential foundation for international cooperation in the realm of space security. Over 21,000 man-made objects orbit Earth, including approximately 1,000 active satellites. This congestion, and the Iridium–Cosmos collision of February 2009, put to rest operator complacency under the “big sky” theory—that is, the attitude that because of the sheer immensity of outer space the probability of collision was extremely low.

47. As a leading space-faring state, the United States of America takes these issues very seriously and will continue to lead in identifying potential hazards and their solutions to protect human and robotic spaceflight. As part of this effort, the United States of America has improved its capacity to track objects in space as well as its ability to predict potential close approaches. As of December 2009, the Joint Space Operations Center at Vandenberg Air Force Base, California, routinely screens every active satellite against other registered space objects for possible close calls and uses this information to notify other countries and commercial operators with the assistance of USA Strategic Command and the Department of State.

48. In addition to being congested, the space domain has grown progressively interdependent and multi-faceted. One reason for this is the expanding range of private companies and public–private partnerships providing competitive services with increasingly capable satellites. This market may even expand to offer logistics support and even space tourism. Another reason is the growing multinational aspect to the commercial uses of space. Many of these commercial companies operate in several countries around the world, providing services to an even wider base of countries. In response, the United States of America is working to improve communications with all satellite operators. Part of this effort involves identifying specific points of contact within other governments so the Joint

Space Operations Center knows whom to contact when a potential close approach is predicted. This will help prevent collisions, but also the potential for misunderstanding or misinterpretation that may arise in the event of an accidental collision.

49. After the Iridium–Cosmos collision, the United States of America engaged in a series of activities that indicate the importance of international cooperation on space security issues. For example, the United States of America was in immediate contact with the Russian Federation, an exchange that was in itself a demonstration of a valuable TCBM. Four months later, experts from both countries met in Vienna to discuss further the incident and its implications for implementing a wider range of TCBMs, and further bilateral discussions are planned to discuss concrete actions, such as expert visits to military satellite flight control centres and discussions on how to exchange information on natural and debris hazards in space. The United States of America also presented to the 52nd session of COPUOS, noting that the collision serves as a reminder of the need to augment international cooperation on ensuring long-term sustainability of operations in space, and is participating in a feasibility study of best practice guidelines that might ensure this long-term sustainability.

50. Furthermore, the United States of America sees a need in this new environment for greater transparency regarding the actions and intentions of all space-faring states, as well as heightened awareness of potential threats to spaceflight safety. One way to achieve this is through bilateral and multilateral TCBMs. Another option is the EU-proposed Code of Conduct, an effort that the United States of America will continue to support. A continued respect of existing space law, enhanced international cooperation, improved SSA and expanded and effective TCBMs are not only in the interest of the United States of America, but also of all space-faring states.

51. Ms. Kennedy expressed her desire to bring a senior member of the USA administration to Geneva to present the Space Policy Review upon its completion. To sum up, Ms. Kennedy characterized the USA administration as “born-again multilateralists”, especially in space.

Session Three

Negotiations of Space Security—Lessons, Models and Directions

52. The final session commenced with a presentation from Mr. Sergey Batsanov, Ambassador, Director of the Geneva Office of the Pugwash Conferences on Science and World Affairs. He gave a comprehensive overview of the types of lessons that can be learned from examining existing arms control agreements. He began with a disclaimer: since negotiations on a space security agreement had yet to begin in earnest, it would be difficult for him to draw relevant lessons from past negotiations on the topic. He gave a brief overview of current space dynamics. The space picture is rapidly evolving with an enormous number of space actors spread across the globe and the number of space-faring states increasing. Space-based military assets are becoming more integrated and irreplaceable. How can these be protected? Armouring space assets would make them too heavy and costly to launch. Using weapons to protect satellites is, therefore, very tempting. The renewed interest in ASATs is one example of this temptation. The technology was considered during the Cold War, but never developed because of a keen understanding of how counterproductive it could be. Some have proposed non-destructive ASATs, which could potentially make banning first-generation ASATs a possibility. Unfortunately, this is unfeasible since such technology would not arrive in all states at the same time and would thus make the ban inequitable.

53. Another question regards what conditions need to be in place for meaningful negotiations on space security to occur. Mr. Batsanov argued that meaningful negotiations cannot happen without first gaining an adequate understanding of the subject matter and the scope of the problem. This does not mean a comprehensive agreement should or will emerge, but a deeper understanding in three areas—the definition of the use and threat of force, TCBMs and space weapons—will help move things forward.

54. Mr. Batsanov describe examples of tactics used in other arms control negotiations and agreements that might prove useful in the PAROS debate. First, regular meetings of experts, like those that occurred during the negotiations of the 1996 Comprehensive Nuclear-Test-Ban Treaty (CTBT), might be replicated for PAROS. Even when official CTBT negotiations were stalled, a CD working group of technical experts continued to meet and contributed to the overall progress of negotiations. For PAROS, such meetings could be held involving military experts, scientists and industry representatives.

55. Second, industrial involvement, such as occurred during the negotiations of the Biological Weapons Convention and the Chemical Weapons Convention, could prove useful for PAROS. In particular, it would be good to approach industry to help inform the verification issue as the PAROS agreement was taking shape. When industry became involved in the Chemical Weapons Convention debate, the approach to the verification portion of the proposed treaty was dramatically altered.

56. Third, military personnel should be encouraged to talk to each other formally and informally. Such discussions do not have to be broadly multilateral, nor do such discussions need to wait for or necessarily be a part of formal negotiations, but fostering military-to-military discussions in advance will substantially ease the decision-making process for politicians. These discussions should focus on how effective space weapons can really be, what kinds of weapons make the most sense, if any, and whether they will have a strategically destabilizing effect.

57. Fourth, it might be useful to develop basic concepts for a space security treaty among a smaller group of states that can then be passed on to the rest of the international community. During the Cold War, when the United States of America and Soviet Union reached an agreement on arms control, the rest of the world went along with it—which is not the case today, obviously. Nonetheless, it could be useful for the key space-faring states to engage in up-front diplomacy.

58. Mr. Batsanov postulated that there are two ways to approach future space negotiations. One is to look at the existing proposals on the table: the PPWT, USA comments on the PPWT, TCBMs, the EU Code of Conduct and the Canadian proposal. Serious review of these proposals by the international community would create an initial momentum. As drafts of various proposals are revamped and redefined, and perhaps even merged, steps toward consensus can be built. The second approach is to establish parallel working groups. One example of this occurred in the CD over radiological weapons, though it was not a very successful experience since there is still no treaty addressing these types of weapons. All the same, a proposal was put forth to address these weapons and an ad hoc committee was established in the CD with two working groups. In space security, for example, a legal group could be established to look specifically at what has already been accomplished in the UN system so as to avoid duplicating efforts and to perhaps discover existing legal platforms that might relate to PAROS. For the initiation of negotiations, TCBMs could play an important role. Again, historical experience demonstrates this. In the 1970s, the Strategic Arms Limitation Talks laid a foundation for deeper negotiations. These talks helped experts to understand their counterparts' psyches and opened up the lines of communication between the two superpowers.

59. At the end of the process, how should any new space security agreements be codified? One comprehensive agreement could be created, though this would take more time. A chapeau agreement could be created and then additional protocols addressing specific issues or technical aspects could follow, like in the case of the Chemical Weapons Convention. A more general agreement could be formed that would establish some kind of institution or organization that would work on elucidating specific issues and recommending accords for future debate. It is important, as well, to not forget about the Outer Space Treaty, which contains relevant provisions for PAROS and which gave birth to several other agreements after its adoption. Lastly, any new space negotiations will require political commitment—whatever forum is chosen for conducting them in. Mr. Batsanov said that because he essentially “grew up” in the CD, he favours using the CD as a space negotiating body, adding that the advantage of the CD is that the most relevant actors are party to the Conference.

60. Mr. Zhai Yucheng of the Chinese Ministry of Defence spoke next. Though negotiations on space security have been ongoing for decades, the conditions have improved. Space is no longer another battlefield for two superpowers, but a domain for multiple stakeholders. As the number of stakeholders grows, so too does the recognition that weaponization will not ensure space security. Like nuclear war, a space war “cannot be won and should not be fought”. This perspective fosters positive negotiations. In order to move forward with these, it is important to examine what has already been achieved and what obstacles still lay ahead. The international community is still divided over space security priorities and solutions. For example, some states believe the greatest threat to space security is the deployment of weapons in outer space. They feel this issue should be solved first with the conclusion of a legally binding treaty. Others feel that irresponsible use of outer space is more urgent and propose instruments that establish norms and define best practice guidelines to address this behavioural issue. Though treaties and agreements have been proposed, states are typically hesitant to adopt them for fear of feasibility issues and restraints on their freedom to operate in space. The international community should not presume that good will suffice. Experiences in multilateral negotiations have shown that only when the unique characteristics of space are considered, equity guaranteed, security concerns addressed and rights balanced against obligations, will an agreement be reached. Since this is a tough task, Mr. Zhai suggested starting with less contentious issues and then developing these step-by-step into a more comprehensive solution when conditions are ripe.

61. In going forward, Mr. Zhai believes the following issues deserve more attention. First, the dual-use nature of space technology will complicate negotiations. For example, any actor capable of launching an object into space is able to attack space-based assets; any satellite with manoeuvrability could be used as a space weapon; any state able to dock its spacecraft with a space station is able to collide with another space object. However, a treaty for space security should not be ratified at the expense of technological innovation and its peaceful application. Therefore, a space treaty will probably need to be general and it is best to remember that all treaties have their limitations, but this does not preclude their utility. A second issue deserving greater attention is the distinction between destructive and non-destructive measures. Many understand that space is too vulnerable a domain in which to conduct destructive activities. Such activities will cause space debris that poses just as much a threat to the initial aggressor as to its targets. Much of the discussion calls for a ban on destructive activities, but does not necessarily prohibit non-destructive measures such as “deceive, disrupt, deny and degrade”. Mr. Zhai believes that no distinction should be made between the two since non-destructive activities will certainly provoke destructive responses. Third, because it is often difficult to distinguish between accidental and intentional damage in outer space, he believes any space treaty should provide for making such a determination. Since the potential for a misunderstanding to occur over damage caused in space is both high and dangerous, it is necessary to establish a mechanism for

preventing such misunderstanding. Fourth, because the development of ASAT capability is, to some extent, a response to the increased reliance by militaries on space, any comprehensive solution to the ASAT issue will require restrictions on the military use of outer space. The PPWT could be such a solution. Fifth, a space treaty, especially one limiting space weapons, should not be avoided based on the “right of self-defence” argument. While it is true that by regulating weapons, arms control agreements limit a state’s options for self-defence, these restrictions do not substantially hinder a state’s ability to defend itself. A future space treaty should either guarantee a state’s right to self-defence in the same way the Charter of the United Nations does, provide a retreat clause, or preserve self-defence under strict conditions. The sixth and last priority proposed by Mr. Zhai is the issue of verification and TCBMs. A verification arrangement should be politically acceptable, technologically feasible and economically affordable. For a space treaty, effective verification will need to focus on Earth and space, and monitor systems and behaviour. Such a verification arrangement will be difficult to design and implement for cost and capacity reasons. Despite this, the need for strong verification measures should not be underestimated when constructing a preventive treaty. To a certain extent, TCBMs could supplement verification processes.

62. To conclude, negotiating a space treaty comes down to balance and compromise. It is difficult to say which approach or proposal is best at this moment, but three things are certain: a treaty of non-weaponization is necessary for long-term space stability no such treaty will be perfect, all-encompassing, or easy to achieve; and any treaty process will be difficult not only for all the aforementioned reasons, but also because space itself is such a unique environment.

63. Mr. Jeffrey Lewis, Doctor, Director of the Nuclear Strategy and Nonproliferation Initiative at the New America Foundation, presented next. He began with the disclaimer that it is difficult to discuss verification when a treaty has yet to be established. This topic is also difficult because of the unique characteristics of space, which will fundamentally inform any regime and its verification measures.

64. The international community will never reach a satisfactory definition of a space weapon and it is probably counterproductive to try. The debate about what constitutes a space weapon and how to distinguish between ballistic missile defence systems and closely related ASAT weapons has been going on for decades. Those who argue that space is already weaponized due to the existence of ballistic missiles typically do so in an unconstructive fashion, but their argument is partially valid and worth considering. Ballistic missile technology is inherently the same as ASAT technology, save for the differing rationale. Instead of becoming hindered by the definitional debate, the international community should focus on the nature of space and the particular technologies that concern it the most. For Mr. Lewis, the most urgent priority should be limiting the spread of hit-to-kill technology, which has already been pursued and developed by a number of states including the United States of America, China and India.

65. The question then becomes how to deal with these particular technologies that threaten the peaceful use of space. It may be best to work backwards and shape a space treaty based on what can be verified instead of first formulating the right set of obligations and then figuring out how to verify them. Experiences from the first Strategic Arms Reduction Treaty (START) talks, for example, show that disarmament efforts can be reasonably based on what can be reliably verified. The START I treaty did not count missiles—it counted silos and tubes in submarines, essentially items the other treaty party could see and link to credible disarmament. For a treaty banning ASATs, for example, verification will have to focus on software since the only credible way to determine if a state intends to use its ballistic missile technology for ASATs is in the software.

66. These difficult circumstances will not be solved with more or new technology. This is mainly because the sort of technology used to verify such a treaty is exactly the same technology one would use to harm a satellite. For example, the United States of America has deployed inspection satellites to monitor an ailing satellite, but these inspectors are based fundamentally on technologies originally intended to develop space-based missile interceptors. Unfortunately, the potential benefit from this dual-use technology is too great to expect complete prohibition. Instead, the international community should focus more on PAROS and counteracting the hedging tendencies already developing in states' approaches to the weaponization of space.

67. If it is impossible to ban the relevant technology, an effort should be made to control the use of that technology instead. For example, a system could exist that would limit how lasers are used to track satellites or that establishes rules on how micro-satellites can operate in proximity to other satellites. For hit-to-kill technology, one could imagine a treaty that bans the testing and use of hit-to-kill interceptors that create a massive amount of orbital debris. This is fundamentally verifiable since hit-to-kill testing and use can be seen. Such a treaty or rule would be useful for two reasons. One, because debris creation has such an indiscriminate, negative effect on all space objects, it would make sense to limit it. Two, it points to why such treaties exist in the first place: to mitigate threats. If it is so difficult to define space weapons, it is due in part to the fact that there is an infinite number of ways to harm space objects. Therefore, even if it is unfeasible to completely protect satellites, it is at least possible to mitigate the threat through such a treaty.

68. The floor was given over to questions and discussion. One participant felt that the international community would not be able to negotiate a formal treaty until the problem had become more urgent. For example, it took a considerable amount of nuclear proliferation to generate the momentum necessary for negotiation and adoption of the Treaty on the Non-Proliferation of Nuclear Weapons. This participant also observed how the debate had moved away from preventing an arms race in space and toward managing it. If the focus has shifted way from prevention and toward arms control, this "critical mass" of urgency, marked by significant public pressure and major player buy-in, will need to occur before any agreement can be reached. Thus, the best way forward is finding a way to fill the gaps in the current Outer Space Treaty, which can be achieved through further TCBMs. This participant felt, though, that despite the number of tabled proposals, the PAROS situation had never looked as grim as it does now. According to another participant, while the situation looked grim for PAROS, significant progress has been made in other space security arenas such as debris mitigation and SSA. This progress has been made possible by broad international interest and support, though this has yet to appear for the PAROS debate. This view was echoed by another participant, who noted that there is a growing understanding of how important space is for the whole world and how incredibly vulnerable an environment it is. As a result, states will be very cautious before engaging in activities that could cause damage in space. Moreover, military planners have perhaps overstated the benefit of space weapons. Many of these systems are still far too expensive to develop, test or deploy and this cost will be the basic force constraining space weaponization. Lastly, since technology has changed so much over time, perhaps a traditional treaty structure is not the only way forward. Rather, maybe a mix of other options like a code of conduct or political commitments will suffice.

69. This discussion regarding PAROS was followed by commentary on the two different approaches currently dominating the space security debate. The first, as put forth by China, the Russian Federation and others, prefers to commence negotiations and then deal with definitions, verification and scope. The second prefers to postpone negotiations due to the difficulties with definitions, verification and the ever-emerging challenges arising out of the space environment. This participant's feeling was that the international community needs a common focus to jump-start negotiations. It is also fortunate that the

international community has at its disposal years of discussion on the issue in fora such as the CD and the UNIDIR space conferences and has already, through these avenues, informally agreed to some preventive measures and other disarmament mechanisms. On the feasibility of the PPWT or another legally binding treaty, there are three other precedents to consider. First, the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques models the sort of preventive measures that could be taken in space security. Second, the Chemical Weapons Convention provides an example of a process where a general convention was signed and more specific articles were constructed and agreed to at later dates. Third, the Outer Space Treaty does not include a clear definition of space weapons. What is really necessary, in this participant's opinion, is the political commitment from several states to not use weapons in outer space. If this can be attained, negotiations can begin and technical issues can be clarified later. Political will from leading states will shape these discussions, which will be expanded to include all others later, and the CD is the best forum for such discussions.

70. A point was raised regarding the importance of pursuing effective international verification measures that can distinguish between accidental and intentional satellite interference or damage, especially since most states lack the technical ability to make this distinction. The United States of America is currently the most capable to monitor missile launches and track satellites. If it can be understood that either everyone operates safely and responsibly in space, or that no one will, then cooperative space surveillance will be an obvious outcome.

71. A suggestion was made that perhaps it was counterproductive to debate the wisdom of a definitional or technological approach versus a conduct-based approach to space security—a better way forward might be to mix the two. Many arms control agreements do not have definitions of the weapons they limit or prohibit. So while some space weapons are easily defined and should be, a conduct-based approach should be taken for those grey areas of dual-use technology. A discussion along those lines ensued regarding ballistic missile defence systems: while the feasibility of banning such systems is so low as to be practically non-existent, despite their applicability to ASAT development, a prohibition on testing in an ASAT mode would make states less certain about their ASAT capabilities. There was general agreement that the advent of destructive ASATs or war in space using such debris-creating weapons would be dangerous and counterproductive for all countries, and that some mechanism for preventing this should be created in the near term.

72. The view was expressed that any space security treaty should be universal and equitable, not creating “space weapons powers” and “have nots”. One participant noted that the Chemical Weapons Convention was an example of a democratic and even-handed treaty approach. Another view was expressed that any space security agreement must first fundamentally address the use of force in space and the threat of use of force as a legal matter.

Concluding Remarks

Ms. Theresa Hitchens, Director of UNIDIR

73. Ms. Theresa Hitchens, Chair of the conference, delivered the concluding remarks. She sees two key trends as having emerged in the realm of outer space. The first is positive. Space-based assets have grown considerably more valuable to human security and development. As more states have entered and will enter space, they are using it primarily for non-military purposes: to monitor climate change, to support communications and banking, to observe agricultural developments, for tele-medicine and tele-education, and to

generally help people in daily life. This is an irreversible trend that will only result in space becoming more vital to life on Earth. The second trend is less positive, in that space has also grown increasingly militarized as states have learned just how useful satellites are for conducting Earth-based military operations. Unfortunately, these two trends are at odds with each other. As space becomes more vital to the world's militaries, the national security imperative grows to perceive space assets as wartime targets. This reality raises the threat to the peaceful uses of space and thus to human security. One solution to this conundrum is to reframe the issue of space security from a debate between the poles of military utility and the imperative of peaceful uses toward recognition that space security and safety must be preserved in order to prevent unacceptable harm to human life. In looking back at other arms control negotiations and agreements, such as the Anti-Personnel Mine Ban Convention, this is the lens through which the issue was framed and what essentially motivated successful agreements. In the international arena, particularly in the civil and commercial realms, there has been a growing appreciation for the value of space for human security and development. This appreciation has been reflected in a growing interest in international fora such as the International Telecommunication Union and COPUOS. Progress has been made on space security issues such as reduction of interference, debris mitigation and SSA. Perhaps the reason such progress has not been mirrored in the arms control realm is because the space issue is almost always viewed through the lens of national security interests and not human security.

74. A further issue for progress is the level of technical difficulty involved, and how these technical aspects would have a limiting affect on what a treaty and negotiations could achieve. However, there are examples of ways to overcome the technical obstacles from the negotiations on the Chemical Weapons Convention and the CTBT. In these cases, expert groups or smaller sets of leading states met together to lay down foundations that were later introduced into multilateral organizations as the basis for wider negotiations. Since the CD will not overcome non-space-related gridlock any time soon, the international community should work outside the Conference to make progress before the nascent arms race in outer space advances much further.

75. It would also pay to look at previous examples of norm-building that transitioned into legally binding arrangements, such as the Convention on the Law of the Sea. There is no reason TCBMs cannot be pursued first and later be incorporated into a more formal document. Overall, the international community needs to get creative in developing modalities for securing an international agreement. Another experience to learn from is how COPUOS negotiated the Space Debris Guidelines. A bottom-up approach was taken where technical experts met first and built consensus before the issue was broached with diplomats and policymakers. If this is done with a view to preventing unacceptable harm, it might help build momentum in the space weaponization debate. Indeed, the CD would surely benefit from working with other international bodies responsible for space such as the International Telecommunication Union, COPUOS and the other agencies of the United Nations that rely on space-based assets for their daily operations. How can their experiences and expertise be integrated into the process?

76. Another possible angle is to look at harmonizing norms through domestic policy. Russian Federation has pledged not to be a first-mover in the use or threat of use of force in space. Why has this example not been followed by other states? A critical mass of such unilateral declarations could be a norm-building step. The Russian Federation's suggestion of a new UN Group of Governmental Experts on space TCBMs is another potential avenue for progress—even in the absence of formal negotiations. The international community should not let the great stand in the way of the good, but rather should make progress when possible instead of getting stuck on larger, intractable issues. That said, there are fundamental issues that will require more in-depth analysis. While this conference has shown that it is still unclear what constitutes a space weapon, it has not really addressed the

still unclear definition of a space attack or what constitutes aggression in space. Another issue that should be addressed is the linkage between space warfare and the wider nuclear disarmament debate. Satellites are used by nuclear powers to keep an eye on each other's forces, particularly during crisis management and escalation. This is partly why ASAT capabilities were never pursued more fervently during the Cold War, as the two superpowers understood just how important safe satellites were to maintaining the nuclear balance. If one state could not reliably see what was happening with the other's nuclear forces, the potential for initiating an accidental nuclear war increased. Today, this threat is even more prominent as there are now nine nuclear powers using satellites in one way or another to monitor their nuclear rivals. As the international community approaches PAROS or managing the arms race in space, the question of how space warfare may result in nuclear warfare—the ultimate harm to humanity—is something that should be more carefully considered.

77. At the end of the day, Ms. Hitchens stressed, the next step for space security is for the international community to start thinking of, and implementing, creative ways to move past the impasse in formal negotiations.

Conference on Disarmament

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Working paper

The position paper of G-21 on prevention of an arms race in outer space

1. The Group believes that the role of space technology in our day to day life has become pervasive. Never before have information, communication, banking, economic transactions, navigation, and even political and strategic decision-making been so dependent on space-based technologies, which are themselves witnessing rapid growth.
2. The Group reiterates that outer space and other celestial bodies are the common heritage of mankind and must be used, explored and utilized for the benefit and interest of all mankind in a spirit of cooperation. The Group reaffirms that the exploration and use of outer space and other celestial bodies shall be for peaceful purposes and shall be carried out for the benefit and in the interest of all countries, irrespective of their degree of economic or scientific development.
3. The Group stresses that the growing use of outer space increases the need for greater transparency, confidence building measures and better information on the part of the international community. The Group believes that all States, with major space capabilities, have special responsibility to contribute actively to the objective of the peaceful use of outer space and of the prevention of an arms race in outer space and to refrain from actions contrary to that objective and to the relevant existing treaties in the interest of maintaining international peace and security and promoting international cooperation.
4. The Group recognizes that prevention of an arms race in outer space would avert a grave danger for international peace and security. The Group emphasizes the necessity of further measures with appropriate and effective provision for verification to prevent an arms race in outer space in all its aspects.
5. The Group emphasizes the importance and urgency of preventing an arms race in outer space. In this regard, the Group is deeply concerned over the negative implications of the development and deployment of anti-ballistic-missile defense systems and the pursuit of advanced military technologies capable of being deployed in outer space which have, inter alia, contributed to the further erosion of an international climate conducive to the promotion of disarmament and strengthening of international security.
6. The Group of 21 stresses that all countries bear a responsibility to refrain from activities that could jeopardize the collective goal of maintaining outer space free from

weapons of mass destruction and all other forms of weaponization so as to ensure that its benefits are available to all.

7. The Group considers that the multilateral disarmament agreements provide the mechanism for States parties to consult one another and to cooperate in solving any problems which may arise in relation to the objective of, or in the application of, the provision of the agreements, and that such consultations and cooperation may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with the Charter.

8. The prevention of an arms race in outer space has assumed greater urgency because of legitimate concerns that existing legal instruments are inadequate to deter further militarization of outer space, or prevent its weaponization. The Group further reaffirms its recognition that the legal regime applicable to outer space does not in and of itself guarantee the prevention of an arms race in outer space. For that purpose, the Group stresses the need to consolidate and reinforce that regime and enhance its effectiveness.

9. In this regard, the Group reaffirms that the Conference on Disarmament is the sole multilateral disarmament negotiation forum of the international community, which has the primary role in substantive negotiations on priority questions of disarmament. The Group considers that it is time to start negotiation in the Conference on Disarmament on matters related to the "Prevention of an arms race in outer space".

10. In addition, the United Nations General Assembly resolution 64/28 on "Prevention of an arms race in outer space" further made the following observations with regard to the Conference on Disarmament.

(a) The CD should complete the examination and updating of the mandate contained in its decision of 13 February 1992 and establish a Working Group during the 2010 Session.

(b) The CD has the primary role in the negotiation of a multilateral agreement or agreements on the prevention of an arms race in outer space in all its aspects.

11. The Group takes note of the United Nations General Assembly resolution 64/49 on "Transparency and confidence-building measures in outer space activities." The Group, while stressing the priority of negotiation of legally binding instruments on strengthening the international legal regime on Outer Space, recognizes that global and inclusive transparency and confidence building measures, arrived at through broad international consultations, could be important complementary measures.

12. In this regard, the Group welcomes the joint Russian-Chinese initiative of a draft treaty on the "Prevention of the placement of weapons in outer space, the threat or use of force against outer space objects" (PPWT) presented by the Minister of Foreign Affairs of Russian Federation in the Conference on Disarmament on 12 February 2008. This initiative is a constructive contribution to the work of the Conference, and is a good basis for further discussion toward adopting an international binding instrument.



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Item 6 of the provisional agenda***
**Information on the activities of international
intergovernmental and non-governmental organizations
relating to space law**

Information on the activities of international intergovernmental and non-governmental organizations relating to space law

Note by the Secretariat

I. Introduction

The present document was prepared by the Secretariat on the basis of information received by 22 January 2010 from the following international non-governmental organizations: European Centre for Space Law, International Institute of Space Law and International Law Association.

II. Replies received from international intergovernmental and non-governmental organizations

European Centre for Space Law

A. Background information

1. Introduction

The European Centre for Space Law (ECSL) was established in 1989, on the initiative and under the auspices of the European Space Agency (ESA), with the

* A/AC.105/C.2/L.277.

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support of a number of pioneers in the field. It functions under a charter defining its missions, structure and objectives (the last version was adopted in October 2009). The current Chairman of ECSL is Sergio Marchisio of the Sapienza University of Rome.

2. Objectives and organization

The main objective of ECSL is to build up and spread in Europe and elsewhere an understanding of the legal framework relevant to space activities. Information exchange among interested stakeholders along with improvement and promotion of the teaching of space law are the two major tools to reach that goal. Another ECSL ambition is to provide updated information on the European contribution to space activities beyond Europe and thus to enhance the European position in space law practice, teaching and publications.

3. A flexible and open structure

The Centre brings together mainly professionals, lawyers, academics and students and encourages interdisciplinary exchanges. It is organized in a very flexible manner and has no legal personality. The ECSL structure provides a forum for discussion for all those wishing to take part in a constructive debate on space law. Great potential exists in Europe in the field of space law, but it is often isolated or scattered; ECSL aims to bridge that gap. The ECSL General Assembly, open to all members, meets every three years and elects the ECSL Board, ensuring that different professional stakeholders and geographical zones are equitably represented. The Executive Secretariat is responsible for the management and growth of the Centre's activities.

4. The Board of the European Centre for Space Law

Members of the ECSL Board are elected by the triennial General Assembly for a period of three years and are nationals of ESA member or associate States or of other European countries that have concluded a cooperation agreement with ESA. Board members have outstanding backgrounds and experience in space law and commit themselves to actively promoting the purposes of ECSL at the national and international levels.

5. Membership and network

Natural or legal persons from ESA member or associate States or from other European countries that have concluded a cooperation agreement with ESA can become members of ECSL upon payment of an annual fee. Membership confers the right to participate in the different ECSL activities, to vote (active and passive vote) at the General Assembly and to receive ECSL publications, in particular the ECSL newsletter. Membership must be renewed at the beginning of every year (January or February).

6. National points of contact

To facilitate its contacts with members, the spread of information and organization of activities, ECSL has encouraged the establishment of national points of contact that act as an interface between ECSL and its members. Thus, points of

contact have been set up in Austria, Belgium, Czech Republic, Finland, France, Germany, Italy, the Netherlands, Spain and the United Kingdom of Great Britain and Northern Ireland. Their status differs depending on whether an institute or centre for space law exists in the country concerned and on the legal form that their members have chosen. The national points of contact, with organizational support from ECSL, play an important role in promoting activities such as conferences, symposiums and research on space issues. ECSL is working to increase the presence of new national points of contact in ESA member States (there are currently 18) such as Portugal or even non-member States such as the Dominican Republic and Morocco.

7. Financing

Currently, most ECSL funding is provided by ESA from its general budget, while other institutions provide support for specific events such as the summer course. Since January 1994, a small annual membership fee has been required from ECSL members.

B. Activities

1. Summer Course on Space Law and Policy

The Eighteenth ECSL Summer Course on Space Law and Policy was organized by ECSL and the University of Lisbon, under the responsibility of José Luís da Cruz Vilaça, Nuno Piçarra and their colleagues. This event took place at the Universidade Nova de Lisboa, Portugal, from 31 August to 11 September 2009.

The Course was attended by 35 students of 16 different nationalities from the following 15 countries: Austria, Belgium, Brazil, Czech Republic, France, Germany, Greece, Italy, Netherlands, Poland, Portugal, Romania, Spain, Turkey, and United Kingdom of Great Britain and Northern Ireland. The students followed 41 hours of lectures on space law and policy issues given by 28 speakers who were either academicians or practitioners specialized in the space field. Divided into eight teams, the students successfully tackled a case entitled: "Satellite applications for the benefit of European citizens: simulation of an international call for tenders" (coordinator: P. Achilleas, Director of the Institut du droit de l'espace et des télécommunications (IDEST), Université Paris-Sud 11). That exercise, which was split into two parts (a written report and an oral presentation in front of a panel of space experts, namely P. Ferreira and P. Achilleas), gave the students the opportunity to put into practice the knowledge acquired at university and during the lessons. The preparation of the teams' projects was supervised by four tutors: Julia Holdorf (Germany), Mathieu Bouquelle (Belgium), Charles-Edward Dumont (France) and Stefano Spano (Italy). The tutors helped the students in conducting their research and in making their presentations intelligible, logical and clear. They proved to be outstanding tutors. The team that performed the best in the awards was the team called Gama. At the end of the course, the students took an exam which consisted of legal questions related to the lessons they had attended during the intense two-week course.

The Nineteenth ECSL Summer Course on Space Law and Policy will be held in September 2010. The exact date and venue are yet to be decided.

2. Manfred Lachs Space Law Moot Court Competition

The European Rounds of the Manfred Lachs Space Law Moot Court Competition took place at the Faculty of Law of the University of Athens, Greece, from 27 to 28 April 2009.

Nine teams (27 participants) were registered to compete from the following universities: University of Leiden (Netherlands); University of Inner Temple (United Kingdom); University of Silesia (Poland); University of Strathclyde (United Kingdom); Catholic University of Leuven (Belgium); International Space University (France); Catholic University of Lublin (Poland); University of Aberdeen (United Kingdom); and University of Genoa (Italy). All of them carried out excellent research. The students solved a hypothetical dispute entitled: "Case concerning the deployment and use of force in low Earth orbit, Fornjot vs. Telesto".

This exercise, which was split into two parts (submission of statements for both the applicant and the respondent and oral arguments in front of a panel of space experts) gave the students the opportunity to improve their English and to put their knowledge of space law into practice. The judges who evaluated the written briefs were I. Zilioli, L. Ravillon and N. Metcalf and the judges of the oral pleadings were S. Marchisio, R. Oosterlinck, E. Back Impallomeni, C. de Cooker, A. Kerrest, V. Iavicoli, V. Cassapoglou and P. Achilleas.

The winner of the European Rounds of the Competition was the team from the University of Strathclyde (Emma Boffey, Laura Mackenzie, Stephen Donnelly and Aimée Asante as coach). The runner-up was the team from International Space University (Megan Ansdell, Axel Bergman, Curtis Iwata and Timiebi Aganaba as coach). The best oral pleading was that by Stefano Gaggero, University of Genoa, Italy. The awards for the best written briefs went to the Catholic University of Leuven. The University of Athens (Greece), the Ministry of Culture, Hellas-Sat S.A., the Faculty Club ("C. Palamas" Building) and the Evgenides Foundation hosted and sponsored the event.

The team from the University of Strathclyde represented Europe at the world final of the competition, which took place during the 60th International Astronautical Congress, held in Daejeon, Republic of Korea, on 15 October 2009. The team from Georgetown University (United States) received the highest score for the briefs and went directly to the final round. The University of Strathclyde and the National Law School of India University (India) met in the semi-final on 13 October 2009. Having won the semi-final, the National Law School of India University and Georgetown University competed during the final. The National Law School of India University won the competition. Georgetown University received the Eilene Galloway Award for best brief and the National Law School of India University obtained the Sterns and Tennen Award for best oralists. The final round was judged by three members of the International Court of Justice, Abdul Koroma, Leonid Skotnikov and Peter Tomka.

The European rounds of the Nineteenth Manfred Lachs Space Law Moot Court Competition will be held in April 2010. The semi-finals and finals of that competition will take place during the Colloquium on the Law of Outer Space at the International Institute of Space Law (IISL) to be held in Prague in 2010. The "Case concerning suborbital tourism: definition of outer space and liability" can be found on the competition website at <http://www.spacemoot.org>.

3. Colloquiums, conferences and international cooperation

IISL and ECSL organized a two-day symposium during the forty-seventh session of the Legal Subcommittee. That event was coordinated by Tanja Masson-Zwaan from IISL in cooperation with Sergio Marchisio, the ECSL Chairman, and took place on 23 March 2009. The symposium included reports by national and international space law institutions on the theme “Thirtieth anniversary of the Moon Agreement: retrospective and prospects”. The Subcommittee heard the following presentations during the symposium: “The negotiation of the Moon Agreement”, by C. Jorgenson on behalf of H. Türk; “The Moon Agreement: perspective of developing countries”, by J. Montserrat Filho; “Status of ratifications and key provisions of the Moon Agreement” by J. Mayence; “The common heritage of mankind principle: the Moon and lunar resources”, by J. de Faramiñan Gilbert; “Is a new look necessary in the age of exploration and exploitation?”, by S. Trepczynski; and “A look ahead: planetary exploration, exploitation and protection” by M. Hofmann. The presentations can be found on the Office for Outer Space Affairs website (<http://www.unoosa.org/oota/COPUOS/Legal/2009/symposium.html>).

ECSL, together with IISL, will hold a one-day symposium on the theme “National space legislation: crafting legal engines for the growth of space activities” on 22 March 2010, during the forty-ninth session of the Legal Subcommittee.

The second meeting of the International Institute for the Unification of Private Law (UNIDROIT) Steering Committee was held in Paris, under the auspices of ECSL, on 14 and 15 May 2009. The meeting was attended by the representatives of 12 of the Governments serving the committee of governmental experts, 28 representatives of the international commercial space and financial communities and eight experts attending in their personal capacity. S. Marchisio (Italy) acted as Chair. The meeting was opened by P. Hulsroj, Director of Legal Affairs and External Relations of the European Space Agency (ESA), who stressed the importance of the preliminary draft Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets in making outer space more accessible to citizens of the world.

In the light of the progress made by the Steering Committee on various outstanding issues concerning the preliminary draft Protocol on space assets, the Steering Committee indicated that it considered the time ripe for the resumption of the intergovernmental consultation process. It was suggested that the committee of governmental experts be reconvened for a third one-week session in Rome in December 2009 and for a final one-week session, again in Rome, in 2010, to finalize a preliminary draft Protocol for submission to the Governing Council for review prior to the adoption of a draft protocol at a diplomatic conference.

4. Policy and administration: Board meetings

The ECSL Board held its fifty-fifth meeting on 13 March 2009, its fifty-sixth meeting on 29 June 2009 and its fifty-seventh meeting on 23 October 2009 at ESA Headquarters in Paris. The General Assembly was held at the same time as the fifty-seventh ECSL Board meeting.

5. Documentation and publications

(a) Legal database

Since October 2004, the ECSL legal database (<http://www.esa.int/SPECIALS/ECSL>) has been active and open to the public. It represents a unique tool for the promotion of knowledge of space law at the European and international levels. The purpose of the database is to familiarize users with space law and to highlight the results and outputs of space law conferences and forums (such as proceedings, research and articles). The site is also intended to promote the work carried out by the ECSL national points of contact, space law institutes, universities, research centres, the Committee on the Peaceful Uses of Outer Space, the United Nations Educational, Scientific and Cultural Organization and other organizations, as well as national space agencies, in order to create a network among all institutions, educational centres and research facilities working in the area of space law. The ECSL legal database is updated and new links are added on a regular basis.

(b) Fourth edition of “Space law teaching in Europe”

The booklet “Space law teaching in Europe” is an ECSL initiative, first issued in 1991 and revised in 1993. The booklet includes a list of space law teaching institutions, universities and educational centres in Europe. It also provides detailed information on teaching staff, credits, tuition fees and the duration of the different courses, together with illustrations of the institutions listed.

The fourth edition of “Space law teaching in Europe” was published in 2009 and has been distributed free of charge to institutions and academics interested in the teaching of space law, as well as to students.

(c) Newsletter

The ECSL Newsletter features articles on legal issues and other topics of interest to the space community. It is a precious tool to provide information on new space law developments as well as on other events around the world, such as conferences or workshops, relevant to the space sector and space applications. Each new issue of the ECSL newsletter is sent free of charge to all ECSL members and is then published on the relevant section of the ECSL website. The next ECSL Newsletter will be published in February 2010.

C. Upcoming events and projects planned for 2010

1. International Institute of Space Law/European Centre for Space Law Symposium

The next IISL/ECSL symposium is to be held on 22 March 2010, during the forty-ninth session of the Legal Subcommittee. It will be entitled “National space legislation — crafting legal engines for the growth of space activities”.

2. Manfred Lachs Space Law Moot Court Competition

The European rounds of the Manfred Lachs Space Law Moot Court Competition will be held in April 2010.

The world semi-finals and finals of the Manfred Lachs Space Law Moot Court Competition will be held in Prague in September 2010, during the 61st International Astronautical Congress.

3. Summer Course on Space Law and Policy

The Nineteenth ECSL Summer Course on Space Law and Policy will be held in September 2010. The exact date and venue are yet to be decided.

4. Annual Practitioners' Forum

The next Practitioners' Forum will be held on the theme "Galileo: current legal issues" at ESA headquarters, in Paris, in March 2010.

5. Board meetings

The next meeting of the ECSL Board will take place on 29 January 2010 at ESA headquarters, in Paris. The subsequent meeting will be held in June 2010 (the exact date and venue are yet to be decided).

International Institute of Space Law

A. Background information

The International Institute of Space Law (IISL) was founded in 1960 with the purpose of carrying out activities for fostering the development of space law and studies of legal and social science aspects of the exploration and use of outer space. IISL has been formally established as an independent association, and its structure has been improved to enable it to better fulfil its role. The Institute currently has individual and institutional elected members from over 40 countries, who are distinguished for their contributions to space law development. In 2008, IISL was granted permanent observer status with the Committee on the Peaceful Uses of Outer Space, after having provided observers to the Legal Subcommittee on behalf of the International Astronautical Federation for many years.

B. General developments

1. Elections

Five directors or officers have been re-elected: J. Gabrynowicz, J. Galloway (Vice-President), A. Kapsutin, T. Kosuge, K.R.S. Murthi, S. Ospina and M. Williams. There were two additional Board positions: H. Zhao and S. M. Rhee. Fourteen individual members were elected to IISL in 2009.

2. Directorate of Studies

The Directorate of Studies has worked on a report submitted in response to various tasks given by the Board of Directors. The Board approved the new abstract guidelines for submission by authors. The Board recommended that the Directorate look into the possibility of an IISL session on the delimitation of air space and outer space and then gauge the relevance of a statement on the issue. It was also decided to edit and publish a Manfred Lachs book and investigate a book on pioneers of space law.

The Directorate of Studies is currently soliciting ideas for the sessions of the Colloquium to be held in Cape Town, South Africa in 2011.

3. IISL Awards

During the 52nd Colloquium on the Law of Outer Space held in Daejeon, Republic of Korea, in October 2009, a Lifetime Achievement Award was presented to V. Vereshchetin and a Distinguished Service Award to S. Hobe. A Certificate of Appreciation was given to Annie Moulin, Deputy Executive Director of the International Astronautical Federation.

The Dr. I.H.Ph. Diederiks-Verschuur Award and Prize for best paper by a young author was awarded to Catherine Doldirina of McGill University (Canada). The paper was on the topic: "A rightly balanced intellectual property rights regime as a mechanism to enhance commercial Earth observation activities".

C. Activities in 2009

1. Sessions of the Committee on the Peaceful Uses of Outer Space

In 2009, during the forty-eighth session of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space, the Institute, along with ECSL, at the request of the Subcommittee, organized a symposium for the benefit of the members on the topic "Thirtieth anniversary of the Moon Agreement: retrospective and prospects". The symposium, held on 23 March 2009, was coordinated by the Secretary of the Institute, Corinne Jorgenson, and Board member Kai-Uwe Schrogl and was chaired by IISL President Tanja Masson-Zwaan and Board member Sergio Marchisio, the President of ECSL. The programme and a link to the presentations are available on the website of the Office for Outer Space Affairs (<http://www.unoosa.org/oosa/COPUOS/Legal/2009/symposium.html>).

IISL was represented by several of its members in the delegation of official observers to the Legal Subcommittee at its forty-eighth session, and to the fifty-second session of the Committee on the Peaceful uses of Outer Space, both held in 2009.

2. 52nd Colloquium on the Law of Outer Space

The 52nd IISL Colloquium on the Law of Outer Space was held in Daejeon, Republic of Korea, from 12 to 16 October 2009. Around 80 papers were accepted for six sessions, on the following topics: (a) Nandasiri Jasentuliyana keynote lecture on space law and first young scholars' session; (b) peace in space: transparency and

confidence-building measures; (c) third-party liability issues in commercial space activities; (d) legal mechanisms for encouraging space commerce; (e) legal challenges to Earth observation programmes with particular emphasis on developing countries; and (f) recent developments in space law.

In addition, a scientific and legal roundtable was held on the theme “Assessing commercial human space flight”. IISL also organized a plenary session on the theme “achieving a sustainable space environment for future space activities.”

3. Eighteenth Manfred Lachs Space Law Moot Court Competition

The eighteenth Manfred Lachs Space Law Moot Court Competition was held during the 52nd IISL Colloquium. The “Case concerning the deployment and use of force in low Earth orbit (Fornjot v. Telesto)” was written by Ricky Lee. Preliminary rounds were held at the regional level in Europe (9 teams), North America (8 teams) and in the Asian and Pacific region (26 teams).

The finals were judged by three members of the International Court of Justice, Abdul Koroma, Peter Tomka and Leonid Skotnikov.

The winner of the final round was the National Law School of India University (India). The Georgetown University (United States) was the runner-up, and the University of Strathclyde (United Kingdom) was the second runner-up.

The organizations that supported the world finals were the Local Organizing Committee and Kyeryong Construction, Martinus Nijhoff Publishers, Association of United States Members of the International Institute of Space Law, Secure World Foundation, Japan Aerospace Exploration Agency, and ECSL.

4. Eilene M. Galloway Symposium on Critical Issues in Space Law

The fourth Eilene M. Galloway Symposium on Critical Issues in Space Law was organized in Washington, D.C., on 10 December 2009 by the National Center for Remote Sensing, Air, and Space Law of the University of Mississippi School of Law, Arianespace and IISL. The topic for the symposium was “Peaceful purposes and uses of outer space”. The event involved lawyers, scientists, space agency representatives and industry. Some of the papers will be published in the IISL proceedings. The fifth Eilene M. Galloway Symposium on Critical Issues in Space Law will be held in Washington, D.C., in December 2010.

D. Activities in 2010

1. IISL and ECSL symposium for delegates of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space

IISL and ECSL will again organize a symposium entitled “National space legislation: crafting legal engines for the growth of space activities”. It will be held on 22 March 2010.

2. 53rd IISL Colloquium on the Law of Outer Space

The 53rd IISL Colloquium on the Law of Outer Space will be held in Prague from 27 September to 1 October 2010. The following session topics will be discussed:

(a) *Nandasiri Jasentuliyana keynote lecture on space law and first young scholars' session.* In the first part, IISL will invite a prominent speaker to address the members of the Institute and other congress attendants on a topical issue of broad interest. After the break, this newly established annual event will be especially dedicated to the space lawyers of the future, in that young scholars (under 35) will be invited to present a paper either entitled "Space law: future challenges and potential solutions" or on another topic to be agreed with IISL;

(b) *Thirty years of the Moon Agreement: perspectives.* This session will address the future perspectives of the Moon Agreement, which celebrated its thirtieth anniversary in 2009;

(c) *Legal aspects of space security.* The legal aspects related to the need for keeping space safe for civilian and military operations while avoiding the weaponization of space will be analysed at the session and the most recent proposals in this context will be addressed and ideas for the further development of space law will be presented to the relevant international forums;

(d) *Current status of the rule of law with regard to space activities;*

(e) *Recent developments in space law.* Papers for this session will focus on the developments in space law since March 2009.

A scientific and legal round table will be held in Prague on the theme "The new age of small satellite missions", and the IISL has submitted proposals for a plenary session.

3. Nineteenth Manfred Lachs Space Law Moot Court Competition

The semi-finals and finals of the nineteenth Manfred Lachs Space Law Moot Court Competition will be held during the 53rd IISL Colloquium to be held in Prague in September 2010. The arrangements for the moot court are being put in place. The case can be found on the website of the competition (www.spacemoot.org). Three Judges of the International Court of Justice will be invited to judge the finals. Regional rounds will be held in Europe, North America and Asia and the Pacific.

E. Publications

The proceedings of the 51st Colloquium on the Law of Outer Space, held in Glasgow, United Kingdom, were published by the American Institute of Aeronautics and Astronautics.

The proceedings of the 52nd Colloquium on the Law of Outer Space, held in Daejeon, Republic of Korea, will be published by the American Institute of Aeronautics and Astronautics.

The Report of the Standing Committee on the Status of International Agreements Relating to Activities in Outer Space has, as usual, been prepared by Mr. Terekhov and will be published in the IISL proceedings.

IISL prepared material for the United Nations annual review of developments in international cooperation and space law, entitled Highlights in Space, under contract with the United Nations.

IISL submits annual reports on IISL activities to the Committee on the Peaceful Uses of Outer Space.

The Institute is working with the Office for Outer Space Affairs to finalize an update of its bibliography of IISL proceedings since 1996.

F. Concluding remarks

IISL is honoured to cooperate with the Committee on the Peaceful Uses of Outer Space and its subsidiary bodies in the further development of space law. In particular, IISL is prepared to assist as appropriate in carrying out background studies needed for the consideration and information of the Committee. IISL recognizes that certain areas that may require legal regulation include technical issues and may need preparatory work that IISL might be able to carry out for the consideration of the Committee.

IISL will be honoured to continue to be of assistance.

International Law Association

A. Background information

The International Law Association (ILA) was founded in Brussels in October 1873. Its headquarters are in London and its objectives are the study, clarification and development of international law, both public and private, and the furtherance of understanding and respect for international law. The focal points of its activities are the international committees that communicate and work permanently between biennial conferences, of which 73 have so far been held.

The ILA regrets to announce the sad loss of the Chairman of its Executive Council, Lord Slynn of Hadley, on 7 April 2009 in London. Lord Slynn had held this position for the previous 20 years. During that time, he indefatigably pursued the objectives of the institution. The new Chair, elected unanimously by the ILA Council in November 2009, is Lord Mance, Justice of the United Kingdom Supreme Court. At the moment, the World President is Eduardo Grebler (Brazil), who will hold office until the next ILA Conference, to take place in 2010.

The Space Law Committee of ILA was established during the 48th ILA International Conference, held in New York in 1958, and its work has continued without interruption. Its present officers are Maureen Williams, Chair, and Stephan Hobe (Germany), General Rapporteur. Since 1996, the ILA Space Law Committee has been a permanent observer to the Committee on the Peaceful Uses of Outer Space and both its subcommittees.

ILA practice includes cooperation with other international organizations, public and private, such as the International Law Commission via the ILA Study Group on Responsibility of International Organisations, the Permanent Court of Arbitration in connection with dispute settlement procedures in space law, the Comisión Nacional de Actividades Espaciales (CONAE) in Argentina, the Associação Brasileira de Direito Aeronáutico e Espacial (SBDA) in Brazil, the German Aerospace Centre (DLR) in Germany and the British National Space Centre (BNSC) in the United Kingdom. In the private field, the ILA Committee and its members participate in the activities of the IISL, the International Academy of Astronautics and the ECSL. Within the framework of the Legal Subcommittee, ILA participates in the work of the Expert Meeting on Promoting Education in Space Law.

B. Activities of the ILA Space Law Committee during 2009

1. Forty-eighth session of the Legal Subcommittee

The ILA Committee was represented by its Chair, General Rapporteur and Session Reporter at the forty-eighth session of the Legal Subcommittee. A written report was circulated during the forty-eighth session; it was followed by an oral presentation by the Chair of the ILA Committee (See A/AC.105/C.2/L.275).

2. United Nations/Islamic Republic of Iran Workshop on Space Law

ILA experts participated in the United Nations/Islamic Republic of Iran Workshop on Space Law on the theme “Role of international space law in the development and strengthening of international and regional cooperation in the peaceful exploration and use of outer space”, held in Tehran from 8 to 11 November 2009. The meeting represented a cross section that was most important for the development of the law in this domain, and a number of recommendations and conclusions were agreed on. The general opinion was that the application of space technology was crucial to daily life in developing countries, even though there was no immediate perception of it, and that there was less legal knowledge than desirable. Hence, capacity-building and international cooperation were seen, once again, as cornerstones in the field. This perception will be transmitted to the ILA International Committee on the Teaching of International Law, which will likewise be reporting to the 74th ILA Conference, to be held in The Hague from 15 to 20 August 2010.

3. Second United Nations Expert Meeting on Promoting Education in Space Law

ILA experts participated in the second United Nations Expert Meeting on Promoting Education in Space Law, held in Tehran from 12 to 13 November 2009.

4. The ILA Space Law Committee programme, 2009 and early 2010

The ILA Committee submitted its Third Report on the Legal Aspects of the Privatisation and Commercialisation of Space Activities to the 73rd ILA Conference, held in Rio de Janeiro from 17 to 21 August 2008.

The Report focused on remote sensing, national space legislation, registration issues, new developments on space debris and dispute settlement related to space activities. The presentation of the Report was followed by a stimulating debate.

The Conference agreed that a Fourth Report, which was close to finalization, would be submitted to the 74th ILA Conference in 2010, with a view to presenting a final Fourth Report to the 75th Conference, to be held in Sofia in 2012. The Chair and the General Rapporteur of the ILA Committee were involved in the preparation of the draft Report. The draft Report will be circulated to members for further comments and ideas early in 2010. After that, it will be published on the ILA website (www.ila-hq.org). A summary of the topics addressed and revisited by the ILA Space Law Committee in 2009 follows.

(a) National space legislation

The ILA Committee is carrying out an analysis of national space laws and is currently drafting a model agreement on the subject based on a thorough study of domestic laws in the field in various countries.

This section of the Committee Report attempts to highlight what is considered an important cornerstone for national space legislation. It will do so by having recourse to already existing national space legislation, as well as the answers of the ILA Space Law Committee members to the questionnaire sent out in 2005. It will also partly base its proposals on a 2004 workshop entitled “Towards a harmonised approach for national space legislation in Europe”, held in Berlin in the framework of Project 2001 Plus by the Institute of Air and Space Law of Cologne University, Germany, and the German Aerospace Centre (DLR). Moreover, the current deliberations in the Legal Subcommittee, as well as discussion in its Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space, will be taken into consideration.

The view of the ILA Committee Rapporteur is that questions of compensation and insurance should be regulated through national space legislation, as should the obligation of States to authorize and continuously supervise the space activities of private actors within their jurisdiction and control. This appears to be the only effective and realistic way for Governments to control private activities.

As a matter of procedure, the Committee Rapporteur intends to carry the discussion further with the aim of deciding whether some kind of model law should be adopted at the ILA Committee Meeting to be held in The Hague in 2010. The Rapporteur made it clear from the beginning that this model law is by no means intended to be binding for any State. It was simply a proposal from the Space Law Committee of the International Law Association — a non-governmental institution — to be considered a working tool for Governments when drafting their own national space legislation.

(b) Remote sensing

The ILA Committee Chair is currently addressing the state-of-the-art and legal issues underlying remote sensing activities in the light of the Principles Relating to Remote Sensing of the Earth from Outer Space (General Assembly resolution 41/65, annex) on the subject to determine whether they are still consistent in the new international and regional scenarios. The main objective is to streamline the validity of the Principles and evaluate whether, in fact, some of them are reflecting customary international law. Or rather, to state it in reverse, if State practice reveals that the Principles are being observed.

Special reference is made, in one of the chapters addressed by the Chair, to the yet unresolved issue of satellite data in international and national litigation and its value as evidence in court, especially where sensitive issues involving sovereignty are concerned. The ILA Committee considers that solutions are needed as the current situation runs counter to the use of satellite imagery in court, particularly in boundary disputes where the precision of space technologies is essential and the margin of interpretation of the experts called upon to interpret the satellite images at the stage of evidence is extremely wide. The idea is to advance on the tentative conclusions on these points, which were agreed at the 73rd ILA Conference. This is an essentially practical issue involving practitioners and academics alike.

A factual point is that there are still no developed international rules or standards in place as to the use, in the courtroom, of data collected by Earth observation satellites. Common standards for digital data products are slowly being developed at the national level but there is still widespread uncertainty in the legal world. A number of recent cases decided by the International Court of Justice and other international arbitrations clearly illustrate the major issues involved.

The main conclusion is that training the legal sector is crucial for the development of these remote sensing technologies. There is still a lack of awareness, knowledge and understanding in the legal field as to what technology can offer and what its limitations are. It is thus essential to have more cross-disciplinary cooperation so that future technologies will have a greater ability to meet the legal users' needs. Once again, there is a need here to encourage capacity-building, which was a recurring theme at the United Nations/Islamic Republic of Iran Workshop on Space Law.

The prevailing opinion is that control of all the phases of data collection — from the first stage of raw data collection to the moment the final product is used — is indispensable for the transparency of this technology.

(c) Space debris

The Chair is further examining the legal aspects of space debris, a topic kept under permanent review by the ILA Committee since the adoption of the International Instrument on the Protection of the Environment from Damage caused by Space Debris by the 66th ILA Conference, held in Buenos Aires in 1994 to establish whether any adjustment should be introduced thereto for it to be consistent 15 years later.

The general opinion concurs that space debris, as a threat to space, should be at the top of the list, followed by the weaponization of outer space and natural near-

Earth objects (NEOs) such as asteroids and meteorites that might pose a serious risk of collision with the Earth.

Space debris is now being reviewed in a new light by the ILA Space Law Committee, having in mind that the Legal Subcommittee, at its forty-seventh session, in 2008, finally included the question on its agenda as a single item for discussion. Furthermore, the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, and the response of States to the directives contained therein, are added elements of considerable importance in the context of the Fourth Report of the ILA Space Law Committee to the 74th ILA Conference.

The fact that Guidelines were developed within the Scientific and Technical Subcommittee with no intervention from the Legal Subcommittee in their drafting is a matter of some concern to the ILA Space Law Committee. Their implementation depends exclusively on the goodwill of States. And even though the recent inclusion of space debris as a single item for discussion on the agenda of the Legal Subcommittee is a step towards clearer regulation, the discussion so far has been limited to a general exchange of information on national mechanisms related to space debris mitigation measures.

The ILA Committee is aware of this question and the outstanding issues and will be analysing the topic in the light of the responses submitted by States to the Legal Subcommittee at its forty-ninth session, in 2010. At the same time, the ILA shall pursue the revision of the International Instrument on the Protection of the Environment from Damage caused by Space Debris.

(d) Registration

This matter, undoubtedly related to the legal aspects of space debris, is subject to permanent scrutiny by ILA with a view to following the development and impact on States and international organizations of General Assembly resolution 62/101. The most important objective of the resolution, on which the ILA Committee was called upon to give an opinion at the time, is to enhance the practice of States and international intergovernmental organizations in registering space objects.

(e) Dispute settlement

The subject of dispute settlement is under permanent review on the basis of the revised draft ILA Convention on the Settlement of Disputes related to Space Activities of 1998, having in mind, particularly, that article 10 of that Convention envisages the participation of private entities in space activities and opens the door for those entities to avail themselves of the mechanisms laid down in the revised draft Convention.

Additionally, the new task of ILA within the Permanent Court of Arbitration concerning dispute settlement in space law to ascertain the need for optional rules for the arbitration of disputes relating to outer space and the need for the development of such rules will be of unquestionable assistance in viewing this matter from a variety of standpoints.

(f) New topic: the legal aspects of near-Earth objects

As outlined earlier, the ILA Committee intends to embark on a study of the legal aspects of NEOs, a question closely linked to space security and under discussion for some time now by the Scientific and Technical Subcommittee. So far, however, it has not been on the agenda of the Legal Subcommittee. Although legal experts have only recently started concerning themselves with NEOs, the topic seems to be gaining a place on the agendas of various academic institutions dealing with international space law.

In connection with that development, the Chair and Rapporteur of the ILA Committee and some of its members were invited to form part of the International Advisory Board of the research project entitled "Legal aspects of the NEO threat: response and related institutional issues", undertaken by the University of Nebraska-Lincoln (United States) under its Programme on space and telecom law, with the support of the Secure World Foundation.

Pursuant to a request from the Office for Outer Space Affairs for information on the topic, a paper on the theme "The legal aspects of natural near-Earth objects (NEOs)" by the ILA and its Space Law Committee was prepared for consideration by the Scientific and Technical Subcommittee at its forty-sixth session, in 2009, in accordance with the multi-year workplan established for the period 2009-2011.

(g) Other matters

International cooperation and the importance of capacity-building as a common denominator in all ILA meetings have encouraged the preparation of a book on space law in Spanish in which the current legal framework governing outer space activities is discussed and analysed and to which a number of specialists of renown from all over the world are contributing. It is an effort to create further awareness of the legal aspects of space activities and their implications in Spanish-speaking countries. The task, conducted from Buenos Aires, forms part of a project presently under way under the auspices of the National Council of Scientific and Technological Research (CONICET) of Argentina and it will be published shortly.

ILA perceptions and suggestions on the topics, that have been addressed over the past year, enlightened by the discussion to take place during the forty-ninth session of the Legal Subcommittee, will be included in the ILA Space Law Committee Report to its 74th Conference, to be held in The Hague in August 2010 (www.ila2010.org).

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Legal Subcommittee
Forty-ninth session
Vienna, 22 March-1 April 2010
Item 6 of the provisional agenda*
**Information on the activities of international
intergovernmental and non-governmental organizations
relating to space law**

Information on the activities of international intergovernmental and non-governmental organizations relating to space law

Note by the Secretariat

Addendum

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* A/AC.105/C.2/L.277.

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I. Introduction

1. The General Assembly, in its resolution 64/86 of 10 December 2009, agreed that the Legal Subcommittee at its forty-ninth session should consider the items recommended by the Committee on the Peaceful Uses of Outer Space at its fifty-second session,¹ including an item entitled “Information on the activities of international intergovernmental and non-governmental organizations relating to space law”.

2. The present document was prepared by the Secretariat on the basis of information received by 26 February 2010 from the following international intergovernmental organizations: the International Mobile Satellite Organization (IMSO), the International Organization of Space Communications (Intersputnik) and the International Telecommunications Satellite Organization (ITSO). More detailed information on IMSO and ITSO is contained in a conference room paper (A/AC.105/C.2/2010/CRP.3).

II. Replies received from international intergovernmental and non-governmental organizations

International Mobile Satellite Organization

The establishment of the International Mobile Satellite Organization (IMSO) was based on the Convention on the International Maritime Satellite Organization (INMARSAT), under the auspices of the International Maritime Organization (IMO). The Convention entered into force on 16 July 1979.

The purpose of the Convention was to make provision for the space segment necessary for improved maritime communications and, in particular, for improved safety of life at sea communications and the Global Maritime Distress and Safety System (GMDSS). That purpose was later extended through amendments to the Convention to provide the space segment for land mobile and aeronautical communications, and the name of the organization was changed in 1994 to the International Mobile Satellite Organization to reflect its amended purpose.

In 1998, amendments to the Convention were adopted to transform the organization’s business into a privatized corporate structure, while retaining intergovernmental oversight of certain public service obligations and, in particular, GMDSS. Those amendments were implemented from 15 April 1999.

Today, the intergovernmental organization that was created by the privatization process has 94 member States and operates through the Assembly of Parties, its Advisory Committee (comprising representatives of member States appointed by the Assembly) and the Directorate, headed by the Director General, who is the Chief Executive Officer and legal representative of the organization.

Following the adoption in November 2007 by the IMO Assembly of resolution A.1001(25) on criteria for the provision of mobile satellite communication systems

¹ *Official Records of the General Assembly, Sixty-fourth Session, Supplement No. 20 (A/64/20)*, paras. 224, 226 and 227.

in GMDSS, which provided clear guidelines for opening up provision of GMDSS services to any satellite operator whose system fit those criteria, and the extension of IMSO responsibilities to overseeing such satellite operators, amendments to the Convention were adopted in 2008 that aimed to extend the oversight functions of IMSO to all providers in the future.

In 2006, IMO adopted new regulations for the long range identification and tracking (LRIT) system and amended the International Convention for the Safety of Life at Sea (SOLAS) accordingly (regulation V/19-1 of the SOLAS Convention, which entered into force on 1 January 2008). IMO also invited IMSO to undertake intergovernmental audit and review of the LRIT infrastructure and to take action to ensure the timely implementation of the LRIT system. On 5 December 2008, IMO adopted resolution MSC.275(85) of the Maritime Safety Committee, in which IMSO was formally appointed as the LRIT Coordinator, responsible for performing those functions.

At its twentieth session, held in Malta from 29 September to 3 October 2008, the IMSO Assembly considered that the 2006 amendments to the IMSO Convention should be improved and, acknowledging the desire of IMSO member States to promote the growth of a pro-competitive market environment in the current and future provision of mobile satellite communications system services for GMDSS, affirmed that there was a need to ensure continuity in the provision of GMDSS through intergovernmental oversight. The Assembly also affirmed the willingness of IMSO member States that IMSO should assume the functions and duties of the LRIT Coordinator, in accordance with IMO decisions and subject to the terms of the Convention.

The IMSO Assembly therefore decided to overturn the decision taken at its eighteenth session to adopt the 2006 amendments; it adopted the 2008 amendments that fully incorporated the 2006 amendments; and it also decided that the 2008 amendments should be provisionally applied from 6 October 2008, pending their formal entry into force in accordance with article 19 of the IMSO Convention. The Assembly noted that member States should conduct themselves, in their relations with each other and the organization, within the parameters of their national constitutions, laws and regulations, in the same way as if the amendments were fully in force from 6 October 2008.

Since then, IMSO has been fully participating in the testing and implementation of the LRIT system worldwide, as part of its functions as the LRIT Coordinator. An increasing number of LRIT data centres were established throughout 2009 by Governments working both individually and collectively. The data centres are integrated into the LRIT production environment by IMSO following successful completion of the compulsory tests. At the end of 2009, IMSO had integrated 36 LRIT data centres into the production phase. Those centres, in addition to the six prototype LRIT data centres that were integrated in 2008, have been providing LRIT services to a total of 71 Governments and to more than 90 per cent of the world's merchant fleet.

More new LRIT data centres are currently being tested and are expected to be integrated into the LRIT system by IMSO in 2010. That will bring the total number of LRIT data centres participating in the system to approximately 65.

As the LRIT Coordinator, IMSO is also responsible for the annual audit and review of all LRIT data centres. In order to establish the formal relationship between IMSO, as the LRIT Coordinator, and the LRIT data centres for undertaking their audit and review, the IMSO Assembly developed the LRIT Services Agreement. IMSO signed 33 LRIT services agreements with different Governments and/or LRIT data centre operators in 2009.

IMSO also continued its oversight of the sole global GMSS provider, Inmarsat Ltd., and followed developments and made contacts within the industry in order to explore which new mobile satellite communication providers intended to be recognized as GMDSS providers.

In recent years, mobile satellite communications have been expanding with ever-increasing speed, and there are several different options for the design and capability of new services. The adoption of resolution A.1001(25) by the IMO Assembly will favour the expansion of the market, which will most likely occur in the context of a revision of chapter IV (Radiocommunications) of the SOLAS Convention and will provide an opportunity for specifying more effective services in a way that permits the use of evolutionary capabilities and non-geostationary satellite constellations. IMSO is actively involved in investigating ways to facilitate this expansion.

International Organization of Space Communications

A. Background information

The International Organization of Space Communications (Intersputnik) was established on 15 November 1971, following the conclusion of the Agreement on the establishment of the “Intersputnik” International System and Organization of Space Communications,² as amended by the Protocol on Amendments to the Agreement on the establishment of the “Intersputnik” International System and Organization of Space Communications of 4 November 2002.

B. Members of the International Organization of Space Communications

As of January 2010, the Governments of the following 25 States were full members of Intersputnik: Afghanistan, Azerbaijan, Belarus, Bulgaria, Cuba, Czech Republic, Democratic People’s Republic of Korea, Georgia, Germany, Hungary, India, Kazakhstan, Kyrgyzstan, Lao People’s Democratic Republic, Mongolia, Nicaragua, Poland, Romania, Russian Federation, Syrian Arab Republic, Tajikistan, Turkmenistan, Ukraine, Viet Nam and Yemen.

C. Signatories of the International Organization of Space Communications

As of January 2010, Intersputnik member States had appointed, from among national telecommunications organizations and/or administrations, 21 Intersputnik signatories.

The Government of Kazakhstan, having approved the Protocol on Amendments, is in the process of appointing a Signatory to sign the Intersputnik Operating

² United Nations, *Treaty Series*, vol. 862, No. 12343.

Agreement. The State-owned company Kazsatnet took part, as an observer, in the 10th meeting of the Operations Committee, held in November 2009.

D. Companies of the International Organization of Space Communications

The phased privatization of Intersputnik is currently being carried out through the establishment of a group of companies that take care of the bulk of the core business of Intersputnik. Those companies serve the purpose of business diversification and principally consist of ventures controlled by Intersputnik Holding Ltd., Intersputnik's wholly owned subsidiary that was established in 2005, in three member States of the Commonwealth of Independent States (CIS) (Kyrgyzstan, the Russian Federation and Tajikistan).

Despite the complicated economic and financial situation resulting from the global financial crisis and the devaluation of local currencies by 10-15 per cent, Intersputnik Holding's revenues grew in 2009 in comparison to the previous year. The success of the whole group of companies has justified the decision to establish Intersputnik Holding Ltd.

Apart from its economic role, Intersputnik Holding Ltd. helps Intersputnik to expand its cooperation with countries where Intersputnik Holding's companies are present. In such countries, Intersputnik offers up-to-date telecommunications or broadcasting solutions on any scale to authorities, private companies and individuals. Intersputnik Holding Ltd. uses this experience to launch similar businesses in other Intersputnik member States that show interest in its activities.

E. Cooperation with International Organizations

Intersputnik has always participated in international activities that are aimed at deepening and developing constructive cooperation with other national, regional and international organizations in the field of space law and satellite communications.

The following are some of the organizations and other entities of which Intersputnik is a member or permanent observer: Committee on the Peaceful Uses of Outer Space, International Telecommunication Union (ITU) Radiocommunication Sector, United Nations Educational, Scientific and Cultural Organization, Asia-Pacific Satellite Communications Council, Global VSAT Forum, International Institute of Space Law, International Law Association, International Telecommunications Academy, National Association of TV and Radio Broadcasters (Russian Federation), Regional Commonwealth in the field of Communications (RCC), Federation of Cosmonautics (Russian Federation), and the International Centre for Space Law under the V. M. Koretsky Institute of State and Law of the National Academy of Sciences of Ukraine.

Intersputnik representatives actively participated in the work of a number of RCC commissions and working groups that bring together the telecommunications administrations of the CIS, Baltic, Central and Eastern European countries. One of the most important bodies of RCC is the working group for the revision of RCC constitutional instruments. It is responsible for drafting documents to establish an international organization called the "Regional Commonwealth in the field of Communications" on the basis of the RCC association, which is a legal entity under Russian law. Using its 37 years of managerial, technological and legal experience,

Intersputnik is determined to continue assisting RCC in establishing a new specialized international organization.

Intersputnik's representatives also sit on the RCC Commission for International Cooperation Coordination. Its mission is to consolidate cooperation among RCC member States and make sure that the interests of those countries are reconciled with those of their partners, while creating an information and communications space to be integrated into the global information infrastructure.

In addition, Intersputnik is a member of the RCC Commission for the electromagnetic compatibility of radio electronic facilities, which coordinates cooperation among the telecommunications administrations of the RCC member States in regulating the use of frequencies and ensuring the efficient use of the frequency spectrum and the compatibility of radio electronic equipment.

F. Assistance to telecommunications administrations and satellite operators worldwide

Owing to its intergovernmental status, Intersputnik can act as a focal point for efficient cooperation between the public and private sectors worldwide.

Intersputnik continues to implement programmes related to the use of frequency/orbit resources and to analyse similar projects as part of the development strategy of the frequency/orbit resources approved by its governing bodies.

In particular, Intersputnik continued implementing a project in cooperation with the Russian satellite system manufacturer Reshetnev Information Satellite Systems (ISS) and the Israeli satellite operator Spacecom.

The three parties jointly launched a project to put into geostationary orbit and operate a telecommunications satellite. Under this project, Intersputnik correlated the interests of the parties in the context of different systems of law. As a result, in mid-2008, ISS and Spacecom signed a contract for the manufacture and launch of a telecommunications spacecraft by the end of 2010.

The implementation of this project has helped rocket and space industry of the Russian Federation to make a crucial breakthrough into the highly competitive global market of high-tech satellite systems and has demonstrated the ability of Intersputnik to act as a link for implementing international telecommunications infrastructure projects.

Intersputnik sees great potential in taking part in the establishment of a nationwide satellite telecommunications system in Turkmenistan — one of its member States. The technical and economic conditions are currently being defined for the expected tender. ISS will bid as a manufacturer of a telecommunications satellite and as a launch service provider.

Intersputnik successfully implemented a new project aimed at upgrading and refurbishing an antenna system at the Caribe Satellite Communications Centre in Cuba. The project was launched under a resolution of the Russian-Cuban Intergovernmental Commission on Trade, Economic, Scientific and Technological Cooperation. That Intersputnik was chosen to implement the project demonstrates the high regard in which both Cuba and the Russian Federation hold its professional expertise.

G. New notifying administration

In June 2009, the Ministry of Communications and Informatization of Belarus decided to cease acting as the notifying administration of Intersputnik to ITU and asked Intersputnik to enter into an agreement with a different notifying administration. Therefore, at their joint meeting in April 2009, the Board and the Operations Committee instructed the Director General to hold consultations with interested Telecommunications Administrations of Intersputnik member States and sign an agreement with a new notifying administration. After those consultations, the telecommunications administration of the Russian Federation agreed to assume that function. To date, a draft agreement between Intersputnik and the telecommunications administration of the Russian Federation is being reviewed by the Government. Once signed, it will have the status of an international treaty.

As part of its cooperation with the new notifying administration, Intersputnik also signed an agreement with the Russian Federation's federal enterprise the Main Radio Frequency Centre on providing technical support to the telecommunications administration of the Russian Federation in its role as the notifying administration.

An important decision for governing bodies of Intersputnik was how to regulate the procedure of cooperation between Intersputnik, ITU and the notifying administration with respect to Intersputnik's orbit/frequency resource. The Directorate drafted a new version of the Filing Procedures, which will supersede a similar document that has been used since 1994 but had become obsolete as it no longer reflected the experience of cooperation among Intersputnik, ITU and the notifying administration.

The Directorate summarized and took into account as far as possible all comments and proposals from Intersputnik member States and Signatories with respect to the new version of the filing procedures, which were approved by the Intersputnik Operations Committee in November 2009. Once the new version of the filing procedures is approved by the Intersputnik Board in April 2010, the filing procedures will take effect and make it possible for Intersputnik to benefit from a new level of international legal protection for its orbit/frequency resource. The new filing procedures will also make its cooperation with ITU and the notifying administration much more efficient.

International Telecommunication Satellite Organization

The 32nd meeting of the International Telecommunications Satellite Organization (ITSO) Assembly of Parties, held in Estoril, Portugal, took decisions on a number of key issues, including the Parties' common heritage assets, consisting of orbital locations and associated frequency assignments currently used by Intelsat, the goals and objectives of ITSO for the period 2008-2013, namely universalizing satellite broadband connectivity, and the ongoing provision of international public telecommunications services by Intelsat in a more uncertain financial and economic market. The Assembly elected José Toscano Director General and Chief Executive Officer for a four-year period, until July 2013.

During 2008, Intelsat Ltd. was acquired by Serafina Holdings Ltd., an entity created by private equity funds that is advised by BC Partners, Silver Lake and other

investors. Since the transaction involved the transfer of control of the Intelsat licences to the new owners, and in particular the licences for use by Intelsat of the parties' common heritage orbital positions and associated frequency assignments, ITSO, Intelsat and the buyers worked closely together to ensure that the transfer would not affect public service obligations of Intelsat or the integrity of the parties' common heritage, and would promote new services. In further support of these efforts, in February 2008 the United States Federal Communications Commission modified the satellite licences previously issued to Intelsat for the use of those orbital resources so as to establish more clearly the ongoing nature of its public service obligations. That decision was taken in coordination with the United States Department of State and Intelsat.

ITSO continued to promote the Global Broadband Satellite Infrastructure Initiative, which was presented to the World Summit on the Information Society as a contribution to ensuring high-speed Internet access in rural and under-served areas of the world.

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Sixty-fifth Session
Supplement No. 20

Report of the Committee on the Peaceful Uses of Outer Space

**Fifty-third session
(9-18 June 2010)**



United Nations • New York, 2010

Note

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

[8 July 2010]

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Chapter I

Introduction

1. The Committee on the Peaceful Uses of Outer Space held its fifty-third session in Vienna from 9 to 18 June 2010. The officers of the Committee were as follows:

<i>Chair:</i>	Dumitru-Dorin Prunariu (Romania)
<i>First Vice-Chair:</i>	Nomfuneko Majaja (South Africa)
<i>Second Vice-Chair/Rapporteur:</i>	Raimundo González Aninat (Chile)

The unedited verbatim transcripts of the meetings of the Committee are contained in documents COPUOS/T.613-627.

A. Meetings of subsidiary bodies

2. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space had held its forty-seventh session in Vienna from 8 to 19 February 2010, under the chairmanship of Ulrich Huth (Germany). The report of the Subcommittee was before the Committee (A/AC.105/958).

3. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space had held its forty-ninth session in Vienna from 22 March to 1 April 2010, under the chairmanship of Ahmad Talebzadeh (Islamic Republic of Iran). The report of the Subcommittee was before the Committee (A/AC.105/942). The unedited verbatim transcripts of the meetings of the Subcommittee are contained in documents COPUOS/Legal/T.803-819.

B. Adoption of the agenda

4. At its opening meeting, the Committee adopted the following agenda:
 1. Opening of the session.
 2. Adoption of the agenda.
 3. Election of officers.
 4. Statement by the Chair.
 5. General exchange of views.
 6. Ways and means of maintaining outer space for peaceful purposes.
 7. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).
 8. Report of the Scientific and Technical Subcommittee on its forty-seventh session.
 9. Report of the Legal Subcommittee on its forty-ninth session.

10. Spin-off benefits of space technology: review of current status.
11. Space and society.
12. Space and water.
13. Space and climate change.
14. Use of space technology in the United Nations system.
15. International cooperation in promoting the use of space-derived geospatial data for sustainable development.
16. Other matters.
17. Report of the Committee to the General Assembly.

C. Election of officers

5. At the 613th meeting, on 9 June, Dumitru-Dorin Prunariu (Romania) was elected Chair of the Committee, Nomfuneko Majaja (South Africa) was elected First Vice-Chair and Raimundo González Aninat (Chile) was elected Second Vice-Chair/Rapporteur, each for a two-year term of office.

6. Also at the 613th meeting, the Committee endorsed the election of Ulrich Huth (Germany) as Chair of the Scientific and Technical Subcommittee at its forty-seventh session and Ahmad Talebzadeh (Islamic Republic of Iran) as Chair of the Legal Subcommittee for a two-year term of office, starting with the forty-ninth session.

D. Membership

7. In accordance with General Assembly resolutions 1472 A (XIV), 1721 E (XVI), 3182 (XXVIII), 32/196 B, 35/16, 49/33, 56/51, 57/116, 59/116 and 62/217 and decision 45/315, the Committee on the Peaceful Uses of Outer Space was composed of the following 69 States: Albania, Algeria, Argentina, Australia, Austria, Belgium, Benin, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chad, Chile, China, Colombia, Cuba, Czech Republic, Ecuador, Egypt, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kazakhstan, Kenya, Lebanon, Libyan Arab Jamahiriya, Malaysia, Mexico, Mongolia, Morocco, Netherlands, Nicaragua, Niger, Nigeria, Pakistan, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Senegal, Sierra Leone, Slovakia, South Africa, Spain, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam.

E. Attendance

8. Representatives of the following States members of the Committee attended the session: Algeria, Argentina, Australia, Austria, Belgium, Bolivia

(Plurinational State of), Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Cuba, Czech Republic, Ecuador, Egypt, France, Germany, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kazakhstan, Kenya, Libyan Arab Jamahiriya, Malaysia, Mexico, Mongolia, Morocco, Nigeria, Pakistan, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Slovakia, South Africa, Spain, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Turkey, Ukraine, United Kingdom, United States, Venezuela (Bolivarian Republic of) and Viet Nam.

9. At its 613th meeting, the Committee decided to invite, at their request, Azerbaijan, Costa Rica, Côte d'Ivoire, the Dominican Republic, Panama, Tunisia, the United Arab Emirates and Zimbabwe, as well as the Holy See, to send observers to attend its fifty-third session and to address it, as appropriate, on the understanding that doing so would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.

10. Observers for the International Atomic Energy Agency, the International Telecommunication Union (ITU) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) attended the session.

11. The session was attended by observers for the following intergovernmental organizations with permanent observer status with the Committee: the African Organization of Cartography and Remote Sensing, the Asia-Pacific Space Cooperation Organization (APSCO), the European Organisation for Astronomical Research in the Southern Hemisphere, the European Space Agency (ESA), the European Telecommunications Satellite Organization and the Regional Centre for Remote Sensing of North African States (CRTEAN).

12. The session was also attended by observers for the following non-governmental organizations with permanent observer status with the Committee: the Association of Space Explorers (ASE), EURISY, the European Space Policy Institute (ESPI), the International Institute for Applied Systems Analysis, the International Society for Photogrammetry and Remote Sensing, the International Space University, the International Academy of Astronautics (IAA), the International Astronautical Federation (IAF), the International Astronomical Union, the International Institute of Space Law (IISL), the Prince Sultan bin Abdulaziz International Prize for Water, the Secure World Foundation (SWF) and the Space Generation Advisory Council (SGAC).

13. At its 613th meeting, the Committee decided to invite, at their request, the International Association for the Advancement of Space Safety (IAASS) and the Association of Remote Sensing Centres in the Arab World to send observers to attend its fifty-third session and to address it, as appropriate, on the understanding that doing so would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.

14. A list of representatives of States members of the Committee, States not members of the Committee, United Nations entities and other organizations attending the session is contained in A/AC.105/2010/INF/1.

F. General statements

15. Statements were made by representatives of the following States members of the Committee during the general exchange of views: Algeria, Austria, Belgium, Bolivia (Plurinational State of), Brazil, Burkina Faso, Canada, Chile, China, Colombia, Ecuador, France, Germany, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kazakhstan, Libyan Arab Jamahiriya, Malaysia, Mexico, Nigeria, Pakistan, Poland, Republic of Korea, Romania, Russian Federation, Saudi Arabia, South Africa, Sudan, Switzerland, Syrian Arab Republic, Thailand, Turkey, Ukraine, United Kingdom, United States and Venezuela (Bolivarian Republic of). The representative of Algeria made a statement on behalf of the Group of 77 and China. The representative of Zimbabwe made a statement on behalf of the Group of African States. The representative of Costa Rica made a statement on behalf of the Group of Latin American and Caribbean States. The representative of Spain made a statement on behalf of the European Union. The representative of Egypt made a statement on behalf of the Movement of Non-Aligned Countries. The observers for Tunisia and the United Arab Emirates also made statements. Statements were also made by the observers for APSCO, CRTEAN, ESPI, IAF, SGAC and SWF.

16. The Committee welcomed the election of Dumitru-Dorin Prunariu (Romania) as its Chair, Nomfuneko Majaja (South Africa) as its First Vice-Chair and Raimundo González Aninat (Chile) as its Second Vice-Chair/Rapporteur.

17. The Committee expressed its appreciation to Ciro Arévalo Yepes (Colombia), the outgoing Chair, to Suwit Vibulsresth (Thailand), the outgoing First Vice-Chair, and to Filipe Duarte Santos (Portugal), the outgoing Second Vice-Chair/Rapporteur, for their excellent work and achievements during their terms of office.

18. The outgoing Chair of the Committee made a statement, noting achievements made by the Committee in the previous period, and acknowledged that the Committee had made concrete efforts to promote regional and interregional cooperation and coordination in space activities for the benefit of all countries.

19. At the 613th meeting, on 9 June, the Chair delivered a statement highlighting the role played by the Committee in promoting efforts to further space exploration and bring the benefits of space technology to Earth to ensure sustainable development for all countries. He stressed the fundamental importance of addressing the major challenges to global development by means of developing space science and technology applications.

20. At the 615th meeting, the Director of the Office for Outer Space Affairs of the Secretariat briefed the Committee on the work carried out by the Office during the past year and stressed the importance of the availability of financial and other resources for the successful implementation of the Office's programme of work.

21. The Committee congratulated Japan on the successful return of its unmanned Hayabusa space mission from the near-Earth asteroid Itokawa. It was noted that the Hayabusa round-trip mission marked the first time that a spacecraft had made physical contact with an asteroid before returning to Earth. The hope was expressed that the Hayabusa capsule would contain a sample from the surface of the asteroid.

22. The Committee also congratulated the Russian Federation on the successful launch from the Baikonur cosmodrome of the manned spacecraft Soyuz TMA-19. It

was the twenty-fourth mission of international crew to the International Space Station and the hundredth launch under the ISS programme.

23. The Committee noted with appreciation the establishment of a national space agency by the Government of the Plurinational State of Bolivia.

24. The Committee also noted the establishment of the UK Space Agency by the United Kingdom to replace the British National Space Centre.

25. The Committee heard the following presentations:

(a) “Satellite activities of Tunisia relating to telecommunication networks”, by the representative of Tunisia;

(b) “Space activities of the National Cartography and Remote Sensing Centre”, by the representative of Tunisia;

(c) “Recent developments in the field of space in Turkey, and the UN/Turkey/ESA Workshop on Space Technology Applications for Socio-Economic Benefits”, by the representative of Turkey;

(d) “Global Lunar Conference”, by the representative of China.

26. The Committee noted with appreciation the successful completion of the 60th International Astronautical Congress, held in the Republic of Korea in October 2009 and attended by over 4,000 participants from 72 countries. The Committee noted with satisfaction that the International Astronautical Congress would be hosted by the Government of the Czech Republic in 2010 and by the Government of South Africa in 2011.

G. Adoption of the report of the Committee

27. After considering the various items before it, the Committee, at its 627th meeting, on 18 June, adopted its report to the General Assembly containing the recommendations and decisions set out below.

Chapter II

Recommendations and decisions

A. Ways and means of maintaining outer space for peaceful purposes

28. In accordance with paragraph 42 of General Assembly resolution 64/86, the Committee continued its consideration, as a matter of priority, of ways and means of maintaining outer space for peaceful purposes.

29. The representatives of the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements were also made on the item by representatives of other member States. The observer for Costa Rica made a statement on behalf of the Group of Latin American and Caribbean States and the representative of Spain made a statement on behalf of the European Union.

30. The Committee heard the following presentations:

(a) “Space Security Index 2010”, by the representative of Canada;

(b) “The Shared Space Situational Awareness Program of the United States”, by the representative of the United States.

31. The Committee agreed that, through its work in the scientific, technical and legal fields, it had a fundamental role to play in ensuring that outer space was maintained for peaceful purposes.

32. The Committee noted with satisfaction the agreement of the General Assembly that, during its consideration of the matter, the Committee could continue to consider ways to promote regional and interregional cooperation based on experiences stemming from the Space Conferences of the Americas and the African Leadership Conferences on Space Science and Technology for Sustainable Development, and the role that space technology could play in the implementation of the recommendations of the World Summit on Sustainable Development.¹

33. The Committee noted with appreciation that representatives of Colombia, Ecuador and Mexico, as well as of the pro tempore secretariat of the Fifth Space Conference of the Americas, the functions of which were exercised by the Government of Ecuador, and the International Group of Experts, had met in Quito on 16 and 17 December 2009 and in Cuenca, Ecuador, on 27 and 28 May 2010. The Committee also noted that the meetings had resulted in detailed plans for the preparations for the Sixth Space Conference of the Americas, to be hosted by the Government of Mexico in November 2010. The Committee noted that a seminar on promoting regional cooperation in matters relating to space law and policy had been held in conjunction with the meeting in May 2010. The Committee noted with appreciation that a preparatory conference for the Sixth Space Conference of the Americas would be hosted by the Government of Chile in July 2010.

¹ *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002* (United Nations publication, Sales No. E.03.II.A.1 and corrigendum).

34. The Committee noted with satisfaction that the Third African Leadership Conference on Space Science and Technology for Sustainable Development had been held in Algiers from 30 November to 2 December 2009, under the patronage of the President of Algeria. In that regard, the Committee noted that, on the occasion of the Conference, Algeria, Kenya, Nigeria and South Africa had signed a cooperation agreement on the African Resource Management satellite constellation. The Committee also noted with appreciation that the Government of Kenya would act as host to the Fourth African Leadership Conference in 2011.

35. The Committee also noted with satisfaction that APSCO had held its second Council Meeting in Beijing on 17 and 18 December 2009 and had commenced the implementation of the long-term development plan and five-year project plan. An APSCO symposium on space technology and applications would be held in Pakistan in September 2010, on the subject of agriculture and food security.

36. The Committee noted with appreciation the holding of the sixteenth session of the Asia-Pacific Regional Space Agency Forum (APRSAF) in Bangkok from 26 to 29 January 2010, with the theme "Space applications: contributions towards human safety and security". The seventeenth session of APRSAF, to be jointly organized by the Government of Australia and the Government of Japan, would be hosted by Australia in November 2010.

37. The Committee emphasized that regional and interregional cooperation and coordination in the field of space activities were essential to strengthen the peaceful uses of outer space, to assist States in the development of their space capabilities and to contribute to the achievement of the Millennium Development Goals.²

38. The Committee noted the project of the European Union to adopt a code of conduct for outer space activities. The draft text had been supported by the Council of the European Union in December 2008 as a basis for consultations with third parties. The draft code of conduct included transparency and confidence-building measures and reflects a comprehensive approach to safety and security in outer space guided by the following principles: freedom of access to space for all for peaceful purposes, preservation of the security and integrity of space objects in orbit and due consideration for the legitimate security and defence interests of States. The Committee also noted that consultations with other States were under way, with a view to reaching consensus on a text that would be acceptable to the greatest possible number of States.

39. Some delegations reiterated their commitment to the peaceful use and exploration of outer space and emphasized the following principles: equal and non-discriminatory access to outer space and equal conditions for all States, irrespective of their level of scientific, technical and economic development; non-appropriation of outer space, including the Moon and other celestial bodies, by claim of sovereignty, use, occupation or any other means; non-militarization of outer space and its strict exploitation for the improvement of living conditions and peace on the planet; and regional cooperation to promote space activities as established by the General Assembly and other international forums.

40. Some delegations were of the view that the Committee provided a unique opportunity for fostering international and interregional dialogue and cooperation to

² A/56/326, annex.

maintain peaceful uses of outer space, and that it served as a valuable forum for encouraging research and information-sharing, exchanging good practices and defining confidence-building measures in the framework of international space law.

41. Some delegations were of the view that all activities in outer space should bring benefits to humankind and that all countries, irrespective of size and capacity, should have the right to use outer space for peaceful purposes.

42. The view was expressed that the Committee played a notable role in advancing space cooperation and provided a unique forum for the exchange of information among States and that there were tangible opportunities to enhance international cooperation, in keeping with the Committee's mandate.

43. Some delegations were of the view that the existing legal regime of outer space was not adequate to prevent the weaponization of outer space and address the issues of the space environment and that the further development of international space law would be important for maintaining outer space for peaceful purposes. Those delegations also expressed their support for a comprehensive legal instrument to maintain outer space for peaceful purposes, without prejudice to the existing legal framework.

44. Some delegations were of the view that provisions of international space law had to be improved to effectively respond to challenges posed by a number of problems involved in space activities, such as the absence of the definition and delimitation of outer space, the use of nuclear power sources in outer space and the threat of space debris. The delegations that expressed that view considered that the improvement of international space law would ensure that outer space was used exclusively for peaceful purposes and that it was necessary to enhance coordination within the United Nations system to promote the creation of international rules and mechanisms that would address effectively the current challenges to outer space activities.

45. The view was expressed that the conclusion of the draft treaty on the prevention of the placement of weapons in outer space and of the threat or use of force against outer space objects, which had been presented by China and the Russian Federation to the Conference on Disarmament in 2008, would prevent an arms race in outer space.

46. The view was expressed that, in order to maintain the peaceful nature of space activities and prevent the weaponization of outer space, it was essential for the Committee to enhance its cooperation and coordination with other bodies and mechanisms of the United Nations system, such as the First Committee of the General Assembly and the Conference on Disarmament.

47. The view was expressed that the Committee had been created exclusively to promote international cooperation on the peaceful uses of outer space and that disarmament issues were more appropriately dealt with in other forums, such as the First Committee of the General Assembly and the Conference on Disarmament.

48. The view was expressed that the principle embodied in article I of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies,³ ensured the free exploration

³ United Nations, *Treaty Series*, vol. 610, No. 8843.

and use of outer space by all States, including the right to uninterrupted operation of the global telecommunication network.

49. The view was expressed that, in order to ensure that developing countries enjoy the benefits of space science and technology, developed countries should share experiences and know-how, as well as provide affordable and timely access to data on a non-discriminatory basis.

50. The view was expressed that activities in outer space, including those related to satellite products, which were making a substantial contribution to the well-being and socio-economic development of humankind, should be carried out in a manner compatible with the sovereign rights of States, including the principle of non-intervention, as enshrined in the relevant United Nations instruments.

51. The Committee recommended that at its fifty-fourth session, in 2011, consideration, on a priority basis, of the item on ways and means of maintaining outer space for peaceful purposes should be continued.

B. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space

52. The Committee considered the agenda item “Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)” in accordance with General Assembly resolution 64/86.

53. The representatives of Canada, Japan, Nigeria, Portugal and the Russian Federation made statements under the item. Representatives of other member States also made statements relating to the item during the general exchange of views and the discussion on the report of the Scientific and Technical Subcommittee on its forty-seventh session.

54. The Committee heard a presentation entitled “Space initiatives at the Center for Strategic and International Studies”, by the representative of the United States.

55. The Committee endorsed the recommendations of the Scientific and Technical Subcommittee, submitted to the Subcommittee at its forty-seventh session by its Working Group of the Whole, which had been reconvened under the chairmanship of S. K. Shivakumar (India) to consider, inter alia, the implementation of the recommendations of UNISPACE III (A/AC.105/958, para. 55 and annex I, sect. III).

56. The Committee noted with satisfaction that Member States continued to contribute to the implementation of the recommendations of UNISPACE III through national and regional activities and by supporting and participating in the programmes established in response to those recommendations, and that some States had established policies aimed at maximizing and harmonizing the use of various types of space-based services, such as navigation, meteorology and remote sensing, to respond to societal needs.

57. The Committee noted with appreciation that the Action Team on Public Health, co-chaired by Canada and India, had included in its workplan the use of telecommunications in the context of tele-health and Earth observation applications

in the context of tele-epidemiology, with an emphasis on improving public health and infectious-disease management. The Committee noted that the action team was pursuing the objectives contained in its workplan for the period 2010-2011 and would present a report at the forty-eighth session of the Subcommittee. The Committee also noted that the action team encouraged Member States to contribute to its report by sharing experiences and views on the way forward.

58. The view was expressed that the Committee should give consideration to the possibility of holding a fourth United Nations conference on the exploration and peaceful uses of outer space to address the current major challenges of sustainable development.

59. The Committee had before it the report on the contribution of the Committee on the Peaceful Uses of Outer Space to the work of the Commission on Sustainable Development for the thematic cluster 2010-2011 (A/AC.105/944).

60. The Committee agreed that, in the preparation of its forthcoming contribution to the work of the Commission on Sustainable Development, it should contribute to the thematic clusters in which space technology and its applications played a particularly important role; pay attention to the cross-cutting issues identified by the Commission; identify areas where space-based systems could complement terrestrial systems to promote integrated solutions; and include, as appropriate and in addition to examples of regional and international cooperation, national success stories that might provide useful examples for the overall contribution of the Committee.

61. The Committee requested the Secretariat to provide, for consideration by the Working Group of the Whole at the forty-eighth session of the Scientific and Technical Subcommittee, a draft of the contribution of the Committee to the work of the Commission for the next thematic cluster, bearing in mind the overall review of the implementation of Agenda 21,⁴ together with contributions of member States.

62. The Committee agreed that the Director of the Office for Outer Space Affairs should attend the sessions of the Commission with a view to raising awareness and promoting the benefits of space science and technology, in particular in the areas being addressed by the Commission.

63. Some delegations were of the view that the Committee, in its contributions to the work of the Commission on Sustainable Development, should focus on the following interrelated main areas: poverty and development; sustainability of energy systems; food security, water resources and biodiversity; and climate change.

64. The Committee noted with appreciation the publication of the report on the events of World Space Week 2009 (ST/SPACE/48), prepared by the World Space Week Association in cooperation with the Office for Outer Space Affairs.

⁴ *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

C. Report of the Scientific and Technical Subcommittee on its forty-seventh session

65. The Committee took note with appreciation of the report of the Scientific and Technical Subcommittee on its forty-seventh session (A/AC.105/958), which contained the results of its deliberations on the agenda items considered by the Subcommittee in accordance with General Assembly resolution 64/86.

66. The Committee expressed its appreciation to the Chair of the Subcommittee, Ulrich Huth (Germany) for his able leadership during its forty-seventh session.

67. The representatives of Belgium, Canada, China, Colombia, Cuba, Germany, India, Indonesia, Japan, Mexico, Nigeria, the Russian Federation, Saudi Arabia, South Africa, the Sudan, Thailand, the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements relating to this item were also made by representatives of other member States and by the observer for Costa Rica on behalf of the Group of Latin American and Caribbean States.

68. The Committee heard the following presentations:

(a) “Japanese contribution for disaster management support”, by the representative of Japan;

(b) “An introduction to the Space Foundation”, by the representative of the United States;

(c) “Use of space-based information for seismic risk management: an Italian Space Agency pilot project”, by the representative of Italy;

(d) “NASA today and tomorrow”, by the representative of the United States;

(e) “Re-entry of Hayabusa on 13 June 2010”, by the representative of Japan;

(f) “Gamma-ray astronomy on the way to uncovering the mystery of dark matter in the universe”, by the representative of the Russian Federation;

(g) “Proposing a new radio-quiet zone on the far side of the Moon”, by the observer for IAA;

(h) “Space in Chile: past, present, future”, by the representative of Chile;

(i) “Volcanic ash layers over Europe: airborne observations with the DLR Falcon research aircraft in April/May 2010”, by the representative of Germany.

1. United Nations Programme on Space Applications

(a) Activities of the United Nations Programme on Space Applications

69. The Committee took note of the discussion of the Subcommittee under the item on the United Nations Programme on Space Applications, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 22-46 and annex I, paras. 2-3).

70. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group of the Whole, which had been convened under the chairmanship of S. K. Shivakumar (India) to consider this item (A/AC.105/958, paras. 25 and 35).

71. The Committee took note of the activities of the Programme carried out in 2009, as presented in the report of the Scientific and Technical Subcommittee (A/AC.105/958, paras. 32-34) and in the report of the Expert on Space Applications (A/AC.105/969, annex I).

72. The Committee expressed its appreciation to the Office for Outer Space Affairs for the manner in which the activities of the Programme had been implemented. The Committee also expressed its appreciation to the Governments and intergovernmental and non-governmental organizations that had sponsored those activities.

73. The Committee noted with satisfaction that further progress was being made in the implementation of the activities of the Programme for 2010, as described in the report of the Subcommittee (A/AC.105/958, para. 35).

74. The Committee noted with satisfaction that the Office for Outer Space Affairs was helping developing countries and countries with economies in transition to participate in and benefit from activities being carried out by the Programme.

75. The Committee noted with concern the limited financial resources available to implement the Programme and appealed to States and organizations to continue supporting the Programme through voluntary contributions.

76. The Committee noted with appreciation the implementation of the Programme's Basic Space Science Initiative and Basic Space Technology Initiative, as well as its preparation of the Human Space Technology Initiative, aimed at enhancing the participation of developing countries in scientific activities at the International Space Station.

(i) *Conferences, training courses and workshops of the United Nations Programme on Space Applications*

77. The Committee endorsed the workshops, training courses, symposiums and expert meetings planned for the remaining part of 2010, and expressed its appreciation to Austria, Bolivia (Plurinational State of), the Czech Republic, Egypt, the Republic of Moldova, Thailand, Turkey and the United States, as well as to ESA and IAF, for co-sponsoring, hosting and supporting those activities (A/AC.105/969, annex II).

78. The Committee noted with appreciation that the first expert meeting on the Human Space Technology Initiative would be held in Putrajaya, Malaysia, in the fourth quarter of 2010 and expressed its appreciation to the Government of Malaysia, the National Space Agency of Malaysia (ANGKASA) and the National University of Malaysia for acting as host to and supporting that meeting.

79. The Committee endorsed the programme of workshops, training courses, symposiums and expert meetings related to socio-economic benefits of space activities, small satellites, basic space technology, human space technology, space weather, global navigation satellite systems (GNSS) and search and rescue, planned to be held in 2011 for the benefit of developing countries.

80. The Committee noted with appreciation that the host countries of the regional centres for space science and technology education, affiliated to the United Nations, were providing the centres with significant financial and in-kind support.

(ii) Long-term fellowships for in-depth training

81. The Committee expressed its appreciation to the Politecnico di Torino, the Istituto Superiore Mario Boella and the Istituto Elettrotecnico Nazionale Galileo Ferraris for the fellowships they provided for postgraduate studies relating to GNSS and landscape epidemiology.

82. The Committee noted that it was important to increase opportunities for in-depth education in all areas of space science, technology and applications and space law through long-term fellowships and urged Member States to make such opportunities available at their relevant institutions.

(iii) Technical advisory services

83. The Committee noted with appreciation the technical advisory services provided under the United Nations Programme on Space Applications in support of activities and projects promoting regional cooperation in space applications, as referred to in the report of the Expert on Space Applications (A/AC.105/969, paras. 46-51).

(b) International Space Information Service

84. The Committee noted with satisfaction that the publication entitled *Highlights in Space 2009* had been issued on CD-ROM.

85. The Committee noted with satisfaction that the forthcoming publication on the United Nations Programme on Space Applications would provide information on the orientation and activities of the Programme for the period 2010 and beyond.

86. The Committee noted with satisfaction that the Secretariat had continued to enhance the International Space Information Service and the website of the Office for Outer Space Affairs (www.unoosa.org).

(c) Regional and interregional cooperation

87. The Committee noted with satisfaction that the United Nations Programme on Space Applications continued to emphasize cooperation with Member States at the regional and global levels to support the regional centres for space science and technology education, affiliated to the United Nations. The highlights of the activities of the regional centres supported under the Programme in 2009 and the activities planned for 2010 and 2011 were presented in the report of the Expert on Space Applications (A/AC.105/969, annexes I-III).

(d) International Satellite System for Search and Rescue

88. The Committee recalled that, at its forty-fourth session, it had agreed that a report on the activities of the International Satellite System for Search and Rescue (COSPAS-SARSAT) should be considered annually by the Committee as part of its consideration of the United Nations Programme on Space Applications and that member States should report on their activities relating to COSPAS-SARSAT.

89. The Committee noted with satisfaction that COSPAS-SARSAT currently had 40 member States and two participating organizations and that it had six polar-orbiting and five geostationary satellites that provided worldwide coverage for

emergency beacons. The Committee further noted that since 1982, COSPAS-SARSAT had helped to save thousands of lives every year; in 2009, it helped to save 1,596 lives in 478 search and rescue events worldwide.

90. The Committee further noted that the use of satellites in medium-Earth orbit continued to be explored, with a view to improving international satellite-aided search and rescue operations.

91. The Committee welcomed the continued efforts to enhance the System for Search and Rescue, including testing of Global Positioning System satellites, and improving the capabilities of beacons in the future to best take advantage of medium-Earth orbit satellites.

2. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment

92. The Committee took note of the discussion of the Subcommittee under this agenda item, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 58-66).

93. In the course of the discussion, delegations reviewed national and cooperative programmes on remote sensing, providing examples of national programmes and bilateral, regional and international cooperation.

94. The Committee noted with satisfaction that a growing number of developing countries were actively developing and deploying their own remote-sensing satellite systems and utilizing space-based data to advance socio-economic development, and stressed the need to continue enhancing capacities of developing countries in the use of remote-sensing technology.

95. The Committee noted with satisfaction the increasing availability of remote-sensing data and derived information at little or no cost, and underlined the importance of ensuring non-discriminatory access to space-based data at a reasonable cost or free of charge, and in a timely manner.

96. The Committee recognized the important role played by international intergovernmental organizations in promoting international cooperation in the use of remote-sensing technology, in particular for the benefit of developing countries.

97. Some delegations were of the view that the unrestricted and unregulated availability of high-resolution satellite data in the public domain could be detrimental to the safety of people and States. Those delegations proposed that the Committee and its Legal Subcommittee place this item on their agendas for their next sessions in order to establish guidelines for the regulation of the sale, distribution and dissemination of high-resolution satellite data on the Internet.

3. Space debris

98. The Committee took note of the discussion of the Subcommittee under the agenda item on space debris, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 67-89).

99. The Committee endorsed the decisions and recommendations of the Subcommittee on this item (A/AC.105/958, paras. 80 and 81).

100. The Committee noted with satisfaction that at its current session the Secretariat had made available the text of the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space in the form of a publication (ST/SPACE/49).

101. The Committee noted with appreciation that some States were implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space and/or the Inter-Agency Space Debris Coordination Committee (IADC) Space Debris Mitigation Guidelines and that other States had developed their own space debris mitigation standards based on those guidelines. The Committee also noted that other States were using the IADC Guidelines and the European Code of Conduct for Space Debris Mitigation as reference points in their regulatory frameworks established for national space activities.

102. The Committee agreed that more States should implement the Space Debris Mitigation Guidelines of the Committee.

103. The view was expressed that more transparency in the information on space debris, as well as on space activities of States, particularly activities that presented a risk of doing harm, was important for States and that it would enhance the awareness and capability of States in space debris monitoring.

104. The view was expressed that States without the capability and expertise to fully implement the Space Debris Mitigation Guidelines of the Committee should benefit from the best practices of and training provided by States with relevant experience.

105. The view was expressed that the Committee should focus on the development of best practices or guidelines for collision avoidance, which would include such topics as pre-launch, pre-manoeuve and re-entry notification, a registry of operators, common standards, best practices and guidelines and the establishment of national regulatory regimes.

106. Some delegations expressed the view that the States most responsible for the creation of space debris, including debris from platforms with nuclear power sources, and the States having the capability to take action on space debris mitigation should inform the Committee about their actions to reduce the creation of space debris.

107. Some delegations were of the view that the Space Debris Mitigation Guidelines of the Committee should be further developed and that the Scientific and Technical Subcommittee and the Legal Subcommittee should cooperate with the aim of developing legally binding rules relating to space debris.

4. Space-system-based disaster management support

108. The Committee took note of the discussion of the Subcommittee under the agenda item on space-system-based disaster management support, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 90-102 and annex I, paras. 10-13).

109. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group of the Whole, which was convened, inter alia, to consider this item (A/AC.105/958, para. 102 and annex I, para. 1).

110. The Committee noted the progress reflected in the reports on the activities carried out in 2009 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) (A/AC.105/952 and A/AC.105/955).

111. The Committee noted with appreciation the signing of the host country agreement between the Government of China and the Office for Outer Space Affairs, which would lead to the establishment of the UN-SPIDER Beijing office.

112. The Committee noted with appreciation the cash and in-kind contributions made by the Governments of Austria, Croatia, Germany, the Republic of Korea, Spain and Turkey to support the activities of the UN-SPIDER programme in 2009. The Committee also noted that the UN-SPIDER programme would require additional voluntary contributions to carry out all the activities planned for 2010, as well as of senior experts, provided as non-reimbursable loans, and associate experts. The Committee encouraged Member States to provide the necessary support, including financial support, for the UN-SPIDER programme to carry out its work.

113. The Committee noted with satisfaction that the Office for Outer Space Affairs had so far signed cooperation agreements for the establishment of UN-SPIDER regional support offices with Algeria, Iran (Islamic Republic of), Nigeria, Pakistan, Romania and Ukraine, as well as the Asian Disaster Reduction Centre and the Water Center for the Humid Tropics of Latin America and the Caribbean. The Committee noted with appreciation that the Governments of Colombia, Indonesia, the Philippines and South Africa, as well as the Regional Centre for Mapping of Resources for Development and the University of the West Indies, had each made an offer to host a UN-SPIDER regional support office.

114. The Committee noted with satisfaction the increase in the availability of space-based information to support disaster management, particularly emergency response activities, through several existing mechanisms, such as the Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters (also called the International Charter on Space and Major Disasters), the Sentinel Asia project, and the Global Monitoring for Environment and Security (GMES) Services and Applications for Emergency Response (SAFER) initiative in Europe.

115. The view was expressed that efforts to make Sentinel Asia more effective and user-friendly should be continued so that more Governments and institutions would make use of it. The delegation that expressed that view also considered that the activities of Sentinel Asia, the results of it and the lessons learned could provide useful ideas and a model for disaster management support activities in other regions where no such initiatives had been carried out.

116. The Committee noted the work carried out in the framework of UN-SPIDER SpaceAid, which was supporting interested end-users in having access to and using large amounts of space-based information made available by existing mechanisms and initiatives to support responses to emergency events.

117. The Committee noted that the Office for Outer Space Affairs had established, as outlined in a conference room paper (A/AC.105/2010/CRP.11), the SpaceAid account within the existing Trust Fund for the United Nations Programme on Space Applications. The separate account would be used to receive funds to support the

aims of the SpaceAid framework. The Committee also noted that the Office for Outer Space Affairs would inform member States about the account and invite them to make contributions.

118. The Committee directed the Office for Outer Space Affairs to meet with the International Charter on Space and Major Disasters, Sentinel Asia, the GMES SAFER project, the Mesoamerican Regional Visualization and Monitoring System (SERVIR) project and others with a view to establishing an agreed interface with UN-SPIDER to avoid overlaps and duplication of effort. The Committee requested the Office to report on its efforts to the Scientific and Technical Subcommittee at its forty-eighth session, in 2011.

119. The view was expressed that the use of the SpaceAid account could lead to overlaps in access to and use of existing and readily available resources in responses to disasters. The delegation that expressed that view stressed that the acquisition of imagery by UN-SPIDER could result in the unwillingness of private sector operators of remote-sensing satellites to provide data free of charge to existing initiatives, as many currently do. That delegation stressed that emergency preparedness, response and recovery were the responsibility of each Member State in respect of its population.

5. Recent developments in global navigation satellite systems

120. The Committee took note of the discussion of the Subcommittee under the agenda item on recent developments in GNSS, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 103-121).

121. The Committee noted with appreciation that the International Committee on GNSS (ICG) continued to make significant progress towards the goals of encouraging compatibility and interoperability among global and regional space-based positioning, navigation and timing systems and promoting the use of GNSS and their integration into infrastructures, particularly in developing countries.

122. The Committee noted with appreciation the progress made on the ICG workplan, in particular the adoption of a new principle on transparency in the provision of open services.

123. The Committee noted with appreciation the achievements of the ICG Providers' Forum, as reflected in the publication entitled "Current and planned global and regional navigation satellite systems and satellite-based augmentation systems" (ST/SPACE/50).

124. The Committee noted with appreciation the activities conducted and/or planned in the framework of the ICG workplan focusing on building capacity, specifically in deploying instruments for the International Space Weather Initiative, developing a GNSS education curriculum, utilizing regional reference frames and the application of GNSS in various areas to support sustainable development, as reflected in document A/AC.105/950.

125. Some delegations reiterated their commitment to provide additional funds in the form of voluntary contributions to the Office for Outer Space Affairs in support of the programme on GNSS applications, including the meetings and activities of ICG and its Providers' Forum.

126. The Committee noted with appreciation that the fourth meeting of ICG and the fourth meeting of its Providers' Forum had been held in Saint Petersburg, Russian Federation, in September 2009 (A/AC.105/948).

127. The Committee expressed its appreciation for work undertaken by the Office for Outer Space Affairs in assisting with the planning and organization of the fourth meeting of ICG and for its continued support as executive secretariat for ICG and its Providers' Forum.

128. The Committee noted that the fifth meeting of ICG would be hosted jointly by Italy and the European Commission in Turin, Italy, from 18 to 22 October 2010, and that the sixth meeting would be hosted by Japan in 2011.

6. Use of nuclear power sources in outer space

129. The Committee took note of the discussion of the Subcommittee under the agenda item on the use of nuclear power sources in outer space, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 122-137).

130. The Committee endorsed the decisions and recommendations of the Subcommittee and the Working Group on the Use of Nuclear Power Sources in Outer Space, reconvened under the chairmanship of Sam A. Harbison (United Kingdom) (A/AC.105/958, para. 134 and annex II).

131. The Committee welcomed the endorsement by the Subcommittee at its forty-seventh session of a new multi-year workplan of the Working Group on the Use of Nuclear Power Sources in Outer Space. The Committee noted that the workplan for the period 2010-2015 was aimed at promoting and facilitating the implementation of the Safety Framework for Nuclear Power Source Applications in Outer Space⁵ by providing information pertinent to challenges faced by member States and international intergovernmental organizations, in particular those considering or initiating involvement in applications of nuclear power sources in outer space. It was also aimed at identifying technical topics for and establishing the objectives, scope and attributes of any potential additional work by the Working Group to further enhance safety in the development and use of nuclear power source applications in space.

132. Some delegations were of the view that the Safety Framework represented a significant advance in the development of safe nuclear power source applications and that its implementation by Member States and international intergovernmental organizations would provide assurance to the global public that nuclear power source applications would be launched and used in a safe manner.

133. The view was expressed that a closer link should be established between the Scientific and Technical Subcommittee and the Legal Subcommittee with the aim of promoting international norms relevant to matters being considered by the Scientific and Technical Subcommittee under this item, as well as to matters related to space debris.

134. Some delegations expressed the view that it was exclusively States, irrespective of their level of social, economic, scientific or technical development, that had an obligation to engage in the regulatory process associated with the use of

⁵ A/AC.105/934.

nuclear power sources in outer space and that the matter concerned all humanity. Those delegations were of the view that Governments bore international responsibility for national activities involving the use of nuclear power sources in outer space conducted by governmental and non-governmental organizations and that such activities must be beneficial, not detrimental, to humanity.

135. Some delegations were of the view that the use of nuclear power sources in outer space should be as limited as possible and that comprehensive and transparent information on measures taken to ensure safety should be provided to other States. Those delegations were of the view that no justification existed for the use of nuclear power sources in terrestrial orbits, for which other sources of energy were available that were much safer and had been proved to be efficient.

7. Near-Earth objects

136. The Committee took note of the discussion of the Subcommittee under the agenda item on near-Earth objects, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 138-152 and annex III).

137. The Committee endorsed the recommendations of the Subcommittee and its Working Group on Near-Earth Objects, which was convened under the chairmanship of Sergio Camacho (Mexico) (A/AC.105/958, para. 152 and annex III).

138. The Committee noted with satisfaction that ASE and SWF, with support from the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (CRECTEALC), had organized a workshop in Mexico City on the establishment of an information, analysis and warning network. The Committee also noted with satisfaction that, with support from ASE and SWF, the University of Nebraska-Lincoln (United States) had prepared a report entitled "Legal aspects of NEO threat response and related institutional issues" in order to assist the intersessional work of the Action Team on Near-Earth Objects and the Working Group on Near-Earth Objects of the Scientific and Technical Subcommittee.

139. The Committee noted that, on the margins of its fifty-third session, the Action Team on Near-Earth Objects had held three meetings to consider, among other things, the executive summaries from the workshop referred to in paragraph 138 above.

140. The Committee noted with satisfaction that the Romanian Space Agency would co-organize the IAA Planetary Defence Conference, to be held in Romania in May 2011.

141. The view was expressed that international projects undertaken by Member States to detect and characterize near-Earth objects, such as the Large Millimeter Telescope, could be usefully employed in future international cooperative endeavours to protect the planet from the impact threat of near-Earth objects.

142. The view was expressed that international cooperation was essential for addressing the issues of observing near-Earth objects on a regular basis, data- and information-sharing, and capacity-building for developing countries.

8. Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union

143. The Committee took note of the discussion of the Subcommittee under the agenda item on the examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 153-161).

144. Some delegations expressed the view that the geostationary orbit was a limited natural resource and that it was at risk of becoming saturated. Those delegations were of the view that the exploitation of the geostationary orbit should, with the participation and cooperation of ITU, be rationalized and made available to all States, irrespective of their current technical capabilities, thus giving them the opportunity to have access to the geostationary orbit under equitable conditions, taking into account in particular the needs of developing countries and the geographical position of certain countries. Those delegations considered that the item on the geostationary orbit should remain on the agenda of the Subcommittee for further discussion, with the purpose of continuing to analyse its scientific and technical characteristics.

145. Some delegations were of the view that the geostationary orbit provided unique potential for social programmes, educational projects and medical assistance. In that regard, those delegations were of the view that the geostationary orbit should be made available taking into account the pertinent ITU regulations, the relevant norms and decisions of the United Nations and in particular annex III to the report of the Legal Subcommittee on its thirty-ninth session (A/AC.105/738).

9. International Space Weather Initiative

146. The Committee took note of the discussion of the Subcommittee under the agenda item on the International Space Weather Initiative, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 162-173).

147. The Committee noted that the International Space Weather Initiative would contribute to the observation of space weather through the deployment of instrument arrays and the sharing of observed data among researchers around the world.

148. The Committee welcomed the fact that participation in the International Space Weather Initiative was open to scientists from all countries, as instrument hosts or instrument providers.

149. The Committee noted that the International Space Weather Initiative offered Member States the opportunity to coordinate the global monitoring of space weather using space- and ground-based assets, assist in consolidating common knowledge and develop essential forecast capabilities to improve the safety of space-based assets.

10. Long-term sustainability of outer space activities

150. The Committee took note of the discussion of the Subcommittee under the agenda item on the long-term sustainability of outer space activities, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 174-203).

151. The Committee endorsed the recommendations of the Scientific and Technical Subcommittee on this item (A/AC.105/958, paras. 179-180 and 184).

152. The Committee welcomed the establishment by the Scientific and Technical Subcommittee of the Working Group on the Long-term Sustainability of Outer Space Activities under the chairmanship of Peter Martinez (South Africa) and endorsed the recommendation of the Subcommittee that the Working Group be allowed to meet during the current session of the Committee to further develop its terms of reference and methods of work.

153. The Committee noted with appreciation that a proposal for the terms of reference and methods of work of the Working Group, as contained in document A/AC.105/L.277, had been submitted by the Chair of the Working Group for consideration by the Working Group.

154. At the 620th meeting, the Chairman of the Working Group informed the Committee about the results of the meeting held by the Working Group at the current session of the Committee.

155. The Committee noted that the proposal for the terms of reference and methods of work of the Working Group would be revised to incorporate, to the extent possible, the comments received from member States during the discussions of the Working Group and would be distributed as a revision to document A/AC.105/L.277.

156. The Committee agreed to invite member States to submit their views and comments on the forthcoming revision to A/AC.105/L.277, with specific emphasis on terms of reference, thematic areas, methods of work and workplan.

157. The Committee agreed to invite member States and the permanent observers of the Committee and the entities referred to in the report of the Scientific and Technical Subcommittee (A/AC.105/958, para. 184) to present information on their activities pertaining to the long-term sustainability of outer space activities, for consideration by the Working Group at the forty-eighth session of the Subcommittee.

158. The Committee agreed to invite member States to nominate their points of contact to facilitate further intersessional progress towards developing the terms of reference and methods of work of the Working Group in preparation for the forty-eighth session of the Scientific and Technical Subcommittee.

159. The view was expressed that actions were necessary to prevent a degradation of the space environment, to extend the benefits of space to all, in particular to developing countries, and to maintain access to space for future generations.

160. The view was expressed that although the preservation of space assets, particularly communication and Earth observation satellites, was critical for social and economic development, there was at present no international space traffic management, nor any mechanism for sharing space awareness information among

all States, and it was essential for member States to actively contribute to the work under this item.

161. The view was expressed that issues relating to ensuring the safety and security of all space activities were among the priorities to be addressed under this agenda item, particularly in view of the collisions and near-collisions of objects in outer space in recent years.

162. The view was expressed that it was impossible to ensure the safety and sustainability of activities in outer space without having security in outer space and that it was important to have a constructive engagement within the Conference on Disarmament on space security.

163. Some delegations were of the view that the work on the long-term sustainability of outer space activities should not be limited to the safety and security interests of States with advanced space activities, but should also focus on ensuring equitable and rational access to outer space, which was a limited resource and at risk of saturation.

164. The view was expressed that the consideration of the long-term sustainability of outer space activities should not be used as a pretext for States that had been able to develop their space capabilities without controls, resulting in the challenges faced today, to restrict or impose controls on other States wishing to exercise their legitimate right to use the same technology for their national benefit.

165. The view was expressed that the consideration of the long-term sustainability of outer space activities should not be used as a means to promote commercial activities in outer space to the detriment of the interests of States and that it was necessary to take into account international law, the Charter of the United Nations and treaties on outer space in the consideration of this item.

166. The view was expressed that a joint working group should be established in cooperation with ITU to address matters relating to the achievement of consensus on the sustainable use of outer space.

167. The view was expressed that collision avoidance should be the emphasis of the best-practice guidelines to be developed under this item and that pre-launch, pre-manoeuvre and re-entry notifications, a registry of operators, common standards, best practices and guidelines and, eventually, the establishment of national regulatory regimes should be addressed.

168. The view was expressed that decisions related to this agenda item were under the exclusive responsibility of States members of the Committee.

11. Draft provisional agenda for the forty-eighth session of the Scientific and Technical Subcommittee

169. The Committee took note of the discussion of the Subcommittee on the agenda item on the draft provisional agenda for the forty-eighth session of the Scientific and Technical Subcommittee, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 204-206 and annex I, sect. V).

170. On the basis of the deliberations of the Scientific and Technical Subcommittee at its forty-seventh session, the Committee agreed that the following substantive items should be considered by the Subcommittee at its forty-eighth session:

1. General exchange of views and introduction of reports submitted on national activities.
2. United Nations Programme on Space Applications.
3. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).
4. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.
5. Space debris.
6. Space-system-based disaster management support.
7. Recent developments in global navigation satellite systems.
8. Items to be considered under workplans:
 - (a) Use of nuclear power sources in outer space;
(Work for 2011 as reflected in the multi-year workplan in paragraph 8 of annex II to the report of the Scientific and Technical Subcommittee on its forty-seventh session (A/AC.105/958))
 - (b) Near-Earth objects;
(Work for 2011 as reflected in the multi-year workplan in paragraph 11 of annex III to the report of the Scientific and Technical Subcommittee on its forty-fifth session (A/AC.105/911))
 - (c) International Space Weather Initiative;
(Work for 2011 as reflected in the multi-year workplan in paragraph 16 of annex I to the report of the Scientific and Technical Subcommittee on its forty-sixth session (A/AC.105/933))
 - (d) Long-term sustainability of outer space activities;
(Work for 2011 as reflected in the multi-year workplan in paragraph 161 of the report of the Committee on the Peaceful Uses of Outer Space on its fifty-second session.)⁶
9. Single issue/item for discussion: Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing

⁶ *Official Records of the General Assembly, Sixty-fourth Session, Supplement No. 20 (A/64/20), para. 161.*

countries, without prejudice to the role of the International Telecommunication Union.

10. Draft provisional agenda for the forty-ninth session of the Scientific and Technical Subcommittee, including identification of subjects to be dealt with as single issues/items for discussion or under multi-year workplans.

171. The Committee endorsed the recommendation that the Working Group of the Whole, the Working Group on the Use of Nuclear Power Sources in Outer Space, the Working Group on Near-Earth Objects and the Working Group on the Long-term Sustainability of Outer Space should be reconvened at the forty-eighth session of the Scientific and Technical Subcommittee.

172. The Committee agreed that two hours of each session of the Subcommittee from 2011 to 2013 should be available for holding workshops under the workplan of the Working Group on the Use of Nuclear Power Sources in Outer Space on the item "Use of nuclear power sources in outer space" (A/AC.105/958, annex II, paras. 8 and 10).

173. The Committee welcomed the agreement of the Subcommittee that the topic for the symposium to be organized in 2011 by the Committee on Space Research should be "Planetary protection" (A/AC.105/958, annex I, para. 15).

D. Report of the Legal Subcommittee on its forty-ninth session

174. The Committee took note with appreciation of the report of the Legal Subcommittee on its forty-ninth session (A/AC.105/942), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution 64/86.

175. The Committee expressed its appreciation to Ahmad Talebzadeh (Islamic Republic of Iran) for his able leadership during the forty-ninth session of the Subcommittee.

176. The representatives of Austria, Canada, China, the Czech Republic, Japan, Indonesia, Italy, the Russian Federation, Saudi Arabia, the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements relating to this item were also made by representatives of other member States and by the observer for Costa Rica on behalf of the Group of Latin American and Caribbean States.

1. Status and application of the five United Nations treaties on outer space

177. The Committee took note of the discussion of the Subcommittee under its agenda item on the status and application of the five United Nations treaties on outer space, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 27-41).

178. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, which had been reconvened under the chairmanship of Jean François Mayence (Belgium) (A/AC.105/942, paras. 28, 31 and 40 and annex I, paras. 5-8).

179. Some delegations were of the view that the United Nations treaties on outer space represented a solid legal structure that was crucial for supporting the increasing scale of space activities and for strengthening international cooperation in the peaceful uses of outer space. Those delegations welcomed further adherence to the treaties and hoped that those States that had not yet ratified or acceded to the treaties would consider becoming parties to them.

180. Some delegations were of the view that the Committee should review, update and modify the five treaties for the purpose of strengthening the guiding principles of outer space activities, in particular those principles that guarantee its peaceful use, strengthen international cooperation and make space technology available to humanity.

181. Some delegations expressed the view that a comprehensive legal instrument on space could be negotiated and concluded without prejudice to the existing legal framework for space activities.

182. The view was expressed that negotiating a new, comprehensive convention on outer space would be counterproductive and could undermine the existing international legal regime governing outer space activities, particularly the principles contained in articles I and II of the Outer Space Treaty.

183. The view was expressed that the involvement of new spacefaring nations in outer space activities and the expansion of outer space activities made it necessary to have universal adherence to the United Nations treaties on outer space in order to preserve, advance and guarantee the exploration and use of outer space for peaceful purposes.

2. Information on the activities of international intergovernmental and non-governmental organizations relating to space law

184. The Committee took note of the discussion of the Subcommittee under the item on information on the activities of international intergovernmental and non-governmental organizations relating to space law, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 42-54).

185. The Committee noted the important role of international intergovernmental and non-governmental organizations and their contribution to its endeavours to promote the development of space law.

186. The Committee noted the role played by intergovernmental organizations in providing platforms for strengthening the legal framework applicable to space activities and invited the organizations to consider taking steps to encourage their members to adhere to the outer space treaties.

3. Matters relating to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit, without prejudice to the role of the International Telecommunication Union

187. The Committee took note of the discussion of the Subcommittee under the agenda item on matters relating to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, including consideration of

ways and means to ensure the rational and equitable use of the geostationary orbit, without prejudice to the role of ITU, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 55-75).

188. The Committee endorsed the recommendations of the Subcommittee and its Working Group on the Definition and Delimitation of Outer Space, reconvened under the chairmanship of José Monserrat Filho (Brazil) (A/AC.105/942, para. 57 and annex II, para. 11).

189. Some delegations expressed the view that the lack of a definition or delimitation of outer space created legal uncertainty concerning the applicability of space law and air law and that matters concerning State sovereignty and the boundary between airspace and outer space needed to be clarified in order to reduce the possibility of disputes among States.

190. Some delegations were of the view that the Subcommittee, when considering matters relating to the definition and delimitation of outer space, should take into account recent and future technological developments, and that the Scientific and Technical Subcommittee should also consider this subject.

191. The view was expressed that it was important to establish legal criteria for the definition and delimitation of outer space. The delegation expressing that view drew the attention of the Committee to the proposals made by the Union of Soviet Socialist Republics at the twenty-second and twenty-sixth sessions of the Legal Subcommittee, in 1983 and 1987, regarding the establishment of a border between airspace and outer space at an altitude of 110 km and the right of passage of space objects through the airspace of other States in order to have access to and exit from the near-Earth orbit.

192. Some delegations were of the view that use of the geostationary orbit, which was a limited natural resource, not only should be rational but should be made available to all States, irrespective of their current technical capacities. That would allow States to have access to the orbit under equitable conditions, bearing in mind in particular the needs and interests of developing countries, as well as the geographical position of certain countries, and taking into account the processes of ITU and relevant norms and decisions of the United Nations. Those delegations expressed their satisfaction with the agreement reached by the Subcommittee at its thirty-ninth session (see A/AC.105/738, annex III) to the effect that coordination among countries aimed at the utilization of the geostationary orbit should be carried out in a rational and equitable manner and in conformity with the ITU Radio Regulations.

193. Some delegations were of the view that the geostationary orbit, as a limited natural resource clearly in danger of saturation, must be used rationally, efficiently, economically and equitably. That principle was deemed fundamental to safeguarding the interests of developing countries and countries with certain geographical positions, as set out in article 44, paragraph 196.2, of the Constitution of ITU, as amended by the Plenipotentiary Conference held in Minneapolis, United States, in 1998.

194. Some delegations were of the view that access to the geostationary orbit, as a limited natural resource that had sui generis characteristics and that was at risk of saturation, should be guaranteed for all States, taking into account in particular the

needs and interests of developing countries and the geographical position of certain countries.

195. Some delegations were of the view that the principle of “first come, first served” was unacceptable with regard to the utilization of orbital positions and that it discriminated against States that wished to enjoy the benefits of space technology and did not yet have the necessary capabilities.

196. Some delegations were of the view that the geostationary orbit could not be appropriated by States or by international intergovernmental and non-governmental organizations.

197. The view was expressed that the discussion of the geostationary orbit by the Legal Subcommittee should be aimed at finding ways to ensure its utilization for the benefit of all States. The delegation that expressed that view considered that the Committee and the Subcommittee should cooperate and coordinate their work with other related international organizations to ensure equitable access to the geostationary orbit for all States.

4. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space

198. The Committee took note of the discussion of the Subcommittee under the agenda item on the review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space,⁷ as reflected in the report of the Subcommittee (A/AC.105/942, paras. 76-88).

199. The Committee endorsed the recommendation of the Subcommittee on this item (A/AC.105/942, para. 87).

200. Some delegations expressed the view that close communication should be maintained among the Scientific and Technical Subcommittee, the Legal Subcommittee and other relevant bodies of the United Nations system with the aim of promoting the development of binding international standards that address the use of nuclear power sources in outer space.

201. The view was expressed that the review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, as well as the elaboration of a new binding instrument on the use of nuclear power sources in outer space, were not warranted.

202. The view was expressed that the Committee, through its Legal Subcommittee, should undertake a review of the Safety Framework for Nuclear Power Source Applications in Outer Space and promote binding standards with a view to ensuring that any activity conducted in outer space was governed by the principles of preservation of life and maintenance of peace. The delegation that expressed that view considered that any activities arising as a result of the new workplan for the period 2010-2015 of the Working Group on the use of Nuclear Power Sources in Outer Space of the Scientific and Technical Subcommittee should be approved by the Legal Subcommittee.

⁷ General Assembly resolution 47/68.

203. The view was expressed that recommendations from the Safety Framework might be considered in further detail for possible implementation in the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, if and when the Principles were reviewed and revised.

5. Examination and review of the developments concerning the draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment

204. The Committee took note of the discussion of the Subcommittee under the item on the examination and review of the developments concerning the draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 89-106).

205. The Committee endorsed the recommendations of the Subcommittee on this item (A/AC.105/942, paras. 104 and 105).

206. The Committee noted that the third session of the committee of governmental experts of the International Institute for the Unification of Private Law (Unidroit) had been held in Rome from 7 to 11 December 2009 as a result of the progress made by the steering committee, and that its fourth session had been held in Rome from 3 to 7 May 2010.

207. The view was expressed that input from all major stakeholders, including Governments and the commercial and financial sectors of the space community, should be carefully considered and reflected in the revision of the draft protocol.

6. Capacity-building in space law

208. The Committee took note of the discussion of the Subcommittee under the item on capacity-building in space law, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 107-126).

209. The Committee endorsed the recommendations of the Subcommittee on the agenda item (A/AC.105/942, paras. 117 and 123).

210. The Committee agreed that research, training and education in space law were of paramount importance to national, regional and international efforts to further develop space activities and to increase knowledge of the legal framework within which space activities were carried out.

211. The Committee noted with appreciation that the Government of Thailand and the Geo-Informatics and Space Technology Development Agency of Thailand, together with the Office for Outer Space Affairs, planned to hold the seventh United Nations workshop on space law in Bangkok from 16 to 19 November 2010. The Committee further noted with appreciation that ESA was a co-sponsor of the workshop.

212. The Committee noted that the exchange of views on national and international efforts to promote a wider appreciation of space law and endeavours such as the annual workshops on space law and the development of the curriculum on space law were playing a vital role in building capacity in this area.

213. The view was expressed that the arrangements for the establishment of a regional centre for space science and technology education in Arabic, affiliated to the United Nations, should be made in close cooperation with the Office for Outer Space Affairs.

7. General exchange of information on national mechanisms relating to space debris mitigation measures

214. The Committee took note of the discussion of the Subcommittee under the item on national mechanisms relating to space debris mitigation measures, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 127-148).

215. The Committee endorsed the recommendations of the Subcommittee on this item (A/AC.105/942, para. 147).

216. The Committee noted that some States had strengthened their national mechanisms governing space debris mitigation through the nomination of governmental supervisory authorities, the involvement of academia and industry and the development of new legislative norms, instructions, standards and frameworks.

217. The view was expressed that this item provided member States and permanent observers with the opportunity to exchange information on steps taken by States to control the creation and effects of space debris and served as a helpful vehicle to continue the important work of the Committee in the area of space debris mitigation.

218. The view was expressed that space debris posed a serious threat to countries located along the equator.

219. Some delegations were of the view that the Space Debris Mitigation Guidelines of the Committee should be further developed and that the Scientific and Technical Subcommittee and the Legal Subcommittee should cooperate with the aim of developing legally binding rules relating to space debris.

220. The view was expressed that the development of a special convention on space debris, including nuclear power sources, was not warranted.

221. Some delegations were of the view that the Subcommittee should include on its agenda an item to review the legal aspects of the Space Debris Mitigation Guidelines of the Committee with a view to the Subcommittee's transforming them into a set of principles on space debris to be adopted by the General Assembly. Those delegations also considered that the adoption of such principles would enrich the current body of law governing outer space.

222. The view was expressed that the Space Debris Mitigation Guidelines of the Committee required legal review and analysis.

223. The view was expressed that since the adoption of the United Nations treaties on outer space, many space-related issues had emerged that were not envisaged in the treaties. The delegation expressing that view considered that in order to meet the challenges of this changing situation, such as space debris mitigation, the Legal Subcommittee should explore the possibility of developing appropriate new rules, including soft laws.

8. General exchange of information on national legislation relevant to the peaceful exploration and use of outer space

224. The Committee took note of the discussion of the Subcommittee under the item on national legislation relevant to the peaceful exploration and use of outer space, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 149-159).

225. The Committee endorsed the recommendations of the Subcommittee and its Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space, reconvened under the chairmanship of Irmgard Marboe (Austria) (A/AC.105/942, para. 150 and annex III, paras. 19-22).

226. The Committee noted with satisfaction that the discussions of the Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space had allowed States to gain an understanding of existing national regulatory frameworks and that the work being conducted under this item was already yielding concrete results, including the sharing of valuable experience of States in the development of their national legislation.

9. Draft provisional agenda for the fiftieth session of the Legal Subcommittee

227. The Committee took note of the discussion of the Subcommittee under the agenda item on the draft provisional agenda for the fiftieth session of the Legal Subcommittee, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 160-172).

228. On the basis of the deliberations of the Legal Subcommittee at its forty-ninth session, the Committee agreed that the following substantive items should be considered by the Subcommittee at its fiftieth session:

Regular items

1. General exchange of views.
2. Status and application of the five United Nations treaties on outer space.
3. Information on the activities of international intergovernmental and non-governmental organizations relating to space law.
4. Matters relating to:
 - (a) The definition and delimitation of outer space;
 - (b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.

Single issues/items for discussion

5. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.
6. Examination and review of the developments concerning the draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment.

7. Capacity-building in space law.
8. General exchange of information on national mechanisms relating to space debris mitigation measures.

Items considered under workplans

9. General exchange of information on national legislation relevant to the peaceful exploration and use of outer space.

(Work for 2011: as reflected in paragraph 136 of the report of the Legal Subcommittee on its forty-sixth session (A/AC.105/891).)

New items

10. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-first session.

229. The Committee agreed that the Legal Subcommittee should, at its fiftieth session, reconvene the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, the Working Group on Matters Relating to the Definition and Delimitation of Outer Space and the Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space.

230. The Committee agreed that the Subcommittee should review, at its fiftieth session, the need to extend the mandate of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space beyond that session of the Subcommittee.

231. The Committee agreed that the International Institute of Space Law and the European Centre for Space Law should be invited to organize a symposium on space law at the fiftieth session of the Subcommittee.

232. The view was expressed that an item on reviewing the Space Debris Mitigation Guidelines of the Committee with a view to transforming them into a set of principles should be included on the agenda of the Legal Subcommittee.

E. Spin-off benefits of space technology: review of current status

233. The Committee considered the agenda item entitled “Spin-off benefits of space technology: review of current status”, in accordance with General Assembly resolution 64/86.

234. The representatives of China, Germany, India, Japan and the United States made statements under the item.

235. The Committee heard the following presentations:

- (a) “JAXA industrial collaboration”, by the representative of Japan;
- (b) “NASA technologies: for the benefit of all mankind”, by the representative of the United States;

(c) “Fifth Space Conference of the Americas: regional space cooperation for security and human development; perspective for the future”, by the representative of Ecuador.

236. The publication *Spinoff 2009*, submitted by the National Aeronautics and Space Administration of the United States, was made available to the Committee.

237. The Committee took note of the information provided by States on their national practices regarding spin-offs of space technology that had resulted in the introduction of useful innovations in various scientific and practical areas of civil society, such as medicine, biology, chemistry, astronomy, agriculture, aviation, land transport, firefighting, protection of nature and energy.

238. The Committee agreed that spin-offs of space technology constituted a powerful engine for technological innovation and growth in both the industrial and service sectors and could be beneficially applied to achieve social and humanitarian objectives and the development of national communications infrastructure, and in projects aimed at achieving the goal of sustainable development.

239. The Committee agreed that spin-offs of space technology should be promoted because they fostered innovative technologies, thus advancing economies and contributing to the improvement of the quality of life.

240. The Committee noted that Governments of Member States had successfully involved the private sector and academia in various projects in the area of spin-offs of space technology.

241. The Committee agreed to continue its consideration of the item at its fifty-fourth session, in 2011.

F. Space and society

242. The Committee considered the agenda item entitled “Space and society”, in accordance with General Assembly resolution 64/86. The Committee focused its discussions on the theme “Space and education”.

243. The representatives of Canada, China, Colombia, India, Japan, the Libyan Arab Jamahiriya, Nigeria, the Syrian Arab Republic, the United States and Venezuela (Bolivarian Republic of) made statements under the item. Representatives of other member States also made statements relating to this item during the general exchange of views. The observer for UNESCO also made a statement.

244. The Committee heard the following presentations:

(a) “Italian Master in space policy and institutions”, by the representative of Italy;

(b) “Bringing space to Canadian classrooms”, by the representative of Canada;

(c) “Building peace in young minds through space education: contributions of JAXA Space Education Centre to human development”, by the representative of Japan;

(d) “Fifty years of operational environmental satellites: the US experience”, by the representative of the United States;

(e) “Space education: international outreach activities of India”, by the representative of India;

(f) “International Year of Astronomy 2009: achievements, legacy and way forward”, by the observer for UNESCO;

(g) “The Space Generation Congress 2009: perspectives from university students and young professionals in the space sector”, by the observer for SGAC.

245. The Committee noted the information provided by States on their actions and programmes aimed at attracting young people to the field of space by making them aware of the importance and significance of space science, technology and applications.

246. The Committee agreed that it was important for States to ensure that space-related educational programmes remained relevant to youth and that States should collaborate closely in this area so that youth would benefit from understanding the interconnectivity among States and the present and future challenges facing humankind.

247. The Committee noted the beneficial uses of space applications for society and their increasing use by developing countries as tools to achieve development goals in such areas as telemedicine, eradication of illicit crops and land planning.

248. The Committee noted the important role of space education in inspiring students to pursue careers in science, technology, engineering and mathematics, in strengthening national capabilities in science and industry and in enhancing educational opportunities through the use of distance-learning technologies such as tele-education and e-learning.

249. The Committee noted with satisfaction that, at the global level, a large number of outreach activities and programmes for children, young people and the general public were being established by national space and educational organizations and international organizations to promote awareness of the benefits of space science and technology and to encourage children to consider careers in mathematics and science.

250. The Committee noted that World Space Week, observed from 4 to 10 October each year pursuant to General Assembly resolution 54/68, contributed to the development of education and provided an important opportunity to sensitize youth and the general public to the benefits of space science and technology. The Committee recognized the valuable contributions made by member States, the World Space Week Association and other organizations for the observance of World Space Week.

251. The Committee noted that the General Assembly, in its resolution 62/200, had declared 2009 International Year of Astronomy and that a number of States used the Year to highlight the importance of space science and technology and to strengthen international cooperation in space education. A number of successful initiatives were reported, such as dedicated national websites, software programs, special issues of scientific magazines, television broadcasts, stamps, poster contests and

several coordinated initiatives among partners from government, academia and civil society.

252. The Committee noted the activities carried out at the regional level for capacity-building through education and training in space science and technology applications for sustainable development.

253. The Committee noted with appreciation the role of regional centres for space science and technology education, affiliated to the United Nations, in space-related education.

254. The Committee noted the role played by the International Space Station in education and in reaching out to education communities worldwide.

255. The view was expressed that the Committee and its subsidiary bodies continued to play a substantial role in providing a global framework for the systematic exchange of experience and information, as well as in the coordination of capacity-building efforts, as reflected in the Plan of Action of the Committee endorsed by the General Assembly in its resolution 59/2.

256. The view was expressed that, while the exchange of information and experiences on a variety of initiatives relating to space education had been important and should continue, it could also be useful to focus the efforts of the Committee on a few specific priority areas that could have a greater impact on the enhancement of space education, such as sharing challenges that States encountered in expanding and promoting space education activities.

257. The Committee agreed that, as recommended by the Working Group of the Whole at the forty-seventh session of the Scientific and Technical Subcommittee (A/AC.105/958, para. 55 and annex I, para. 9) the issue of promoting the greater participation of young people in space science and technology would be considered by the Committee under the item "Space and society".

258. The Committee agreed that, in view of the importance of the theme "Space and education", it would continue to consider the special theme at its fifty-fourth session, in 2011.

G. Space and water

259. The Committee considered the agenda item entitled "Space and water", in accordance with General Assembly resolution 64/86.

260. The representatives of China, Germany, India, Japan and the Syrian Arab Republic made statements under the item. Representatives of other member States also made statements relating to this item during the general exchange of views.

261. In the course of the discussions, delegations reviewed national and cooperative water-related activities, giving examples of national programmes and bilateral, regional and international cooperation.

262. The Committee noted that many States were confounded by the broad spectrum of serious water-related issues — ranging from lack of water, and the resulting impact on populations and food production, to overabundance of water,

causing floods and destruction — which constituted a significant threat to the sustainable development of human societies.

263. The Committee noted that space-derived data were used extensively in water management and that space technology and applications played an active role in addressing most water-related issues.

264. The Committee noted that space technology and its applications had growing potential to provide useful information for scientific research on water-related issues and to support water management and policy- and decision-making with a view to efficient and sustainable use of water resources.

265. The Committee further noted that space technology could be used in combination with non-space technologies to contribute to the observation of global water cycles and the monitoring and mitigation of the effects of flood, drought and earthquake disasters, and to improve the timeliness and accuracy of forecasts.

266. The Committee agreed to continue its consideration of the item at its fifty-fourth session, in 2011.

H. Space and climate change

267. The Committee considered the agenda item entitled “Space and climate change”, in accordance with General Assembly resolution 64/86.

268. The representatives of Brazil, India, Japan, Malaysia, Mexico, Saudi Arabia and the United States made statements under this item. The representatives of France and Germany made a joint statement. Representatives of other member States also made statements relating to this item during the general exchange of views.

269. The Committee heard the following presentations under this item:

(a) “The application of satellite remote sensing on climate change and food security in Indonesia”, by the representative of Indonesia;

(b) “Mission objectives and current status of GOSAT (IBUKI)”, by the representative of Japan.

270. The Committee noted that the adverse effects of climate change constituted a threat to all humanity and were manifested in a variety of phenomena, such as unusual weather, including droughts in some regions and floods in others; unusual dust storms in the Arabian region; glacial retreat in the Himalayas; and changes in the polar ice sheets.

271. The Committee noted that, because of the global nature of climate change, global observations were required to monitor it more precisely, and that space-based observations, complemented with ground-based observations, were well suited to monitor the different manifestations of climate change and the factors contributing to it.

272. The Committee noted the efforts conducted in various countries regarding the deployment of satellites carrying a variety of instruments to measure some essential climate variables and to monitor different processes related to climate change, such

as emissions of greenhouse gases and aerosols, atmospheric dynamics, deforestation emissions and land degradation.

273. The Committee noted international efforts conducted under the auspices of the United Nations system (in particular, the United Nations Framework Convention on Climate Change and the World Meteorological Organization (WMO)), as well as other international initiatives targeting climate change, such as those of the Committee on Earth Observation Satellites, the Group on Earth Observations, the Global Earth Observation System of Systems, GMES and the Intergovernmental Panel on Climate Change.

274. Some delegations were of the view that the Committee should play a more proactive role in advocating international cooperation in the deployment and use of satellites to observe the effects of climate change, including in terms of disasters.

I. Use of space technology in the United Nations system

275. The Committee continued its consideration of the agenda item entitled "Use of space technology in the United Nations system", in accordance with General Assembly resolution 64/86.

276. The representatives of Colombia, Germany and the United Arab Emirates made statements under the item. Representatives of other member States also made statements relating to this item during the general exchange of views. The observer for ITU made a statement, in his capacity as Chair of the United Nations Inter-Agency Meeting on Outer Space Activities at its thirtieth session, to inform the Committee about the results of that meeting.

277. The Committee had before it the report of the Inter-Agency Meeting on Outer Space Activities on its thirtieth session (A/AC.105/960), which had been held in Geneva from 10 to 12 March 2010, and the report of the Secretary-General on the coordination of space-related activities within the United Nations system: directions and anticipated results for the period 2010-2011 (A/AC.105/961).

278. The Committee noted with appreciation the measures and decisions taken by the Inter-Agency Meeting to further strengthen its role as a central mechanism of the United Nations for the coordination of space-related activities, namely:

(a) The reorientation of the report of the Secretary-General to allow for a stronger emphasis on the United Nations development agenda and a contribution to the work of the Commission on Sustainable Development;

(b) The agreement on the preparation of biennial special reports on selected thematic areas;

(c) The agreement to hold the annual sessions of the Inter-Agency Meeting in Geneva to facilitate greater participation of United Nations entities and programmes.

279. The Committee noted with appreciation that the special report for 2011, to be prepared by WMO in cooperation with the Office for Outer Space Affairs and the United Nations Framework Convention on Climate Change secretariat, would

address climate change and the use of space technology in the United Nations system.

280. The Committee noted that the seventh open informal session for States members and observers of the Committee, on the theme “Space technology for emergency communications” had been held immediately following the thirtieth session of the Inter-Agency Meeting, on 12 March 2010.

281. The Committee noted with satisfaction that the Secretariat continued to maintain a website on the coordination of outer space activities within the United Nations system (www.uncosa.unvienna.org). The presentations made at the thirtieth session of the Inter-Agency Meeting and the subsequent open informal session, as well as other information on the current space-related activities of United Nations entities, are available on that website.

282. The Committee noted that the Office for Outer Space Affairs, as secretariat of the Inter-Agency Meeting, was coordinating with the Office of the United Nations High Commissioner for Refugees (UNHCR) for the hosting of its thirty-first session, in Geneva in 2011, and that the open informal session, open to all members and permanent observers of the Committee, would be held in the afternoon of the last day of the session. The theme would be selected in consultation with UNHCR and other participating United Nations entities.

283. Some delegations welcomed the working paper by the Chair of the Committee for the period 2008-2009 entitled “Towards a United Nations space policy” (A/AC.105/L.278) and noted that the paper proposed a holistic approach for enhancing coordination between member States and the United Nations in applying space science and technology to meet the challenges to development of all countries.

284. Some delegations expressed the view that the working paper deserved further discussion with a view to developing and elaborating on the issues addressed therein.

J. International cooperation in promoting the use of space-derived geospatial data for sustainable development

285. The Committee considered the agenda item entitled “International cooperation in promoting the use of space-derived geospatial data for sustainable development”, in accordance with General Assembly resolution 64/86.

286. The representatives of Belgium, Brazil, China, Germany, India, Indonesia, Malaysia, the United Kingdom and the United States made statements under the item. Other member States made statements related to this item during the general exchange of views.

287. The Committee heard the following technical presentations under the item:

- (a) “OCEANSAT-2: meeting global demand”, by the representative of India;
- (b) “Geo-wiki.org: how community remote sensing can help to improve global land cover”, by the representative of Austria;

(c) “Utilizing space geospatial data for complex diagnosis of earthquake precursors”, by the representative of the Russian Federation;

(d) “International Global Monitoring Aerospace System: new approach to the disaster management issue”, by the representative of the Russian Federation.

288. In the course of the discussion, delegations reviewed national and cooperative activities in promoting the use of space-derived geospatial data for sustainable development, providing examples of national programmes and bilateral, regional and international cooperation.

289. The Committee noted the importance of remote-sensing applications and spatial data infrastructures for decisions in the areas of socio-economic and environmental management, which relied heavily on the availability of accurate data on natural resources and other geospatial data.

290. The Committee noted that a number of organizations and initiatives at the regional and global levels, such as the Committee on Earth Observation Satellites, the European Umbrella Organisation for Geographic Information and the Group on Earth Observations, contributed to capacity-building and to the coordination and promotion of activities related to the use of space-derived geospatial data, as well as sharing data from current and future satellite systems and opening up access to previously unavailable data sets.

291. The Committee noted the increased availability of space-based data at little or no cost, including those provided by the China-Brazil Earth resources satellites, the Greenhouse Gases Observing Satellite of Japan and the United States Landsat image archive.

292. The Committee noted the activities being carried out by the United Nations Geographic Information Working Group, currently co-chaired by the Office for Outer Space Affairs and the Economic Commission for Africa, which was addressing common geospatial issues in the United Nations system and working towards implementation of the United Nations Spatial Data Infrastructure.

293. The view was expressed that because the Earth was a home shared by all humankind, it was a responsibility of States to promote the use of space-derived geospatial data for sustainable development through extensive international cooperation.

294. The view was expressed that transparency and clarity should be encouraged in mechanisms to guarantee that developing countries have access to geospatial data for the advancement of sustainable development.

295. The Committee noted that, in response to the agreement reached at its fifty-second session, the delegation of Brazil had held informal consultations with all interested members of the Committee to reach consensus on a set of recommendations on ways and means to foster international cooperation with a view to building up national infrastructures for the use of space-derived geospatial data. On the basis of those consultations, the Committee considered a draft report (A/AC.105/2010/CRP.16) and agreed that that text should constitute the final report

of the Committee on international cooperation in promoting the use of space derived geospatial data for sustainable development.⁸

K. Other matters

296. The Committee considered the agenda item entitled “Other matters”, in accordance with General Assembly resolution 64/86.

297. The representatives of Algeria, Belgium, Bolivia (Plurinational State of), Canada, Chile, China, Colombia, Cuba, the Czech Republic, Ecuador, France, Germany, Iran (Islamic Republic of), Italy, the Libyan Arab Jamahiriya, Mexico, Nigeria, Pakistan, Saudi Arabia, Slovakia, Spain, the Sudan, Switzerland, the Syrian Arab Republic, the United Kingdom, the United States and Venezuela (Bolivarian Republic of) made statements under the item. The observer for Costa Rica also made a statement.

298. The observers for IAASS and the Association of Remote Sensing Centres in the Arab World also made statements under the item.

1. Proposed strategic framework for the programme on the peaceful uses of outer space for the period 2012-2013

299. The Committee had before it for its consideration the proposed strategic framework for the programme on the peaceful uses of outer space for the period 2012-2013 (A/65/6 (Prog. 5)). The Committee agreed on the proposed strategic framework.

2. Composition of the bureaux of the Committee and its subsidiary bodies for the period 2012-2013

300. In accordance with General Assembly resolution 64/86 and pursuant to the measures relating to the working methods of the Committee and its subsidiary bodies⁹ as endorsed by the General Assembly in its resolution 52/56, the Committee considered the composition of the bureaux of the Committee and its subsidiary bodies for the period 2012-2013.

301. The Committee noted that the Group of Asian States had endorsed the candidature of Yasushi Horikawa (Japan) for the office of Chair of the Committee for the period 2012-2013 (A/AC.105/2010/CRP.9).

302. The Committee noted that the Group of Western European and Other States had endorsed the candidature of Filipe Duarte Santos (Portugal) for the office of First Vice-Chair of the Committee for the period 2012-2013 (A/AC.105/2010/CRP.10).

303. The Committee noted that the Group of Latin American and Caribbean States had endorsed the candidature of Félix Clementino Menicocci (Argentina) for the

⁸ To be issued as A/AC.105/973.

⁹ *Official Records of the General Assembly, Fifty-second Session, Supplement No. 20 (A/52/20)*, annex I; see also *Official Records of the General Assembly, Fifty-eighth Session, Supplement No. 20 (A/58/20)*, annex II, appendix III.

office of Chair of the Scientific and Technical Subcommittee for the period 2012-2013 (A/AC.105/2010/CRP.14).

304. The Committee noted that the Group of Eastern European States and the Group of African States would nominate their candidates for the offices of Second Vice-Chair/Rapporteur of the Committee and Chair of the Legal Subcommittee, respectively, for the period 2012-2013 before the next meeting of the Committee.

3. Membership of the Committee

305. The Committee welcomed the application of Tunisia for membership of the Committee (see A/AC.105/2010/CRP.3).

306. The Committee decided to recommend to the General Assembly at its sixty-fifth session, in 2010, that Tunisia should become a member of the Committee.

4. Observer status

307. The Committee welcomed the additional information provided by IAASS in accordance with the request made by the Committee at its fifty-second session, in 2009.¹⁰ The application of IAASS is contained in conference room papers A/AC.105/2009/CRP.8 and A/AC.105/2010/CRP.4 and Add.1.

308. The Committee decided to recommend that the General Assembly, at its sixty-fifth session, grant to IAASS the status of permanent observer of the Committee on the understanding that, in accordance with the agreement of the Committee at its thirty-third session concerning observer status for non-governmental organizations and in accordance with the practice established by the Committee, IAASS would apply for consultative status with the Economic and Social Council.

309. The Committee took note of the application of the Association of Remote Sensing Centres in the Arab World. The relevant correspondence was before the Committee in conference room paper A/AC.105/2010/CRP.5.

310. The Committee agreed to invite the Association of Remote Sensing Centres in the Arab World to participate in its fifty-fourth session, as well as in the sessions of the Subcommittees in 2011, with a view to the Association's provision of additional written information, and that a decision on its application would be made by the Committee at that session.

311. The Committee agreed that observer status would be granted to non-governmental organizations on a provisional basis, for a period of three years, pending information on the status of their application for consultative status with the Economic and Social Council. The Committee agreed that the provisional observer status could be extended for an additional year, if necessary. The Committee further agreed that it would grant permanent observer status to such non-governmental organizations upon confirmation of their consultative status with the Council.

¹⁰ Ibid., *Sixty-fourth Session, Supplement No. 20* (A/64/20), para. 312.

312. Some delegations expressed the view that the requirement for permanent observers to have consultative status with the Economic and Social Council should be suspended. Those delegations were also of the view that the Committee should be fully competent to independently assess applications from non-governmental organizations.

313. The Committee agreed that the Secretariat should contact the Committee on Non-Governmental Organizations of the Economic and Social Council to verify the application process and the duration of the procedure for granting consultative status with the Council.

5. Organizational matters

314. The Committee recalled that at its fifty-second session, in 2009, it had requested the members of its bureau and the bureaux of its subsidiary bodies to consider how to rationalize and optimize the use of the time of the Committee and its subsidiary bodies, taking into account the need strike a balance between technical presentations, which brought great value, and the substantive consideration of the issues before the Committee and its subsidiary bodies, which required adequate time.

315. The Committee requested the Secretariat, in close consultation with the members of the bureaux of the Committee and its subsidiary bodies, to implement measures to rationalize and optimize the use of time of the Committee and its Subcommittees, taking into account the need for maximum flexibility in organizing the work of their sessions in 2011, including the possibility of scheduling symposiums in the second week of a session.

316. To enable the Committee and its Subcommittees to commence their consideration of all the items on their agendas in a timely and balanced manner, the Committee agreed that the possibility of scheduling the item entitled "General exchange of views" over a longer period of time during their sessions should be explored. The Committee agreed that the Secretariat should coordinate with delegations on the rescheduling of statements under that item to a later meeting so as to allow sufficient time for other agenda items to be considered as planned.

317. The Committee agreed that the reports to be submitted by Member States on their national activities in outer space (see A/AC.105/958, para. 19) should comprise a summary of those activities and not exceed three pages.

318. The Committee recommended that open-ended informal consultations be held among interested member States in the margins of the sessions of the Committee and its Subcommittees in 2011, with a view to proposing further measures to rationalize and optimize the work of the Committee and its subsidiary bodies.

319. The Committee agreed to continue reviewing its organizational matters at its fifty-fourth session, in 2011.

320. The Committee requested the Secretariat to present to the Legal Subcommittee at its fiftieth session and the Committee at its fifty-fourth session, for their consideration, a detailed proposal to discontinue the use of unedited transcripts. The use of digital recordings should be assessed.

321. The Committee noted the following proposals for optimizing and rationalizing its work and that of the Subcommittees:

- (a) Clustering of agenda items;
- (b) Having open only one item at a time;
- (c) Making better use of existing tools, such as the daily *Journal* and the indicative schedule of work;
- (d) Uploading statements on the website of the Office for Outer Space Affairs in a timely manner and the introduction of webcasts;
- (e) Limiting the number of interventions by delegations under each agenda item;
- (f) Limiting the length of presentations of information on national activities and projects in statements;
- (g) Beginning meetings promptly as scheduled;
- (h) Reducing the length and quantity of technical presentations, and the establishment of selection criteria.

322. The Committee considered, upon the request of the States members of the Group of Latin American and Caribbean States, the possibility of introducing new procedural terminology in reports of the Committee and its subsidiary bodies when reflecting views of that regional group.

323. Some delegations were of the view that the reference to names of regional groups in connection with the summaries of views in reports of the Committee and its subsidiary bodies would support the principle of multilateralism and extend a similar practice adopted in other committees of the General Assembly and organizations of the United Nations system.

324. Some delegations were of the view that the present procedural terminology remained relevant and that it reflected clearly the spirit of consensus in the decision-making of the Committee and its subsidiary bodies. Those delegations were of the view that references to names of regional groups in connection with the summaries of views in reports could upset the balance in them by creating the impression that views expressed by a group prevailed over views expressed by individual States.

325. The Committee agreed to include the names of regional groups in the paragraphs listing the speakers under each agenda item in the reports of the Committee and its subsidiary bodies.

6. Commemoration of the fiftieth anniversary of the first session of the Committee and the fiftieth anniversary of human space flight

326. The Committee recalled its agreement at its fifty-second session, in 2009, to celebrate at its fifty-fourth session, scheduled to be held from 1 to 10 June 2011, the fiftieth anniversary of the first session of the Committee and the fiftieth anniversary of the first human space flight.

327. The Committee noted with appreciation that the Office for Outer Space Affairs had begun to make arrangements for special events and activities to be held

throughout 2011 in celebration of those milestones and that, together with the Chair of the Committee, it had conducted informal consultations with interested member States regarding the events to take place at the fifty-fourth session of the Committee.

328. The Committee noted with appreciation the proposal by the Chair regarding the fiftieth anniversary of the Committee and the fiftieth anniversary of human space flight, contained in conference room paper A/AC.105/2010/CRP.13.

329. The Committee agreed that the first day of its fifty-fourth session should be dedicated to the commemoration of the two anniversaries to enable representation at the highest level.

330. The Committee agreed that the commemorative events on 1 June 2011 would include a high-level segment, open to all Member States of the United Nations. Those events would have the participation of representatives at the ministerial level, heads of agencies, astronauts and other dignitaries and would address the achievements of the Committee over the course of 50 years, the 50 years of human space flight and the future of humanity in outer space.

331. The Committee encouraged Member States to draw the attention of their ministers, heads of agencies and other dignitaries to the commemorative events with a view to securing their participation.

332. The Committee agreed that a joint statement or similar communiqué should be prepared to raise awareness of how international cooperation is accelerating progress in space science and technology and their application for achieving sustainable development. The Committee agreed that the first draft of the statement should be circulated before the forty-eighth session of the Scientific and Technical Subcommittee.

333. The Committee agreed that as from Thursday, 2 June 2011, the work of its session would follow the usual pattern.

334. The Committee agreed that an informal consultative group, composed of representatives of the permanent missions of interested States, would be set up to support the Chair in the preparations for the events and that interested representatives of the permanent missions should be invited to provide their names to the Office for Outer Space Affairs.

335. The Committee noted with satisfaction the preparations undertaken by the Office for Outer Space Affairs in consultation with interested member States to organize a special exhibition to commemorate the two anniversaries.

7. Future role and activities of the Committee

336. The Committee continued its consideration of the topic "Future role and activities of the Committee", in accordance with the agreement reached at its fifty-second session.

337. The Committee noted with appreciation the working paper by the Chair of the Committee for the period 2008-2009 entitled "Towards a United Nations space policy" (A/AC.105/L.278) and agreed to include a new item entitled "Future role of the Committee" on the agenda for its fifty-fourth session, for one year only, to enable the Committee to consider that paper further.

8. Panel discussion during the sixty-fifth session of the General Assembly

338. The Committee agreed that the panel discussion to be held in the Fourth Committee of the General Assembly during its sixty-fifth session, when it considers the item "International cooperation in the peaceful uses of outer space", should be on the subject "Space and emergencies".

9. Draft provisional agenda for the fifty-fourth session of the Committee

339. The Committee recommended that the following substantive items be considered at its fifty-fourth session, in 2011:

1. General exchange of views.
2. Ways and means of maintaining outer space for peaceful purposes.
3. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).
4. Report of the Scientific and Technical Subcommittee on its forty-eighth session.
5. Report of the Legal Subcommittee on its fiftieth session.
6. Spin-off benefits of space technology: review of current status.
7. Space and society.
8. Space and water.
9. Space and climate change.
10. Use of space technology in the United Nations system.
11. Future role of the Committee.
12. Other matters.

L. Schedule of work of the Committee and its subsidiary bodies

340. The Committee agreed on the following tentative timetable for its session and those of its subcommittees in 2011:

	<i>Date</i>	<i>Location</i>
Scientific and Technical Subcommittee	7-18 February 2011	Vienna
Legal Subcommittee	28 March-8 April 2011	Vienna
Committee on the Peaceful Uses of Outer Space	1-10 June 2011	Vienna

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General Assembly

Distr.: General
13 January 2011

Sixty-fifth session
Agenda item 95

Resolution adopted by the General Assembly

[on the report of the First Committee (A/65/408)]

65/44. Prevention of an arms race in outer space

The General Assembly,

Recognizing the common interest of all mankind in the exploration and use of outer space for peaceful purposes,

Reaffirming the will of all States that the exploration and use of outer space, including the Moon and other celestial bodies, shall be for peaceful purposes and shall be carried out for the benefit and in the interest of all countries, irrespective of their degree of economic or scientific development,

Reaffirming also the provisions of articles III and IV of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies,¹

Recalling the obligation of all States to observe the provisions of the Charter of the United Nations regarding the use or threat of use of force in their international relations, including in their space activities,

Reaffirming paragraph 80 of the Final Document of the Tenth Special Session of the General Assembly,² in which it is stated that in order to prevent an arms race in outer space, further measures should be taken and appropriate international negotiations held in accordance with the spirit of the Treaty,

Recalling its previous resolutions on this issue, and taking note of the proposals submitted to the General Assembly at its tenth special session and at its regular sessions, and of the recommendations made to the competent organs of the United Nations and to the Conference on Disarmament,

Recognizing that prevention of an arms race in outer space would avert a grave danger for international peace and security,

Emphasizing the paramount importance of strict compliance with existing arms limitation and disarmament agreements relevant to outer space, including

¹ United Nations, *Treaty Series*, vol. 610, No. 8843.

² Resolution S-10/2.



bilateral agreements, and with the existing legal regime concerning the use of outer space,

Considering that wide participation in the legal regime applicable to outer space could contribute to enhancing its effectiveness,

Noting that the Ad Hoc Committee on the Prevention of an Arms Race in Outer Space, taking into account its previous efforts since its establishment in 1985 and seeking to enhance its functioning in qualitative terms, continued the examination and identification of various issues, existing agreements and existing proposals, as well as future initiatives relevant to the prevention of an arms race in outer space,³ and that this contributed to a better understanding of a number of problems and to a clearer perception of the various positions,

Noting also that there were no objections in principle in the Conference on Disarmament to the re-establishment of the Ad Hoc Committee, subject to re-examination of the mandate contained in the decision of the Conference on Disarmament of 13 February 1992,⁴

Emphasizing the mutually complementary nature of bilateral and multilateral efforts for the prevention of an arms race in outer space, and hoping that concrete results will emerge from those efforts as soon as possible,

Convinced that further measures should be examined in the search for effective and verifiable bilateral and multilateral agreements in order to prevent an arms race in outer space, including the weaponization of outer space,

Stressing that the growing use of outer space increases the need for greater transparency and better information on the part of the international community,

Recalling, in this context, its previous resolutions, in particular resolutions 45/55 B of 4 December 1990, 47/51 of 9 December 1992 and 48/74 A of 16 December 1993, in which, inter alia, it reaffirmed the importance of confidence-building measures as a means conducive to ensuring the attainment of the objective of the prevention of an arms race in outer space,

Conscious of the benefits of confidence- and security-building measures in the military field,

Recognizing that negotiations for the conclusion of an international agreement or agreements to prevent an arms race in outer space remain a priority task of the Conference on Disarmament and that the concrete proposals on confidence-building measures could form an integral part of such agreements,

Noting with satisfaction the constructive, structured and focused debate on the prevention of an arms race in outer space at the Conference on Disarmament in 2009 and 2010,

Taking note of the introduction by China and the Russian Federation at the Conference on Disarmament of the draft treaty on the prevention of the placement of weapons in outer space and of the threat or use of force against outer space objects,⁵

³ *Official Records of the General Assembly, Forty-ninth Session, Supplement No. 27 (A/49/27), sect. III.D (para. 5 of the quoted text).*

⁴ CD/1125.

⁵ See CD/1839.

Taking note also of the decision of the Conference on Disarmament to establish for its 2009 session a working group to discuss, substantially, without limitation, all issues related to the prevention of an arms race in outer space,

1. *Reaffirms* the importance and urgency of preventing an arms race in outer space and the readiness of all States to contribute to that common objective, in conformity with the provisions of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies;¹

2. *Reaffirms its recognition*, as stated in the report of the Ad Hoc Committee on the Prevention of an Arms Race in Outer Space, that the legal regime applicable to outer space does not in and of itself guarantee the prevention of an arms race in outer space, that the regime plays a significant role in the prevention of an arms race in that environment, that there is a need to consolidate and reinforce that regime and enhance its effectiveness and that it is important to comply strictly with existing agreements, both bilateral and multilateral;⁶

3. *Emphasizes* the necessity of further measures with appropriate and effective provisions for verification to prevent an arms race in outer space;

4. *Calls upon* all States, in particular those with major space capabilities, to contribute actively to the objective of the peaceful use of outer space and of the prevention of an arms race in outer space and to refrain from actions contrary to that objective and to the relevant existing treaties in the interest of maintaining international peace and security and promoting international cooperation;

5. *Reiterates* that the Conference on Disarmament, as the sole multilateral disarmament negotiating forum, has the primary role in the negotiation of a multilateral agreement or agreements, as appropriate, on the prevention of an arms race in outer space in all its aspects;

6. *Invites* the Conference on Disarmament to establish a working group under its agenda item entitled "Prevention of an arms race in outer space" as early as possible during its 2011 session;

7. *Recognizes*, in this respect, the growing convergence of views on the elaboration of measures designed to strengthen transparency, confidence and security in the peaceful uses of outer space;

8. *Urges* States conducting activities in outer space, as well as States interested in conducting such activities, to keep the Conference on Disarmament informed of the progress of bilateral and multilateral negotiations on the matter, if any, so as to facilitate its work;

9. *Decides* to include in the provisional agenda of its sixty-sixth session the item entitled "Prevention of an arms race in outer space".

*60th plenary meeting
8 December 2010*

⁶ See *Official Records of the General Assembly, Forty-fifth Session, Supplement No. 27 (A/45/27)*, para. 118 (para. 63 of the quoted text).

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General Assembly

Distr.: General
13 January 2011

Sixty-fifth session
Agenda item 97 (v)

Resolution adopted by the General Assembly

[on the report of the First Committee (A/65/410)]

65/68. Transparency and confidence-building measures in outer space activities

The General Assembly,

Recalling its resolutions 60/66 of 8 December 2005, 61/75 of 6 December 2006, 62/43 of 5 December 2007, 63/68 of 2 December 2008 and 64/49 of 2 December 2009,

Reaffirming that the prevention of an arms race in outer space would avert a grave danger to international peace and security,

Conscious that further measures should be examined in the search for agreements to prevent an arms race in outer space, including the weaponization of outer space,

Recalling, in this context, its previous resolutions, including resolutions 45/55 B of 4 December 1990 and 48/74 B of 16 December 1993, which, inter alia, emphasize the need for increased transparency and confirm the importance of confidence-building measures as a means conducive to ensuring the attainment of the objective of the prevention of an arms race in outer space,

Recalling also the report of the Secretary-General of 15 October 1993 to the General Assembly at its forty-eighth session, the annex to which contains the study by governmental experts on the application of confidence-building measures in outer space,¹

Noting the constructive debate which the Conference on Disarmament held on this subject in 2010, including the views expressed by Member States,

Noting also the introduction by China and the Russian Federation at the Conference on Disarmament of the draft treaty on the prevention of the placement of weapons in outer space and of the threat or use of force against outer space objects,²

¹ A/48/305 and Corr.1.

² See CD/1839.



Noting further the presentation by the European Union of a draft code of conduct for outer space activities,

Noting the contribution of Member States which have submitted to the Secretary-General concrete proposals on international outer space transparency and confidence-building measures pursuant to paragraph 1 of resolution 61/75, paragraph 2 of resolution 62/43, paragraph 2 of resolution 63/68 and paragraph 2 of resolution 64/49,

1. *Takes note* of the final report of the Secretary-General containing concrete proposals from Member States on international outer space transparency and confidence-building measures;³

2. *Requests* the Secretary-General to establish, on the basis of equitable geographical distribution, a group of governmental experts to conduct a study, commencing in 2012, on outer space transparency and confidence-building measures, making use of the relevant reports of the Secretary-General, including the final report, submitted to the General Assembly at its sixty-fifth session, and without prejudice to the substantive discussions on the prevention of an arms race in outer space within the framework of the Conference on Disarmament, and to submit to the Assembly at its sixty-eighth session a report with an annex containing the study of governmental experts;

3. *Also requests* the Secretary-General to provide the group of governmental experts with any assistance and services, within existing resources, that may be required for the discharge of its tasks;

4. *Decides* to include in the provisional agenda of its sixty-sixth session the item entitled "Transparency and confidence-building measures in outer space activities".

*60th plenary meeting
8 December 2010*

³ A/65/123.



General Assembly

Distr.: General
20 January 2011

Sixty-fifth session
Agenda item 50

Resolution adopted by the General Assembly

[on the report of the Special Political and Decolonization Committee
(Fourth Committee) (A/65/421)]

65/97. International cooperation in the peaceful uses of outer space

The General Assembly,

Recalling its resolutions 51/122 of 13 December 1996, 54/68 of 6 December 1999, 59/2 of 20 October 2004, 61/110 and 61/111 of 14 December 2006, 62/101 of 17 December 2007, 62/217 of 22 December 2007 and 64/86 of 10 December 2009,

Deeply convinced of the common interest of mankind in promoting and expanding the exploration and use of outer space, as the province of all mankind, for peaceful purposes and in continuing efforts to extend to all States the benefits derived therefrom, and also of the importance of international cooperation in this field, for which the United Nations should continue to provide a focal point,

Reaffirming the importance of international cooperation in developing the rule of law, including the relevant norms of space law and their important role in international cooperation for the exploration and use of outer space for peaceful purposes, and of the widest possible adherence to international treaties that promote the peaceful uses of outer space in order to meet emerging new challenges, especially for developing countries,

Seriously concerned about the possibility of an arms race in outer space, and bearing in mind the importance of article IV of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies¹ (Outer Space Treaty),

Recognizing that all States, in particular those with major space capabilities, should contribute actively to the goal of preventing an arms race in outer space as an essential condition for the promotion and strengthening of international cooperation in the exploration and use of outer space for peaceful purposes,

Recognizing also that space debris is an issue of concern to all nations,

¹ United Nations, *Treaty Series*, vol. 610, No. 8843.



Noting the progress achieved in the further development of peaceful space exploration and applications as well as in various national and cooperative space projects, which contributes to international cooperation, and the importance of further developing the legal framework to strengthen international cooperation in this field,

Convinced of the need to promote the use of space technology towards implementing the United Nations Millennium Declaration,²

Seriously concerned about the devastating impact of disasters,³

Desirous of enhancing international coordination and cooperation at the global level in disaster management and emergency response through greater access to and use of space-based services for all countries and facilitating capacity-building and institutional strengthening for disaster management, in particular in developing countries,

Deeply convinced that the use of space science and technology and their applications in areas such as telemedicine, tele-education, disaster management, environmental protection and other Earth observation applications contribute to achieving the objectives of the global conferences of the United Nations that address various aspects of economic, social and cultural development, particularly poverty eradication,

Taking note, in that regard, of the fact that the 2005 World Summit recognized the important role that science and technology play in promoting sustainable development,⁴

Having considered the report of the Committee on the Peaceful Uses of Outer Space on the work of its fifty-third session,⁵

1. *Endorses* the report of the Committee on the Peaceful Uses of Outer Space on the work of its fifty-third session;⁵

2. *Agrees* that the Committee on the Peaceful Uses of Outer Space, at its fifty-fourth session, should consider the substantive items recommended by the Committee at its fifty-third session,⁶ taking into account the concerns of all countries, in particular those of developing countries;

3. *Notes* that, at its forty-ninth session, the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space continued its work,⁷ as mandated by the General Assembly in its resolution 64/86;

4. *Agrees* that the Legal Subcommittee, at its fiftieth session, should consider the substantive items and reconvene the working groups recommended by the Committee,⁸ taking into account the concerns of all countries, in particular those of developing countries;

² See resolution 55/2.

³ The term “disasters” refers to natural or technological disasters.

⁴ See resolution 60/1, para. 60.

⁵ *Official Records of the General Assembly, Sixty-fifth Session, Supplement No. 20 (A/65/20)*.

⁶ *Ibid.*, para. 339.

⁷ *Ibid.*, chap. II.D; and A/AC.105/942.

⁸ See *Official Records of the General Assembly, Sixty-fifth Session, Supplement No. 20 (A/65/20)*, paras. 228–231.

5. *Urges* States that have not yet become parties to the international treaties governing the uses of outer space⁹ to give consideration to ratifying or acceding to those treaties in accordance with their domestic law, as well as incorporating them in their national legislation;

6. *Notes* that, at its forty-seventh session, the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space continued its work,¹⁰ as mandated by the General Assembly in its resolution 64/86;

7. *Agrees* that the Scientific and Technical Subcommittee, at its forty-eighth session, should consider the substantive items and reconvene the working groups recommended by the Committee,¹¹ taking into account the concerns of all countries, in particular those of developing countries;

8. *Notes with appreciation* that some States are already implementing space debris mitigation measures on a voluntary basis, through national mechanisms and consistent with the Space Debris Mitigation Guidelines of the Inter-Agency Space Debris Coordination Committee and with the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space,¹² endorsed by the General Assembly in its resolution 62/217;

9. *Invites* other States to implement, through relevant national mechanisms, the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space;¹²

10. *Considers* that it is essential that States pay more attention to the problem of collisions of space objects, including those with nuclear power sources, with space debris, and other aspects of space debris, calls for the continuation of national research on this question, for the development of improved technology for the monitoring of space debris and for the compilation and dissemination of data on space debris, also considers that, to the extent possible, information thereon should be provided to the Scientific and Technical Subcommittee, and agrees that international cooperation is needed to expand appropriate and affordable strategies to minimize the impact of space debris on future space missions;

11. *Urges* all States, in particular those with major space capabilities, to contribute actively to the goal of preventing an arms race in outer space as an essential condition for the promotion of international cooperation in the exploration and use of outer space for peaceful purposes;

⁹ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (United Nations, *Treaty Series*, vol. 610, No. 8843); Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (United Nations, *Treaty Series*, vol. 672, No. 9574); Convention on International Liability for Damage Caused by Space Objects (United Nations, *Treaty Series*, vol. 961, No. 13810); Convention on Registration of Objects Launched into Outer Space (United Nations, *Treaty Series*, vol. 1023, No. 15020); and Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (United Nations, *Treaty Series*, vol. 1363, No. 23002).

¹⁰ See *Official Records of the General Assembly, Sixty-fifth Session, Supplement No. 20* (A/65/20), chap. II.C; and A/AC.105/958.

¹¹ See *Official Records of the General Assembly, Sixty-fifth Session, Supplement No. 20* (A/65/20), paras. 170 and 171.

¹² *Ibid.*, *Sixty-second Session, Supplement No. 20* (A/62/20), paras. 117 and 118, and annex.

12. *Endorses* the United Nations Programme on Space Applications for 2011, as proposed to the Committee by the Expert on Space Applications and endorsed by the Committee;¹³

13. *Welcomes* the progress made by the International Committee on Global Navigation Satellite Systems towards achieving compatibility and interoperability among global and regional space-based positioning, navigation and timing systems and in the promotion of the use of global navigation satellite systems and their integration into national infrastructure, particularly in developing countries, and notes with satisfaction that the International Committee held its fifth meeting in Turin, Italy, from 18 to 22 October 2010, which was jointly organized by Italy and the European Commission;

14. *Notes with satisfaction* the progress made within the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) in the implementation of the workplan of the UN-SPIDER programme for the biennium 2010–2011,¹⁴ in particular the work of the UN-SPIDER office in Bonn, Germany, which is establishing a systematic compilation of relevant information with respect to disasters and making it accessible to all end-users, as well as the work of the UN-SPIDER staff in Vienna who are coordinating all the programme activities, including the work of the regional support offices, and encourages Member States to provide all necessary support, on a voluntary basis, to UN-SPIDER, including financial support, to enable it to carry out the workplan;

15. *Welcomes with appreciation* the signing of a host country agreement on 17 June 2010 by the Government of China and the Office for Outer Space Affairs of the Secretariat for the establishment of the UN-SPIDER Beijing office, and welcomes the fact that, in accordance with General Assembly resolution 61/110, regional support offices have been established in several countries to support the implementation of the activities of the UN-SPIDER programme;¹⁵

16. *Agrees* that the Office for Outer Space Affairs should ensure, within existing resources, the coordination of the UN-SPIDER SpaceAid framework with mechanisms and initiatives that are making space-based information available to support responses to emergency events, thus avoiding duplication of efforts;

17. *Notes with appreciation* that the African regional centres for space science and technology education in the French and English languages, located in Morocco and Nigeria, respectively, as well as the Centre for Space Science and Technology Education in Asia and the Pacific and the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean, affiliated to the United Nations, have continued their education programmes in 2010, and agrees that the regional centres should continue to report to the Committee on their activities;

18. *Emphasizes* that regional and interregional cooperation in the field of space activities is essential to strengthen the peaceful uses of outer space, assist States in the development of their space capabilities and contribute to the

¹³ Ibid., *Sixty-fifth Session, Supplement No. 20 (A/65/20)*, para. 79; and A/AC.105/969, sects. II and III, and annex III.

¹⁴ See A/AC.105/937.

¹⁵ See *Official Records of the General Assembly, Sixty-fifth Session, Supplement No. 20 (A/65/20)*, para. 113.

achievement of the goals of the United Nations Millennium Declaration² and to that end fosters interregional dialogue on space matters between Member States;

19. *Recognizes*, in this regard, the important role played by conferences and other mechanisms in strengthening regional and international cooperation among States, such as the African Leadership Conference on Space Science and Technology for Sustainable Development, the Asia-Pacific Regional Space Agency Forum, the Asia-Pacific Space Cooperation Organization and the Space Conference of the Americas;

20. *Notes with appreciation* that since the adoption of the Declaration of San Francisco de Quito by the Fifth Space Conference of the Americas in July 2006, more States in the Latin American and Caribbean region have set up national space entities of a civilian nature, thus laying the foundation for enhanced regional cooperation in the peaceful uses of outer space, and recalls that in the Declaration, States in the Latin American and Caribbean region were invited to, inter alia, “set up national space entities to lay the foundation for a regional entity for cooperation”;

21. *Welcomes with appreciation* the organization by the Government of Mexico of the Sixth Space Conference of the Americas, to be held in Pachuca, Mexico, from 15 to 19 November 2010, and notes with satisfaction that the proposed results of the Conference will be aimed towards strengthening the participation of the academic, public and private sectors, as well as youth and non-governmental organizations, in regional and international programmes and projects using space science and technology to support the economic, social, cultural and scientific development of the region;

22. *Urges* Member States and invites international organizations to participate actively in the four committees that will meet during the Sixth Space Conference of the Americas;

23. *Emphasizes* the need to increase the benefits of space technology and its applications and to contribute to an orderly growth of space activities favourable to sustained economic growth and sustainable development in all countries, including mitigation of the consequences of disasters, in particular in the developing countries;

24. *Notes* that space science and technology and their applications make important contributions to economic, social and cultural development and welfare, as indicated in the resolution entitled “The Space Millennium: Vienna Declaration on Space and Human Development”,¹⁶ its resolution 59/2 and the Plan of Action of the Committee on the Peaceful Uses of Outer Space on the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III);¹⁷

25. *Notes with satisfaction* that a number of the recommendations set out in the Plan of Action have been implemented and that satisfactory progress is being made in implementing the outstanding recommendations, and that Member States continue to contribute to the implementation of the recommendations of UNISPACE III through national and regional activities and by supporting and participating in the programmes established in response to those recommendations;

¹⁶ See *Report of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, Vienna, 19–30 July 1999* (United Nations publication, Sales No. E.00.I.3), chap. I, resolution 1.

¹⁷ See A/59/174, sect. VI.B.

26. *Urges* all Member States to continue to contribute to the Trust Fund for the United Nations Programme on Space Applications to enhance the capacity of the Office for Outer Space Affairs to provide technical and legal advisory services in accordance with the Plan of Action, while maintaining the priority thematic areas agreed by the Committee;

27. *Reiterates* that the benefits of space technology and its applications should continue to be brought to the attention, in particular, of the major United Nations conferences and summits for economic, social and cultural development and related fields and that the use of space technology should be promoted towards achieving the objectives of those conferences and summits and for implementing the United Nations Millennium Declaration;

28. *Notes with satisfaction* that the working paper by the Chair of the Committee on the Peaceful Uses of Outer Space for the period 2008–2009 entitled “Towards a United Nations space policy” will be considered by the Committee at its fifty-fourth session;¹⁸

29. *Welcomes* the increased efforts to strengthen further the Inter-Agency Meeting on Outer Space Activities, notes with satisfaction that the open informal meetings, held in conjunction with the annual sessions of the Inter-Agency Meeting on Outer Space Activities, provide a constructive mechanism for an active dialogue between the entities of the United Nations system and Member States, and encourages entities of the United Nations system to participate fully in the work of the Inter-Agency Meeting;

30. *Urges* entities of the United Nations system, particularly those participating in the Inter-Agency Meeting on Outer Space Activities, to continue to examine, in cooperation with the Committee, how space science and technology and their applications could contribute to implementing the United Nations Millennium Declaration on the development agenda, particularly in the areas relating to, inter alia, food security and increasing opportunities for education;

31. *Agrees* that the Director of the Office for Outer Space Affairs should continue to participate in the sessions of the Commission on Sustainable Development to raise awareness and promote the benefits of space science and technology for sustainable development;

32. *Calls upon* the United Nations University and other institutions of the same nature, within the framework of their mandates, to provide training and to carry out research in the areas of international space law and, in particular, matters relating to disasters and emergencies;

33. *Requests* the Economic Commission for Latin America and the Caribbean and other relevant regional organizations to offer the assistance necessary so that countries can carry out recommendations of regional conferences;

34. *Requests* the Committee to continue to consider, as a matter of priority, ways and means of maintaining outer space for peaceful purposes and to report thereon to the General Assembly at its sixty-sixth session, and agrees that during its consideration of the matter the Committee could continue to consider ways to promote regional and interregional cooperation based on experiences stemming from the Space Conferences of the Americas, the African Leadership Conferences

¹⁸ See *Official Records of the General Assembly, Sixty-fifth Session, Supplement No. 20 (A/65/20)*, para. 337; and A/AC.105/L.278.

on Space Science and Technology for Sustainable Development and the role space technology could play in the implementation of recommendations of the World Summit on Sustainable Development;

35. *Invites* the Committee to consider how it can contribute to the objectives of the United Nations Conference on Sustainable Development, to be held in Rio de Janeiro, Brazil, in 2012;

36. *Notes* that, in accordance with the agreement reached by the Committee at its forty-sixth session on the measures relating to the future composition of the bureaux of the Committee and its subsidiary bodies,¹⁹ on the basis of the measures relating to the working methods of the Committee and its subsidiary bodies,²⁰ the Group of Asian States, the Group of Latin American and Caribbean States and the Group of Western European and Other States nominated their candidates for the offices of Chair of the Committee, Chair of the Scientific and Technical Subcommittee and First Vice-Chair of the Committee, respectively, for the period 2012–2013;²¹

37. *Urges* the Group of African States to nominate its candidate for the office of Chair of the Legal Subcommittee and the Group of Eastern European States to nominate its candidate for the office of Second Vice-Chair/Rapporteur of the Committee, for the period 2012–2013, before the next meeting of those bodies;

38. *Agrees* that, upon the nomination of the candidate of the Group of African States and the candidate of the Group of Eastern European States, the Committee and its subsidiary bodies should elect their officers;

39. *Decides* that Tunisia shall become a member of the Committee;²²

40. *Endorses* the decision of the Committee to grant permanent observer status to the International Association for the Advancement of Space Safety;²³

41. *Notes* that each of the regional groups has the responsibility for actively promoting the participation in the work of the Committee and its subsidiary bodies of the member States of the Committee that are also members of the respective regional groups, and agrees that the regional groups should consider this Committee-related matter among their members;

42. *Notes with satisfaction* that a panel discussion on space and emergencies was held at United Nations Headquarters on 12 October 2010, and agrees that a panel discussion should be held at the sixty-sixth session of the General Assembly on a topic to be selected by the Committee, taking into account the panel discussions held on climate change, food security, global health, and emergencies;

43. *Requests* the entities of the United Nations system, other international organizations and the Secretary-General to continue and, where appropriate, to enhance their cooperation with the Committee and to provide it with reports on the issues dealt with in the work of the Committee and its subsidiary bodies, and to

¹⁹ See *Official Records of the General Assembly, Fifty-eighth Session, Supplement No. 20 (A/58/20)*, annex II, paras. 4–9.

²⁰ *Ibid.*, *Fifty-second Session, Supplement No. 20 (A/52/20)*, annex I; and *ibid.*, *Fifty-eighth Session, Supplement No. 20 (A/58/20)*, annex II, appendix III.

²¹ *Ibid.*, *Sixty-fifth Session, Supplement No. 20 (A/65/20)*, paras. 301–303.

²² *Ibid.*, *Sixty-fifth Session, Supplement No. 20 (A/65/20)*, paras. 305 and 306.

²³ *Ibid.*, para. 308.

address the issues covered by the panel discussions held in conjunction with sessions of the General Assembly;

44. *Welcomes* the fact that the Committee will celebrate at its fifty-fourth session the fiftieth anniversary of the Committee and the fiftieth anniversary of human space flight.

*62nd plenary meeting
10 December 2010*

Monthly Statement of Treaties and International Agreements

Space related agreements registered in the U.N.'s Monthly Statement of Treaties and International Agreements (volumes 2010/1-2010/11)

2010/1:

No. 15020 - **Multilateral**

Convention on registration of objects launched into outer space. New York, 12 November 1974

Accession: Libyan Arab Jamahiriya

Deposit of instrument with the Secretary-General of the United Nations: 8 January 2010

Date of effect: 8 January 2010

Registration with the Secretariat of the United Nations: ex officio, 8 January 2010

2010/3

No. 47280 - **Argentina and Ecuador**

Framework Agreement on cooperation in the field of space activities between the Argentine Republic and the Republic of Ecuador. Buenos Aires, 20 September 2007

Entry into force: 6 May 2009 by notification, in accordance with article VIII

Authentic text: Spanish

Registration with the Secretariat of the United Nations: Argentina, 19 March 2010

2010/4:

No. 47342 - **Germany and United States of America**

* Exchange of notes constituting an Arrangement between the Government of the Federal Republic of Germany and the Government of the United States of America concerning the activities of enterprises charged with providing analytical support services "Northrop Grumman Space & Mission Systems Corporation (DOCPER-AS-43-06) (VN 502)". Berlin, 20 January 2010

Entry into force: 20 January 2010, in accordance with the provisions of the said notes

Authentic texts: English and German

Registration with the Secretariat of the United Nations: Germany, 1 April 2010

No. 47414 - **Argentina and Ukraine**

Framework Agreement between the Government of the Argentine Republic and the Government of Ukraine on cooperation in peaceful uses of outer space. Kiev, 2 October 2006

Entry into force: 28 January 2009 by notification, in accordance with article 16

Authentic texts: English, Spanish and Ukrainian

Registration with the Secretariat of the United Nations: Argentina, 21 April 2010

2010/5

No. 24265 - **Multilateral**

Convention for the establishment of a European organisation for the exploitation of meteorological satellites ("EUMETSAT"). Geneva, 24 May 1983

Accession: Czech Republic

Deposit of instrument with the Government of Switzerland: 12 May 2010

Date of effect: 12 May 2010

Registration with the Secretariat of the United Nations: Switzerland, 27 May 2010

No. 26373 - Multilateral

Protocol on the privileges and immunities of the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT). Darmstadt, 1 December 1986

Accession: Czech Republic

Deposit of instrument with the Government of Switzerland: 12 May 2010

Date of effect: 11 June 2010

Registration with the Secretariat of the United Nations: Switzerland, 27 May 2010

2010/9:

No. 47762 - Spain and Russian Federation

Agreement between the Government of the Kingdom of Spain and the Government of the Russian Federation on cooperation in the field of the exploration and use of outer space for peaceful purposes (with annex). Madrid, 9 February 2006

Entry into force: 17 March 2010 by notification, in accordance with article 17

Authentic texts: English, Russian and Spanish

Registration with the Secretariat of the United Nations: Spain, 22 September 2010

See article 16 for provisions relating to the appointment of arbitrator(s) by the President of the International Court of Justice

2010/10:

No. 15020 - Multilateral

Convention on registration of objects launched into outer space. New York, 12 November 1974

Accession: Costa Rica

Deposit of instrument with the Secretary-General of the United Nations: 14 October 2010

Date of effect: 14 October 2010

Registration with the Secretariat of the United Nations: ex officio, 14 October 2010

2010/11:

No. 9574 - Multilateral

Agreement on the rescue of astronauts, the return of astronauts and the return of objects launched into outer space. London, 22 April 1968, Moscow, 22 April 1968 and Washington, 22 April 1968

Accession: Libyan Arab Jamahiriya

Deposit of instrument with the Government of the United Kingdom of Great Britain and Northern Ireland: 20 April 2010

Date of effect: 20 April 2010 provided the deposit in London was the effective deposit for the purpose of article VII (4) of the Agreement.

Registration with the Secretariat of the United Nations: United Kingdom of Great Britain and Northern Ireland, 19 November 2010

No. 13810 - **Multilateral**

Convention on the international liability for damage caused by space objects. London, 29 March 1972, Moscow, 29 March 1972 and Washington, 29 March 1972

Accession: Libyan Arab Jamahiriya

Deposit of instrument with the Government of the United Kingdom of Great Britain and Northern Ireland: 20 April 2010

Date of effect: 20 April 2010 provided the deposit in London was the effective deposit for the purpose of article XXIV of the Convention.

Registration with the Secretariat of the United Nations: United Kingdom of Great Britain and Northern Ireland, 19 November 2010

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POSTAL ADDRESS—ADRESSE POSTALE: UNITED NATIONS, N.Y. 10017
CABLE ADDRESS—ADRESSE TELEGRAPHIQUE: UNATIONS NEWYORK

Reference: C.N.29.2010.TREATIES-1 (Depositary Notification)

CONVENTION ON REGISTRATION OF OBJECTS LAUNCHED INTO OUTER
SPACE

NEW YORK, 12 NOVEMBER 1974

LIBYAN ARAB JAMAHIRIYA: ACCESSION

The Secretary-General of the United Nations, acting in his capacity as depositary,
communicates the following:

The above action was effected on 8 January 2010.

The Convention entered into force for the Libyan Arab Jamahiriya on 8 January 2010 in
accordance with its article VIII(4) which reads as follows:

"For States whose instruments of ratification or accession are deposited subsequent to the entry
into force of the Convention, it shall enter into force on the date of the deposit of their instrument of
ratification or accession."

27 January 2010

A handwritten signature in black ink, consisting of a stylized 'J' followed by a flourish.

Attention: Treaty Services of Ministries of Foreign Affairs and of international organizations concerned.
Depositary notifications are currently issued in both hard copy and electronic format. Depositary
notifications are made available to the Permanent Missions to the United Nations at the following e-mail
address: missions@un.int. Such notifications are also available in the United Nations Treaty Collection on
the Internet at <http://treaties.un.org>, where interested individuals can subscribe to directly receive depositary
notifications by e-mail through a new automated subscription service. Depositary notifications are available
for pick-up by the Permanent Missions in Room NL-300.

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POSTAL ADDRESS—ADRESSE POSTALE: UNITED NATIONS, N.Y. 10017
CABLE ADDRESS—ADRESSE TELEGRAPHIQUE: UNATIONS NEWYORK

Reference: C.N.644.2010.TREATIES-2 (Depositary Notification)

CONVENTION ON REGISTRATION OF OBJECTS LAUNCHED INTO OUTER
SPACE

NEW YORK, 12 NOVEMBER 1974

COSTA RICA: ACCESSION

The Secretary-General of the United Nations, acting in his capacity as depositary,
communicates the following:

The above action was effected on 14 October 2010.

The Convention entered into force for Costa Rica on 14 October 2010 in accordance with its
article VIII(4) which reads as follows:

"For States whose instruments of ratification or accession are deposited subsequent to the entry
into force of the Convention, it shall enter into force on the date of the deposit of their instrument of
ratification or accession."

15 October 2010

A handwritten signature in black ink, appearing to be "J. G. W.", is written below the date.

Attention: Treaty Services of Ministries of Foreign Affairs and of international organizations concerned.
Depositary notifications are issued in electronic format only. Depositary notifications are made available to
the Permanent Missions to the United Nations in the United Nations Treaty Collection on the Internet at
<http://treaties.un.org>, under "Depositary Notifications (CNs)". In addition, the Permanent Missions, as well
as other interested individuals, can subscribe to receive depositary notifications by e-mail through the Treaty
Section's "Automated Subscription Services", which is also available at <http://treaties.un.org>.

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No. 10-026

The Embassy of the United States of America presents its compliments to the Department of Foreign Affairs and Trade and refers to the cooperative program facilitating space flight operations implemented in accordance with the *Agreement between the Government of the United States of America and the Government of Australia concerning Space Vehicle Tracking and Communications Facilities* ("the Agreement"), effected by exchange of notes at Canberra May 29, 1980, as amended.

In view of the mutual benefits to be derived from this cooperative program, the Embassy, on behalf of the Government of the United States of America, proposes that the Agreement be amended as follows:

1. In paragraph 1 of Article 2 of the Agreement, the list of facilities shall be replaced by the following:
 - a) Canberra Deep Space Communication Complex, Tidbinbilla, Australian Capital Territory;
 - b) Tracking and Data Relay Satellite System, Alice Springs, Northern Territory;
 - c) Tracking and Data Relay Satellite Facility, Dongara, Western Australia;

DIPLOMATIC NOTE

2. Paragraph 1 of Article 13 of the Agreement shall be replaced by the following:

(1) This Agreement shall remain in force until February 26, 2012, or until a further agreement between the Government of the United States of America and the Government of Australia concerning space vehicle tracking and communication facilities is concluded and enters into force, whichever occurs first. The present Agreement may be further extended by the agreement of the two Governments.

The Embassy further proposes that if the foregoing is acceptable to the Government of Australia, then this note and the Government of Australia's affirmative note in reply shall constitute an agreement between the Government of the United States of America and the Government of Australia to amend the Agreement concerning Space Vehicle Tracking and Communications Facilities of 29 May 1980, as amended, which shall enter into force, with effect from February 26, 2010, on the date the Government of Australia notifies the Government of the United States of America by diplomatic note that it has completed the domestic processes necessary for this purpose.

The Embassy of the United States of America avails itself of this opportunity to renew to the Department of Foreign Affairs and Trade the assurances of its highest consideration.

Embassy of the United States of America.

Canberra, February 25, 2010





N° 10/046

The Department of Foreign Affairs and Trade presents its compliments to the Embassy of the United States of America and has the honour to refer to the Embassy's Note No. 10-026 of 25 February 2010, which reads as follows:

"The Embassy of the United States of America presents its compliments to the Department of Foreign Affairs and Trade and refers to the cooperative program facilitating space flight operations implemented in accordance with the *Agreement between the Government of the United States of America and the Government of Australia concerning Space Vehicle Tracking and Communications Facilities* ("the Agreement"), effected by exchange of notes at Canberra May 29, 1980, as amended.

In view of the mutual benefits to be derived from this cooperative program, the Embassy, on behalf of the Government of the United States of America, proposes that the Agreement be amended as follows:

1. In paragraph 1 of Article 2 of the Agreement, the list of facilities shall be replaced by the following:
 - a) Canberra Deep Space Communication Complex, Tidbinbilla, Australian Capital Territory;
 - b) Tracking and Data Relay Satellite System, Alice Springs, Northern Territory;
 - c) Tracking and Data Relay Satellite Facility, Dongara, Western Australia;
2. Paragraph 1 of Article 13 of the Agreement shall be replaced by the following:

(1) This Agreement shall remain in force until February 26, 2012, or until a further agreement between the Government of the United States of America and the Government of Australia concerning space vehicle tracking and communication facilities is concluded and enters into force, whichever occurs first. The present Agreement may be further extended by the agreement of the two Governments.

The Embassy further proposes that if the foregoing is acceptable to the Government of Australia, then this note and the Government of Australia's affirmative note in reply shall constitute an agreement between the Government of the United States of America and the Government of Australia to amend the Agreement concerning Space Vehicle Tracking and Communications Facilities of 29 May 1980, as amended, which shall enter into force, with effect from February 26, 2010, on the date the Government of Australia notifies the

Government of the United States of America by diplomatic note that it has completed the domestic processes necessary for this purpose.

The Embassy of the United States of America avails itself of this opportunity to renew to the Department of Foreign Affairs and Trade the assurances of its highest consideration.”

The Department has the honour to confirm that the Embassy’s proposals are acceptable to the Australian Government. Accordingly the Embassy’s Note and this Note in reply shall together constitute an agreement between the Government of the United States of America and the Government of Australia to amend the Agreement concerning Space Vehicle Tracking and Communications Facilities of 29 May 1980, as amended.

This Agreement shall enter into force with effect from 26 February 2010, on the day the Government of Australia notifies the Government of the United States of America, by diplomatic note, that it has completed the domestic processes necessary for this purpose.

The Department of Foreign Affairs and Trade avails itself of this opportunity to renew to the Embassy of the United States of America assurances of its highest consideration.

CANBERRA



25 February 2010

National Aeronautics and Space Administration

Headquarters

Washington, DC 20546-0001



June 28, 2010

Reply to Attention:

Office of International & Interagency Relations

Mr. Chris de Cooker
Head, International Relations Department
European Space Agency
8-10, rue Mario-Nikis
75738 Paris Cedex 15
France

Dear Mr. de Cooker:

Thank you for your letter dated June 22, 2010, concerning continued cooperation between ESA and NASA in the joint exploration of Mars, initially focusing on the 2016 and 2018 launch opportunities, while leading to an ongoing cooperative program.

NASA agrees with the terms and conditions as outlined in your letter. Consequently, I acknowledge that your letter, together with this affirmative reply, shall constitute an agreement between ESA and NASA on the exploration of Mars in the 2016 and 2018 mission opportunities, with the interest in building an ongoing program.

Sincerely,

A handwritten signature in black ink, appearing to read "K. C. Feldstein", followed by a horizontal line.

Karen Feldstein
Director (Acting), Science Division
Office of International and Interagency Relations

LEX-1/1173

Karen Feldstein
Director (Acting)
Science Division
Office of International and Interagency Relations
NASA Headquarters
300 E St., SW
Washington, DC 20546

Paris, 22 June 2010

Dear Mrs. Feldstein,

On 21 March 2008, the European Space Agency (ESA) and the United States National Aeronautics and Space Administration (NASA) concluded an agreement on cooperation on the ExoMars mission, by means of an Exchange of Letters (hereinafter the "2008 Agreement"). The 2008 Agreement expired on 31 December 2009. Meanwhile, ESA and NASA have expressed a mutual interest in continuing the cooperation established by the 2008 Agreement while revising the scope of the cooperation. As envisaged, the revised cooperation on the robotic exploration of Mars would span several launch opportunities (i.e., launch windows), initially focusing on 2016 and 2018, with landers and orbiters conducting astrobiological, geological, climatological, and other high-priority investigations.

Programmatic goals, technological advances, and available budgets will be assessed to determine the mission architecture and potential contributions of each agency to the envisioned cooperative missions.

The missions

NASA and ESA have begun studying the 2016 and 2018 missions to meet the goals of each agency that have been defined over the past several years: ESA's in terms of the ExoMars mission concept, which includes landing, drilling, and roving technology development; and NASA's in terms of a trace gas mapping and imaging mission concept that would also replenish the communications infrastructure at Mars to support future missions, followed by a surface roving mission with the capability of characterizing and caching Martian astrobiological/geological samples for potential retrieval.

The 2016 mission, under ESA lead, would involve an orbiter provided by ESA and launched to Mars by NASA. The orbiter would provide orbital science in mapping trace gases, communications relay operations and demonstration of key technologies for a hyperbolic entry, descent, and semi-soft landing system (EDLS) with limited mass and surface lifetime. The opportunity would be used to land a scientific payload

within the limited resources available in the EDLS. ESA would conduct operations of the spacecraft during all phases of the mission. NASA would be responsible for launch operations and for the science operations of its payload, with relay and aerobraking operations jointly performed with ESA.

The 2018 mission, under NASA lead, would include the ExoMars rover provided by ESA, including scientific payloads and drilling capabilities. NASA would provide, as a minimum, the Atlas V-class launch vehicle, a rover, the "Sky Crane" EDLS, accommodation for the ESA ExoMars rover in addition to NASA's own rover, and Radioisotope Heater Units for the ExoMars rover. NASA would conduct the launch approval process and associated launch, cruise, and EDL operations. NASA would also be responsible for the surface operations of its rover and ESA would be responsible for the surface operations of the ExoMars rover. ESA and NASA would jointly select the landing site and coordinate surface science operations.

Purpose of the present letter

The purpose of the present letter is to establish an Agreement (hereinafter "Agreement") between ESA and NASA (hereinafter "the Parties") confirming their intention to continue the cooperation on the robotic exploration of Mars that began with the 2008 Agreement, while revising the scope of the earlier cooperation, which will now encompass two missions as described above.

Bearing in mind the requirements stemming from the implementation of their respective programmes, it is the intention of the Parties to expeditiously develop a Memorandum of Understanding (MoU) that will cover in a detailed manner specific, agreed-upon mission activities in each opportunity, or across opportunities, including relevant management structures and provisions on the Parties' rights in, and responsibilities for, distribution of scientific data.

Under this Agreement, the Parties will pursue their cooperation on the robotic exploration of Mars according to the provisions below:

Activities of the Parties under this Agreement

To implement the present cooperation pursuant to this Agreement, the Parties will use all reasonable efforts to:

- (a) cooperate on the further definition and development of mission concepts, mission requirements and implementation approaches for each of the mission opportunities;
- (b) issue and support a joint Announcement of Opportunity (AO) for selection of instrumentation on the 2016 mission;
- (c) establish joint working groups to examine relevant issues and appoint representatives to participate therein;
- (d) appoint representatives to participate in the deliberation of working groups and reviews established by the other Party to examine relevant issues;

- (e) establish a joint program architecture review team and appoint representatives to participate therein;
- (f) consult and collaborate in public education and outreach activities associated with the joint robotic exploration of Mars;
- (g) organise workshops and experts meetings on the robotic exploration of Mars;
- (h) exchange reports and documents relevant to the definition and implementation of the joint robotic exploration of Mars, including industry studies, design models and scientific reports, and flight project documents specific to each of the mission concepts; and
- (i) facilitate short- and long-term placements of personnel from ESA and NASA, or from institutions associated with the Parties' activities pursuant to this Agreement, as agreed on a case-by-case basis, to one another's facilities to participate in, confer with, and advise their counterparts on relevant issues.

Points of Contact

The following Points of Contact have been designated to enable both NASA and ESA to take the necessary steps to formalise their intended cooperation on the robotic exploration of Mars:

- (a) for NASA: Doug McCuiston
- (b) for ESA: Marcello Coradini

Any change in the Parties' respective Points of Contact, or in the corresponding details, will be communicated in writing by the Party making such change to the other Party.

Planetary Protection

The Parties will conduct their activities pursuant to this Agreement in accordance with the prescriptions of their respective planetary protection policies, consistent with the corresponding policies promulgated by the Committee on Space Research (COSPAR) and the applicable implementing requirements and guidelines.

Definitions

For the purpose of this Agreement,

1. The term "Related Entity" means:
 - (a) a contractor, subcontractor, or sponsored entity of a Party at any tier;
 - (b) a user or customer of a Party at any tier;
 - (c) a contractor or subcontractor of a user or customer or sponsored entity of a Party at any tier; or
 - (d) a scientific investigator.

The terms “contractor” and “subcontractor” include suppliers of any kind.

Without prejudice to the detailed provisions contained in this Agreement, each Party will, by contract or otherwise, extend the obligations intended for its Related Entities, as set forth in this Agreement, to the said Related Entities.

2. The term “damage” means:

- (a) bodily injury to, or other impairment of health of, or death of, any person;
- (b) damage to, loss of, or loss of use of any property;
- (c) loss of revenue or profits; or
- (d) other direct, indirect, or consequential damage.

3. The term “launch vehicle” means an object or any part thereof intended for launch, launched from Earth, or returning to Earth which carries payloads or persons, or both.

4. The term “payload” means all property to be flown or used on or in a launch vehicle.

5. The term “Protected Space Operations” means all activities pursuant to this Agreement, including launch vehicle activities and payload activities on Earth, in outer space, or in transit between Earth and outer space. “Protected Space Operations” begin at the entry into force of this Agreement and end when all activities done in implementation of this Agreement are completed. The term includes, but is not limited to:

- (a) research, design, development, test, manufacture, assembly, integration, operation, or use of launch or transfer vehicles, payloads, or instruments, as well as related support equipment and facilities and services;
- (b) all activities related to ground support, test, training, simulation, or guidance and control equipment and related facilities or services.

The term “Protected Space Operations” excludes activities on Earth that are conducted on return from space to develop further a payload’s product or process for use other than for the ExoMars mission.

Financial Arrangements

Each Party will bear the costs of discharging its respective responsibilities, including travel and subsistence of personnel and transportation of all equipment and other items for which it is responsible. The ability of the Parties to carry out their obligations is subject to the availability of appropriated funds. Should either Party encounter budgetary problems that may affect the activities to be carried out under this Agreement, the Party encountering the problems will notify and consult with the other Party as soon as possible and will take appropriate steps to minimise any negative impact of the budgetary problem on the other Party.

Release of Results and Public Information

1. The Parties retain the right to release public information regarding their own activities under this Agreement. The Parties will coordinate with each other in advance concerning releasing to the public information that relates to the other Party's responsibilities or performance under this Agreement.
2. The Parties will make the results available to the general scientific community, as appropriate.
3. The Parties acknowledge that the following data or information does not constitute public information and that such data or information will not be included in any publication or presentation by a Party under this clause without the other Party's prior written permission:
 - (a) data furnished by the other Party in accordance with the Transfer of Goods and Technical Data clause of this Agreement which is export-controlled, classified, or proprietary; or
 - (b) information about an invention of the other Party before an application for a patent (or similar form of protection in any country) corresponding to such invention has been filed covering the same, or a decision not to file has been made.

Intellectual Property

1. Nothing in this Agreement shall be construed as granting, either expressly or by implication, to the other Party any rights to, or interest in, any inventions or works of a Party or its Related Entities made prior to the entry into force of, or outside the scope of, this Agreement, including any patents (or similar forms of protection in any country) corresponding to such inventions or any copyrights corresponding to such works.
2. Any right to, or interest in, any invention or work made in the performance of this Agreement solely by one Party or any of its Related Entities, including any patents (or similar forms of protection in any country) corresponding to such invention or any copyright corresponding to such work, shall be owned by such Party or Related Entity. Allocation of rights to, or interest in, such invention or work between such Party and its Related Entities shall be determined by applicable laws, rules, regulations, and contractual obligations.
3. It is not anticipated that there will be any joint inventions made in the performance of this Agreement. Nevertheless, in the event that an invention is jointly made by the Parties in the performance of this Agreement, the Parties shall, in good faith, consult and agree within 30 calendar days as to:

- (a) the allocation of rights to, or interest in, such joint invention, including any patents (or similar forms of protection in any country) corresponding to such joint invention;
 - (b) the responsibilities, costs, and actions to be taken to establish and maintain patents (or similar forms of protection in any country) for each such joint invention; and
 - (c) the terms and conditions of any license or other rights to be exchanged between the Parties or granted by one Party to the other Party.
4. For any jointly authored work, should the Parties decide to register the copyright in such work, they shall, in good faith, consult and agree as to the responsibilities, costs, and actions to be taken to register copyrights and maintain copyright protection (in any country).
 5. Subject to the provisions of the clauses on Transfer of Goods and Technical Data and on the Release of Results and Public Information, each Party shall have an irrevocable royalty-free right to reproduce, prepare derivative works, distribute, and present publicly, and authorise others to do so on its behalf, any copyrighted work resulting from activities undertaken in the performance of this Agreement for its own purposes, regardless of whether the work was created solely by, or on behalf of, the other Party or jointly with the other Party.

Transfer of Goods and Technical Data

The Parties are obligated to transfer only those goods and technical data (including software) necessary to fulfil their respective responsibilities under this Agreement, in accordance with the following provisions, notwithstanding any other provision of this Agreement:

1. All activities of the Parties will be carried out in accordance with applicable laws, rules, and regulations pertaining to export control and the control of classified information.
2. The transfer of goods and technical data for the purpose of discharging the Parties' responsibilities with regard to interface, integration, and safety will normally be made without restriction, except as provided in paragraph 1 above.
3. All transfers of export-controlled goods and proprietary or export-controlled technical data are subject to the following provisions. In the event a Party or its Related Entity finds it necessary to transfer export-controlled goods or to transfer proprietary or export-controlled technical data, for which protection is to be maintained, such goods will be specifically identified and such technical data will be marked with a notice. The identification for such goods and the marking of such technical data will indicate that the goods and technical data will be used by the receiving Party or its Related Entities only for the purposes of fulfilling the receiving Party's or Related Entity's responsibilities under this Agreement, and that the identified goods and marked technical data will not be disclosed or retransferred to any other entity without the prior written

permission of the furnishing Party or its Related Entity. The receiving Party or Related Entity will abide by the terms of the notice and protect any such identified goods or marked technical data from unauthorized use and disclosure. The Parties to this Agreement will cause their Related Entities to be bound by the provisions of this clause related to use, disclosure, and retransfer of identified goods and marked technical data through contractual mechanisms or equivalent measures.

4. All goods and marked proprietary or export-controlled technical data exchanged in the performance of this Agreement will be used by the receiving Party or Related Entity exclusively for the purposes of this Agreement. Upon completion of the activities under this Agreement, the receiving Party or Related Entity will return or, at the request of the furnishing Party or its Related Entity, otherwise dispose of all goods and marked proprietary or export-controlled technical data provided under this Agreement.

Liability

1. The Parties agree that a comprehensive cross-waiver of liability between the Parties and their Related Entities shall further participation in space exploration, use, and investment. The cross-waiver of liability shall be broadly construed to achieve this objective. The terms of the cross-waiver are set out below.
2. (a) Each Party agrees to a cross-waiver of liability pursuant to which each Party waives all claims against the other Party, the other Party's Related Entities, employees of the other Party, and employees of the other Party's Related Entities, based on Damage arising out of Protected Space Operations. This cross-waiver shall apply only if the person, entity, or property causing the damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The cross-waiver shall apply to any claims for damage, whatever the legal basis for such claims.
- (b) Each Party shall extend the cross-waiver of liability to its own Related Entities by requiring them, by contract or otherwise, to agree to waive all claims, and require that their Related Entities waive all claims, against the other Party, the other Party's Related Entities, and employees of the other Party or its Related Entities, based on damage arising out of Protected Space Operations.
- (c) For avoidance of doubt, this cross-waiver of liability includes a cross-waiver for any liability arising from the Convention on International Liability for Damage Caused by Space Objects, which entered into force on 1 September 1972 (hereinafter referred to as the "Liability Convention"), where the person, entity, or property causing the damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.

- (d) Notwithstanding the other provisions of this clause, this cross-waiver of liability shall not be applicable to:
 - (i) claims between a Party and its own Related Entity or among its own Related Entities;
 - (ii) claims made by a natural person, his/her estate, survivors, or subrogees (except when a subrogee is a Party to this Agreement or is otherwise bound by the terms of this cross-waiver) for bodily injury, other impairment of health, or death of such natural person;
 - (iii) intellectual property claims; or
 - (iv) claims for damage caused by willful misconduct.
- (e) This cross-waiver of liability shall not apply to performance of the Parties' obligations under this Agreement.
- (f) Nothing in this clause shall be construed to create the basis for a claim or suit where none would otherwise exist.
- (g) In the event of third-party claims which may arise out of, *inter alia*, the Liability Convention, the Parties shall consult promptly on any potential liability, on any apportionment of such liability, and on the defense of such claim.

Customs Clearance and Movement of Persons and Goods Facilitation

In accordance with applicable laws and regulations, each Party will facilitate, on a fully reciprocal basis, free customs clearance and waiver of all applicable customs duties and taxes for equipment and related goods necessary for the implementation of this Agreement. In the event that any customs duties or taxes of any kind are nonetheless levied on such equipment and related goods, such customs duties or taxes will be borne by the Party related to the authority levying them.

Each of the Parties will also facilitate the movement of persons and goods into and out of the corresponding territory as necessary to carry out activities pursuant to this Agreement in accordance with applicable laws and regulations.

Ownership of Equipment

Unless otherwise agreed between the Parties, all equipment transferred by the Parties under this Agreement shall remain the property of the originating Party. Each Party shall return any of the other Party's equipment in its possession to the other Party once the purpose of the transfer is achieved.

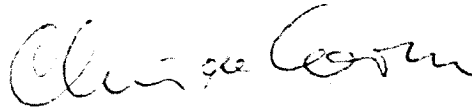
Consultation and Dispute Resolution

If an issue concerning the interpretation or implementation of this Agreement submitted by **either Party** to the other is not resolved through consultation conducted under the **appropriate level** of authority of the Parties and still needs to be resolved, the Parties may agree to submit the dispute to an agreed-upon form of dispute resolution.

Entry Into Force and Termination

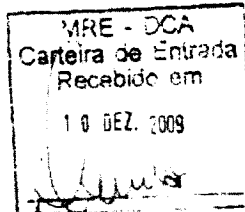
If the above terms and conditions are acceptable to NASA, I propose that this letter, together with your affirmative reply, shall constitute an agreement between ESA and NASA, which will enter into force on the date of NASA's affirmative reply. It will remain in force until 31 December 2012. This Agreement may be amended or extended at any time by mutual written agreement of the Parties and may be terminated by either Party after at least six months advance written notification of intent to terminate. The obligations of the Parties set forth in this Agreement concerning Liability; Intellectual Property; Transfer of Goods and Technical Data; and Customs Clearance, will continue to apply after the expiration or termination of this Agreement.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Chris de Cooker', written in a cursive style.

Chris de Cooker
Head of the International Relations Department

Doc. 101
L 44 7473



No. 443

Your Excellency:

I have the honor to refer to the Framework Agreement between the Government of the United States of America and the Government of the Federative Republic of Brazil on Cooperation in the Peaceful Uses of Outer Space, signed at Brasilia March 1, 1996, as extended (hereinafter referred to as "the 1996 Agreement").

I am pleased to recognize the significant achievements in cooperative activities in space of the two Governments under the 1996 Agreement, and to express the desire of the United States that their mutually beneficial relationship continues.

Accordingly, noting that the 1996 Agreement is currently set to expire on January 31, 2010, I, on behalf of the Government of the United States of America, have the honor to propose that the 1996 Agreement, consistent with Article 13 thereof, be extended for an additional two years, through January 31, 2012.

DIPLOMATIC NOTE

I further propose that if this arrangement is acceptable to the Government of the Federative Republic of Brazil, this Note and your affirmative reply shall constitute an agreement between the two Governments to extend the 1996 Agreement, which shall enter into force on the date of your reply Note, with effect from January 31, 2010.

Accept, Excellency, the assurances of my highest consideration.



Lisa Kubiske

Chargé d'Affaires, a.i.

Embassy of the United States of America



Brasilia, December 10, 2009.



TRANSLATION/COMPARISON

No. DMAE/DAI/CGEUC/01/MESP BRAS EUA

January 5, 2010

Madam Charge d'Affaires:

I have the honor to refer to Note No. 443, dated December 10, 2009, the

Portuguese translation of which reads as follows:

[The Portuguese-language translation of note verbale No. 443 of December 10, 2009, has been found to have the same meaning as the original in all substantive respects.]

Considering the importance of the above-cited Agreement to bilateral cooperation in space between Brazil and the United States, I have the honor to accept Your Excellency's proposal, and to confirm our understanding that your note verbale, together with this reply, constitute an agreement between our two Governments to extend the above-mentioned Framework Agreement through January 31, 2012, which shall enter into force on the signature date of this note.

I avail myself of this opportunity to renew to Your Excellency the assurances of my highest consideration.

[s] Ruy Nunes Pinto Nogueira

Ruy Nunes Pinto Nogueira
Minister of Foreign Relations, a.i.

Her Excellency
Lisa Kubiske,
Chargé d'Affaires, a.i.,
Embassy of the United States of America

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COOPERATION AGREEMENT**on Satellite Navigation between the European Union and its Member States and the Kingdom of Norway**

THE EUROPEAN UNION, hereinafter also referred to as the 'Union',

and

THE KINGDOM OF BELGIUM,

THE REPUBLIC OF BULGARIA,

THE CZECH REPUBLIC,

THE KINGDOM OF DENMARK,

THE FEDERAL REPUBLIC OF GERMANY,

THE REPUBLIC OF ESTONIA,

IRELAND,

THE HELLENIC REPUBLIC,

THE KINGDOM OF SPAIN,

THE FRENCH REPUBLIC,

THE ITALIAN REPUBLIC,

THE REPUBLIC OF CYPRUS,

THE REPUBLIC OF LATVIA,

THE REPUBLIC OF LITHUANIA,

THE GRAND DUCHY OF LUXEMBOURG,

THE REPUBLIC OF HUNGARY,

MALTA,

THE KINGDOM OF THE NETHERLANDS,

THE REPUBLIC OF AUSTRIA,

THE REPUBLIC OF POLAND,

THE PORTUGUESE REPUBLIC,

ROMANIA,

THE REPUBLIC OF SLOVENIA,

THE SLOVAK REPUBLIC,

THE REPUBLIC OF FINLAND,

THE KINGDOM OF SWEDEN,

THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND,

the Contracting parties to the Treaty on the Functioning of the European Union, hereinafter referred to as 'Member States',

of the one part, and

THE KINGDOM OF NORWAY, hereinafter referred to as 'Norway',

of the other part,

the European Union, the Member States and Norway hereinafter jointly referred to as 'the Parties',

RECOGNISING Norway's close participation in the Galileo and EGNOS programmes since the definition phases of those programmes,

CONSCIOUS of the evolution in the governance, ownership and financing of the European GNSS Programmes by virtue of Council Regulation (EC) No 1321/2004 of 12 July 2004 on the establishment of structures for the management of the European satellite radio-navigation programmes ⁽¹⁾, its amendments and Regulation (EC) No 683/2008 of the European Parliament and of the Council of 9 July 2008 on the further implementation of the European satellite navigation programmes (EGNOS and Galileo) ⁽²⁾,

CONSIDERING the benefits of an equivalent level of protection of European GNSS and their services in the territories of the Parties,

RECOGNISING Norway's intention to timely adopt and enforce within its jurisdiction measures providing an equivalent degree of security and safety as those applicable in the European Union,

RECOGNISING the obligations of the Parties under international law,

RECOGNISING Norway's interest in all Galileo services, including the public regulated service (PRS),

RECOGNISING the Agreement between Norway and the European Union on security procedures for the exchange of classified information,

DESIRING to formally establish close collaboration in all aspects of the European GNSS Programmes,

CONSIDERING the Agreement on the European Economic Area (hereinafter referred to as 'the EEA Agreement') as an appropriate legal and institutional basis to develop cooperation between the European Union and Norway in satellite navigation,

DESIRING to complement the provisions of the EEA Agreement through a bilateral agreement on satellite navigation in matters of specific relevance to Norway, the Union and its Member States,

HAVE AGREED AS FOLLOWS:

Article 1

Objective of the Agreement

The main objective of this Agreement is to further strengthen the cooperation between the Parties by complementing the provisions of the EEA Agreement applicable to satellite navigation.

Article 2

Definitions

For the purposes of this Agreement:

- (a) 'European Global navigation satellite systems (GNSS)' include the Galileo system and the European Geostationary Navigation Overlay System (EGNOS);
- (b) 'Augmentation' means regional mechanisms such as EGNOS. Those mechanisms enable users of GNSS to obtain enhanced performance, such as increased accuracy, availability, integrity and reliability;
- (c) 'Galileo' means an autonomous civil European global satellite navigation and timing system under civil control, for the provision of GNSS services designed and developed by the Union and its Member States. The operation of Galileo may be transferred to a private party.

Galileo envisages open, commercial, safety-of-life and search and rescue services in addition to a secured PRS with restricted access to meet the needs of authorised public sector users;

- (d) 'Regulatory measure' means any law, regulation, policy, rule, procedure, decision or similar administrative action by a Party;

- (e) 'Classified information' means information, in any form, that requires protection against unauthorised disclosure, which could harm in various degrees the essential interests, including national security, of the Parties or of individual Member States. Its classification is indicated by a classification marking. Such information is classified by the Parties in accordance with applicable laws and regulations and must be protected against any loss of confidentiality, integrity and availability.

Article 3

Principles of the cooperation

1. The Parties agree to apply the following principles to cooperation activities covered by this Agreement:

- (a) the EEA Agreement shall be the basis for cooperation in satellite navigation between the Parties;
- (b) freedom to provide satellite navigation services in the territories of the Parties;
- (c) freedom to use all the Galileo and EGNOS services, including PRS, subject to fulfilling the conditions governing their use;

⁽¹⁾ OJ L 246, 20.7.2004, p. 1.

⁽²⁾ OJ L 196, 24.7.2008, p. 1.

(d) close cooperation in GNSS security matters through the adoption and enforcement of equivalent GNSS security measures both in the Union and Norway;

(e) due respect of the international obligations of the Parties in respect of ground facilities of European GNSS.

2. This Agreement shall not affect the institutional structure established by European Union law for the purpose of the operations of the Galileo programme. Nor does this Agreement affect the applicable regulatory measures implementing non-proliferation commitments and export control, controls of intangible transfers of technology, or national security measures.

Article 4

Radio spectrum

1. The Parties agree to cooperate on radio-spectrum issues concerning European satellite navigation systems in the International Telecommunication Union (ITU), taking account of the Memorandum of Understanding on the Management of ITU filings of the Galileo radio-navigation satellite service system signed on 5 November 2004.

2. In this context the Parties shall protect adequate frequency allocations for European satellite navigation systems in order to ensure the availability of the services of these systems for the benefit of users.

3. Moreover, the Parties recognise the importance of protecting radio navigation spectrum from disruption and interference. To this end they shall identify sources of interference and seek mutually acceptable solutions to combat such interference.

4. Nothing in this Agreement shall be construed so as to derogate from the applicable provisions of the ITU, including the ITU Radio Regulations.

Article 5

Ground facilities of European GNSS

1. Norway shall take all practicable measures to facilitate the deployment, maintenance and replacement of ground facilities of European GNSS ('ground facilities') in the territories under its jurisdiction.

2. Norway shall take all practicable measures to ensure the protection and the continuous and undisturbed operation of ground facilities in its territories, including, where appropriate, by mobilising its law enforcement authorities. Norway shall take all means practicable to maintain the facilities free from local radio interference, hacking and eavesdropping attempts.

3. The contractual relationships regarding the ground facilities will be agreed upon between the European Commission and the holder of the property rights. The Norwegian authorities will fully respect the special status of

the ground facilities and seek prior agreement with the European Commission, whenever possible, before any action concerning ground facilities is taken.

4. Norway shall allow continuous and unhindered access to the ground facilities to all persons designated or otherwise authorised by the European Union. For this purpose, Norway shall establish a contact point that shall receive information on persons travelling to the ground facilities and otherwise facilitate the movements and operations of such persons in practice.

5. The archives and equipment of the ground facilities and documents in transit, whatever their form, under official seal or marking shall not be subject to inspections by customs or police.

6. In the case of a threat or compromise against the security of ground facilities or their operation, Norway and the European Commission shall, without delay, inform each other of the event and steps to remedy the situation. The European Commission may designate another trusted entity to act as the contact point with Norway for such information.

7. The Parties will establish more detailed procedures concerning the issues in paragraphs 1 to 6 in a separate arrangement. Such procedures should cover, inter alia, clarifications concerning inspections, duties of the contact points, requirements for couriers and on measures against local radio frequency interference and hostile attempts.

Article 6

Security

1. The Parties are convinced of the need to protect Global Navigation Satellite Systems against threats such as misuse, interference, disruption and hostile acts. Consequently, the Parties shall take all practicable steps including, where appropriate, separate agreements, to ensure the continuity, safety and security of the satellite navigation services and the related infrastructure and critical assets in their territories.

The European Commission intends to develop measures to protect, control and manage sensitive assets, information and technologies of the European GNSS Programmes against such threats and undesired proliferation.

2. In this context Norway confirms its intention to timely adopt and enforce, within its jurisdiction, measures providing an equivalent degree of security and safety as those applicable in the European Union.

In recognition of this, the Parties will address GNSS security issues including accreditation in the relevant committees of the governance structure of European GNSS. The practical arrangements and procedures are to be defined in the rules of procedures of the relevant committees taking also into account the framework of the EEA Agreement.

3. Should an event occur where such an equivalent degree of security and safety cannot be achieved the Parties shall hold consultations with a view to remedy the situation. Where appropriate, the scope of cooperation in this sector could be adjusted accordingly.

Article 7

Exchanges of classified information

1. Exchange and protection of Union's classified information shall be in accordance with the Agreement between the Kingdom of Norway and the European Union on security procedures for the exchange of classified information⁽¹⁾ signed on 22 November 2004, as well as the Implementing arrangements of that Agreement.

2. Norway may exchange classified information with national classification marking on Galileo with those Member States with which it has concluded bilateral agreements to that effect.

3. The Parties shall seek to establish a comprehensive and coherent legal framework allowing exchanges between them of classified information concerning the Galileo programme.

Article 8

Export control

1. In order to ensure the application of a uniform policy of export controls and non-proliferation concerning Galileo between the Parties, Norway confirms its intention to timely adopt and enforce, within its jurisdiction, measures providing an equivalent degree of export control and a non-proliferation of Galileo technologies, data and items as those applicable in the Union and its Member States.

2. Should an event occur where such an equivalent degree of export control and a non-proliferation cannot be achieved, the Parties shall hold consultations with a view to remedy the situation. Where appropriate, the scope of cooperation in this sector could be adjusted accordingly.

Article 9

Public regulated service

Norway has expressed its interest in the Galileo PRS, considering it an important element of its participation in the European GNSS Programmes. The Parties agree to address this issue once the policies and operational arrangements governing access to the PRS have been defined.

Article 10

International cooperation

1. The Parties recognise the value of coordinating approaches in international standardisation and certification forums concerning global satellite navigation services. In particular,

the Parties will jointly support the development of Galileo standards and promote their application worldwide, emphasising interoperability with other GNSS.

2. Consequently, in order to promote and implement the objectives of this Agreement, the Parties shall, as appropriate, cooperate on all GNSS matters that arise, notably in the International Civil Aviation Organisation, the International Maritime Organisation and the ITU.

Article 11

Consultation and dispute resolution

The Parties shall promptly consult, at the request of any of them, on any question arising out of the interpretation or application of this Agreement. Any disputes concerning the interpretation or application of this Agreement shall be settled through consultation between the Parties.

Article 12

Entry into force and termination

1. This Agreement shall enter into force the first day of the month following that in which the Parties have notified each other of the completion of the procedures necessary for this purpose.

Notifications shall be sent to the General Secretariat of the Council which shall be the depository of this Agreement.

2. The expiration or termination of this Agreement shall not affect the validity or duration of any arrangements made under it or any specific rights and obligations that have accrued in the field of intellectual property rights.

3. This Agreement may be amended by mutual agreement of the Parties in writing. Any amendment shall enter into force on the date of receiving the last diplomatic note informing the other Party that their respective internal procedures necessary for its entry into force have been completed.

4. Notwithstanding paragraph 1, Norway and the European Union, as regards elements falling within its competence, agree to apply provisionally this Agreement from the first day of the month following the date on which they have notified each other of the completion of the procedures necessary for this purpose.

5. Either Party may, by giving six months notice to the other in writing, terminate this Agreement.

This Agreement is drawn up in duplicate in the Bulgarian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovak, Slovenian, Spanish, Swedish and Norwegian languages, all texts being equally authentic.

⁽¹⁾ OJ L 362, 9.12.2004, p. 29.

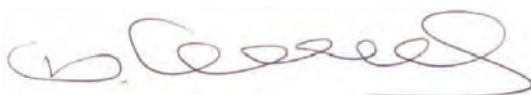
Voor het Koninkrijk België

Pour le Royaume de Belgique

Für das Königreich Belgien



За Република България




Za Českou republiku



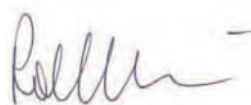
På Kongeriget Danmarks vegne



Für die Bundesrepublik Deutschland

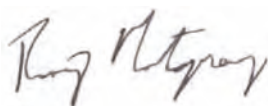


Eesti Vabariigi nimel



Thar cheann Na hÉireann

For Ireland



Για την Ελληνική Δημοκρατία

Por el Reino de España

Pour la République française

Per la Repubblica italiana

Για την Κυπριακή Δημοκρατία

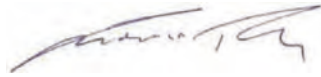
Latvijas Republikas vārdā

Lietuvos Respublikos vardu

Pour le Grande-Duché de Luxembourg



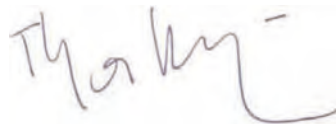
A Magyar Köztársaság részéről



Għal Malta



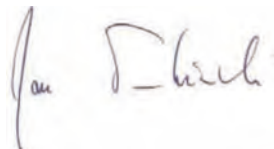
Voor het Koninkrijk der Nederlanden



Für die Republik Österreich



W imieniu Rzeczypospolitej Polskiej



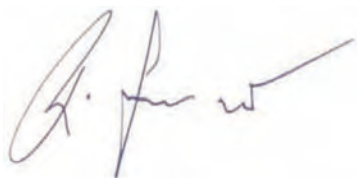
Pela República Portuguesa



Pentru România

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Za Republiko Slovenijo

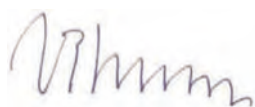
A handwritten signature in blue ink, appearing to be 'A. P. W.'.

Za Slovenskú republiku

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Suomen tasavallan puolesta

För Republiken Finland

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För Konungariket Sverige

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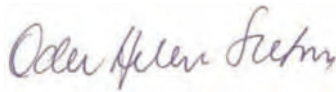
For the United Kingdom of Great Britain and Northern Ireland

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За Европейския съюз
Por la Unión Europea
Za Evropskou unii
For Den Europæiske Union
Für die Europäische Union
Euroopa Liidu nimel
Για την Ευρωπαϊκή Ένωση
For the European Union
Pour l'Union européenne
Per l'Unione europea
Eiropas Savienības vārdā
Europos Sąjunga vardu
Az Európai Unió részéről
Għall-Unjoni Ewropea
Voor de Europese Unie
W imieniu Unii Europejskiej
Pela União Europeia
Pentru Uniunea Europeană
Za Európsku úniu
Za Evropsko unijo
Euroopan unionin puolesta
För Europeiska unionen



For Kongeriket Norge



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Joint Announcement on United States-Japan Global Positioning System Cooperation

Office of the Spokesman
Washington, DC
January 14, 2010

Following is the text of a Joint Announcement issued by the United States and Japan following a meeting in Washington on January 13, 2010 to review and discuss cooperation on the civil use of the Global Positioning System.

Begin text:

The Governments of the United States of America and Japan convened a plenary meeting at the Department of State in Washington, D.C. on January 13 to review and discuss cooperation in the civil use of the Global Positioning System (GPS) and its augmentations, including Japan's Multi-functional Transport Satellite (MTSAT) Satellite-based Augmentation System (MSAS) and Quasi-Zenith Satellite System (QZSS). The Global Positioning System consultations are held regularly pursuant to the "Joint Statement on Cooperation in the Use of the Global Positioning System" signed by the two Governments on September 22, 1998.

During the meeting, United States (U.S.) representatives described the status of Global Positioning Systems modernization and the United States' international Global Positioning Systems cooperation with third parties. Representatives of the Government of Japan reported on the status of the Multi-functional Transport Satellite Satellite-based Augmentation System and Quasi-Zenith Satellite System programs and on Japanese international Global Navigation Satellite System-related (GNSS) cooperation activities. Both Governments reaffirmed the importance of providing open access to space-based positioning, navigation and timing services for peaceful purposes, free of direct user fees. Global Positioning Systems and its augmentations have become an integral part of modern life in the U.S., Japan and the world, providing essential services and increased efficiencies in a broad range of applications, such as aviation and maritime safety-of-life, geodetic surveying, car and personal navigation, mobile telephone timing, international financial transactions and electric power transmission.

Representatives of both Governments reviewed the ongoing work of the Global Positioning System/Quasi-Zenith Satellite System Technical Working Group, which was established to foster close cooperation during the development of Quasi-Zenith Satellite System. The Technical Working Group reaffirmed that both systems are designed to be compatible and highly interoperable. Both Governments noted with satisfaction that the Japan Aerospace Exploration Agency and the U.S. National Oceanic and Atmospheric Administration (NOAA) collaboration to install a Quasi-Zenith Satellite System Monitoring Station on NOAA property in Guam in exchange for access to monitoring station data has resulted in the completion of the Guam monitoring station. A similar effort between Japan Aerospace Exploration Agency and the U.S. National Aeronautics and Space Administration (NASA) to establish both a Quasi-Zenith Satellite System monitoring station and a Two-Way Satellite Time and Frequency Transfer station at a NASA facility in Hawaii in support of Japan's National Institute of Information and

Communications Technology and the U.S. Naval Observatory is nearing completion. Both Governments intend to continue cooperation in protecting spectrum used for global navigation satellite systems. The two Governments also discussed the importance of pursuing the interoperability and compatibility of all current and planned global navigation satellite systems with Global Positioning and Quasi-Zenith Satellite Systems.

This 7th Plenary meeting strengthened cooperative relations between the United States and Japan. Both Governments acknowledged the important future contribution of Quasi-Zenith Satellite System to the space-based positioning, navigation and timing services of Japan. They affirmed that continued close cooperation in the area of satellite navigation will contribute to the peaceful development of the Asia-Pacific region and promote global economic growth. In that regard, both Governments welcomed the Asia Oceania Regional Workshop on Global Navigation Satellite Systems to be held in Bangkok, January 25-26, 2010, and the Asia Pacific Economic Cooperation (APEC) Global Navigation Satellite System Implementation Team meeting to be held in Seattle, Washington, June 21-24, 2010.

Conclude text.

PRN: 2010/055



**COUNCIL OF
THE EUROPEAN UNION**

Brussels, 11 October 2010

14455/10

**PESC 1234
CODUN 34
ESPACE 2
COMPET 284**

NOTE

from:	General Secretariat
to:	Delegations
Previous doc.	17175/08 PESC 1697 CODUN 61
Subject:	Council Conclusions concerning the revised draft Code of Conduct for Outer Space Activities

Delegations will find attached the Conclusions adopted by the Council on 27 September 2010, together with the revised draft for a Code of Conduct for Outer Space Activities, which has been endorsed as a basis for consultations with third countries.

Council Conclusions of 27 September 2010
on the revised draft Code of Conduct for Outer Space Activities

The Council recalls that the European Union is aiming at strengthening the security of activities in outer space in the context of expanding space activities that contribute to the development and security of states. The European Union's space policy can contribute towards this objective.

The Council invites the High Representative to pursue consultations with third countries on the basis of the annexed revised draft for a Code of Conduct for Outer Space Activities, which has been established in the light of wide consultations with space faring nations. All States will be invited to adhere on a voluntary basis to the Code, which includes transparency and confidence-building measures.

In the upcoming consultations, the High Representative will engage with third countries that have an interest in outer space activities, with the aim of establishing a text that is acceptable to the greatest number of countries and of adopting the Code of Conduct at an ad-hoc diplomatic conference.

REVISED DRAFT
CODE OF CONDUCT FOR OUTER SPACE ACTIVITIES

Preamble

The Subscribing States

Noting that all States should actively contribute to the promotion and strengthening of international cooperation relating to the activities in the exploration and use of outer space for peaceful purposes;

Considering that these activities play a growing role in economic, social and cultural development of nations, preservation of the environment, promotion of international cooperation, strengthening of national security and sustaining international peace;

Recognizing the need for the widest possible adherence to relevant existing international instruments that promote the peaceful uses of outer space in order to meet emerging new challenges;

Further recognising that space capabilities - including associated ground and space segments and supporting links - are vital to national security and to the maintenance of international peace and security;

Recalling the initiatives aiming at promoting a peaceful, safe and secure outer space environment, through international cooperation;

Recalling the importance of developing transparency and confidence-building measures for activities in outer space;

Taking into account that space debris constitutes a threat to outer space activities and potentially limits the effective deployment and exploitation of associated space capabilities;

Stressing that the growing use of outer space increases the need for greater transparency and better information exchange among all actors conducting outer space activities ;

Convinced that the formation of a set of best practices aimed at ensuring security in outer space could become a useful complement to international space law;

Noting that such best practices could apply to all types of outer space activities;

Reaffirming their commitment to resolve any conflict concerning actions in space by peaceful means;

Recognising that a comprehensive approach to safety and security in outer space should be guided by the following principles: (i) freedom of access to space for peaceful purposes, (ii) preservation of the security and integrity of space objects in orbit, (iii) due consideration for the legitimate defence interests of States;

Conscious that a comprehensive code, including transparency and confidence-building measures could contribute to promoting common and precise understandings;

Adopt the following Code of conduct for outer space activities (hereinafter referred to as "the Code").

I. Purpose, Scope and Core Principles

1. Purpose and scope

- 1.1. The purpose of this Code is to enhance the security, safety and sustainability of all outer space activities.
- 1.2. The present Code is applicable to all outer space activities conducted by a Subscribing States or jointly with other States(s) or by non-governmental entities under the jurisdiction of a Subscribing State, including those activities conducted within the framework of international intergovernmental organisations.
- 1.3. This Code, in endorsing best practices, contributes to transparency and confidence-building measures and is complementary to the existing framework regulating outer space activities.
- 1.4. Adherence to this Code and to the measures contained in it is voluntary and open to all States.

2. General principles

The Subscribing States resolve to abide by the following principles:

- the freedom for all States to access, to explore, and to use outer space and to exploit space objects for peaceful purposes without interference, fully respecting the security, safety and integrity of space objects in orbit consistent with international law and security, safety and integrity standards;
- the inherent right of individual or collective self-defence in accordance with the United Nations Charter;
- the responsibility of States to take all the appropriate measures and cooperate in good faith to prevent harmful interference in outer space activities; and

- the responsibility of States, in the conduct of scientific, commercial and military activities, to promote the peaceful exploration and use of outer space and to take all appropriate measures to prevent outer space from becoming an area of conflict.

3. Compliance with and promotion of treaties, conventions and other commitments relating to outer space activities

3.1. The Subscribing States reaffirm their commitment to:

- the existing legal framework relating to outer space activities;
- making progress towards adherence to, and implementation of:
 - (a) the existing framework regulating outer space activities, inter alia:
 - the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (1967);
 - the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (1968);
 - the Convention on International Liability for Damage Caused by Space Objects (1972);
 - the Convention on Registration of Objects Launched into Outer Space (1975);
 - the Constitution and Convention of the International Telecommunications Union and its Radio Regulations (1995), as amended;
 - the Treaty banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water (1963) and the Comprehensive Nuclear Test Ban Treaty (1996); and
 - the International Code of Conduct against Ballistic Missile Proliferation (2002).

(b) Declarations and Principles, inter alia:

- the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space as adopted by UNGA Resolution 1962 (XVIII), (1963);
- the Principles Relevant to the Use of Nuclear Power Sources in Outer Space as adopted by UNGA Resolution 47/68 (1992);
- the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries as adopted by UNGA Resolution 51/122 (1996); and
- the Recommendations on the Practice of States and International Organisations in Registering Space Objects as stated in UNGA Resolution 62/101 (2007);

3.2. The Subscribing States also reiterate their support to encouraging coordinated efforts in order to promote universal adoption of, and full adherence to, the above mentioned instruments.

II. General Measures

4. Measures on space operations

4.1. The Subscribing States are committed to establishing and implementing their policies and procedures to minimise the possibility of accidents in space, collisions between space objects or any form of harmful interference with other States' right to the peaceful exploration and use of outer space.

4.2. The Subscribing States, commit in conducting outer space activities, to:

- refrain from any action which intends to bring about, directly or indirectly, damage, or destruction, of outer space objects unless such action is conducted to reduce the creation of outer space debris and/or is justified by the inherent right of individual or collective self-defence in accordance with the United Nations Charter or imperative safety considerations;

- take appropriate measures to minimize the risk of collision; and
- abide by and implement all International Telecommunications Union recommendations and regulations on allocation of radio spectra and orbital assignments.

4.3. When executing manoeuvres of space objects in outer space, for example to supply space stations, repair space objects, mitigate debris, or reposition space objects, the Subscribing States confirm their intention to take all reasonable measures to minimise the risks of collision.

4.4. The Subscribing States resolve to promote the development of guidelines for space operations within the appropriate fora for the purpose of protecting the safety of space operations and the long-term sustainability of outer space activities.

4.5. The Subscribing States resolve to promote further security guarantees within the appropriate fora for the purposes of enhancing the security of outer space activities by all States and the prevention of an arms race in outer space.

5. Measures on space debris control and mitigation

In order to limit the creation of space debris and reduce its impact in outer space, the Subscribing States commit to:

- refrain from the intentional destruction of any on-orbit space object or other activities which may generate long-lived space debris;
- adopt and implement, in accordance with their own internal processes, the appropriate policies and procedures or other effective measures in order to implement the Space Debris Mitigation Guidelines of the United Nations Committee for the Peaceful Uses of Outer Space as endorsed by UNGA Resolution 62/217.

III. Cooperation mechanisms

6. Notification of outer space activities

6.1. The Subscribing States commit to notify, in a timely manner, to the greatest extent feasible and practicable, all potentially affected Subscribing States on the outer space activities conducted which are relevant for the purposes of this Code, inter alia:

- scheduled manoeuvres which may result in dangerous proximity to the space objects of both Subscribing and non-Subscribing States;
- pre-notification of launch of space objects;
- collisions, break-ups in orbit, and any other destruction of space objects generating measurable orbital debris which have taken place;
- predicted high-risk re-entry events in which the re-entering object or residual material from the re-entering object either likely would survive to cause potential significant damage, or might cause radioactive contamination; and
- malfunctioning of orbiting space objects which could result in a significantly increased probability of a high risk re-entry event or a collision between space objects in orbit.

6.2. The Subscribing States commit to provide the notifications described above through diplomatic channels, or by any other method as may be mutually agreed.

7. Registration of space objects

The Subscribing States commit to register space objects in accordance with the Convention on Registration of Objects launched to Outer Space and to provide the United Nations Secretary-General with the relevant data as set forth in this Convention and in the Recommendations on the Practice of States and International Organisations in Registering Space Objects, as adopted by UNGA Resolution 62/101.

8. Information on outer space activities

8.1. The Subscribing States resolve to share, on an annual basis, where available and appropriate information on:

- their space policies and strategies, including basic objectives for security and defence related activities in outer space;
- their space policies and procedures to prevent and minimise the possibility of accidents, collisions or other forms of harmful interference;
- their space policies and procedures to minimise the creation of space debris; and
- efforts taken in order to promote universal adherence to legal and political regulatory instruments concerning outer space activities;

8.2. The Subscribing States may also consider providing timely information on space environmental conditions and forecasts to the governmental agencies and the relevant non-governmental entities of all space faring nations, collected through their space situational awareness capabilities.

9. Consultation mechanism

9.1. Without prejudice to existing consultation mechanisms provided for in Article IX of the Outer Space Treaty of 1967 and in Article 56 of the ITU Constitution, the Subscribing States have decided on the creation of the following consultation mechanism:

- A Subscribing States that may be directly affected by certain outer space activities conducted by one or more Subscribing State(s) and has reason to believe that those activities are, or may be contrary to the core purposes of the Code may request consultations with a view to achieving mutually acceptable solutions regarding measures to be adopted in order to prevent or minimise the inherent risks of damage to persons or property, or of potentially harmful interference to a Subscribing State's outer space activities.

- The Subscribing States involved in a consultation process commit to:
 - consulting through diplomatic channels or by other methods as may be mutually determined; and
 - working jointly and cooperatively in a timeframe sufficiently urgent to mitigate or eliminate the identified risk initially triggering the consultations.
- Any other Subscribing State(s) which has reason to believe that its space activities would be affected by the identified risk and requests to take part in the consultations is entitled to take part, with the consent of the Subscribing State(s) which requested consultations and the Subscribing State(s) which received the request.
- The Subscribing States participating in the consultations are to seek mutually acceptable solutions in accordance with international law.

9.2. In addition, the Subscribing States may propose, on a voluntary basis, to create a mechanism to investigate proven incidents affecting space objects and to collect reliable and objective information facilitating their assessment. The mechanism, to be determined at a later stage, should utilize information provided on a voluntary basis by the Subscribing States, subject to national laws and regulations, and a roster of internationally recognised experts to undertake an investigation. The findings and any recommendations of these experts are to be advisory, and are not binding upon the Subscribing States involved in the incident that is the subject of the investigation.

IV. Organisational aspects

10. Biennial meeting of Subscribing [States] [Parties]

10.1. The Subscribing States decide to hold meetings biennially or as otherwise agreed by Subscribing States, to define, review and further develop this Code and ensure its effective implementation. The agenda for such biennial meetings could include: (i) review of the implementation of the Code, (ii) evolution of the Code and (iii) additional measures which appear necessary, including those due to advances in the development of space technologies and their application.

- 10.2. The decisions at such meetings will be taken by consensus of the Subscribing States present.
- 10.3. The results of the meeting will be brought to the attention of relevant international fora including the United Nations Committee on Peaceful Uses of Outer Space (COPUOS) and the Conference on Disarmament (CD) in an appropriate manner.

11. Central point of contact

A central point of contact should be nominated by Subscribing States to:

- receive and announce the subscription of additional States;
- maintain the electronic information-sharing system;
- serve as secretariat at the meetings of Subscribing States; and
- carry out other tasks as determined by the Subscribing States.

12. Outer Space Activities Database

The Subscribing States commit to creating an electronic database and communications system, which should be used exclusively for their benefit in order to:

- collect and disseminate notifications and information submitted in accordance with the provisions of this Code; and
- serve as a mechanism to channel requests for consultations.

13. Participation by Regional Integration Organisations and International Intergovernmental Organisations

In this Code, references to Subscribing States shall be deemed to apply to the following:

- To the European Union in view of its competences over matters covered by the present code, without prejudice to the competences of its member States.
- With the exception of articles 10 to 12 inclusive: To any regional integration organisation or international intergovernmental organisation which conducts outer-space activities if a majority of the States members of the organisation are Subscribing States to this Code.

СОГЛАШЕНИЕ
между Правительством Российской Федерации и Правительством
Китайской Народной Республики об уведомлениях о пусках
баллистических ракет и космических ракет-носителей

Правительство Российской Федерации и Правительство Китайской Народной Республики, именуемые в дальнейшем Сторонами,

руководствуясь принципами и духом Договора о добрососедстве, дружбе и сотрудничестве между Российской Федерацией и Китайской Народной Республикой от 16 июля 2001 г.,

стремясь укрепить и углубить отношения партнерства и стратегического сотрудничества между Российской Федерацией и Китайской Народной Республикой в интересах дальнейшего укрепления двустороннего политического доверия и последовательного повышения уровня двустороннего сотрудничества в военной области и в сфере безопасности,

стремясь обеспечить режим взаимного доверия, открытости и предсказуемости деятельности Сторон при осуществлении ими пусков баллистических ракет и космических ракет-носителей,

признавая важное значение создания режима взаимного уведомления о пусках баллистических ракет и космических ракет-носителей на основе принципов доверия, взаимной выгоды, равноправия и взаимодействия,

принимая во внимание при создании режима уведомления о пусках баллистических ракет и космических ракет-носителей также необходимость полного учета конкретных обстоятельств у государств Сторон, которые заслуживают должного внимания и уважения Сторон,

подтверждая стремление на имеющейся основе поэтапно, последовательно и планомерно наладить и повышать уровень и масштабы

сотрудничества в области взаимного уведомления о пусках баллистических ракет и космических ракет-носителей,

согласились о нижеследующем:

Статья 1

Для целей настоящего Соглашения:

1. Термин «баллистическая ракета» означает являющуюся средством доставки оружия ракету с дальностью свыше 2000 км., большая часть полета которой осуществляется по баллистической траектории.

2. Термин «космическая ракета-носитель» означает ракету, используемую для запуска космического объекта на орбиту Земли или дальше в космическое пространство.

3. Термин «групповые одновременные пуски» означает пуск двух или более баллистических ракет или космических ракет-носителей с интервалом менее 5 минут.

4. Термин «групповые почти одновременные пуски» означает пуск двух или более баллистических ракет или космических ракет-носителей с интервалом менее 60 минут.

5. Термин «квадрант океана» означает сектор с углом 90 градусов, охватывающий примерно одну четвертую часть площади океана.

Статья 2

1. Каждая из Сторон определяет уполномоченные органы, ответственные за реализацию положений настоящего Соглашения, и сообщает о них другой Стороне.

2. Каждая из Сторон предоставляет другой Стороне через уполномоченные органы Сторон уведомления о готовящихся и состоявшихся пусках баллистических ракет и космических ракет-носителей.

3. Применительно к баллистическим ракетам Китайской Стороны уведомления предоставляются о пусках, осуществляемых в западном, северо-западном, северном и северо-восточном направлениях.

4. Применительно к баллистическим ракетам Российской Стороны уведомления предоставляются о пусках, осуществляемых в восточном, северо-восточном, южном и юго-восточном направлениях.

5. Независимо от положений пункта 2 настоящей Статьи каждая из Сторон имеет право в исключительных случаях, которые определяются этой Стороной, не предоставлять уведомления о готовящемся пуске баллистической ракеты в течение первых пяти лет после вступления в силу настоящего Соглашения. По истечении пяти лет после вступления в силу настоящего Соглашения Стороны должны предоставлять уведомления о готовящемся пуске баллистической ракеты, однако Стороны оставляют за собой право в особых случаях, которые определяются ими самостоятельно и количество которых не должно превышать двух раз в год, не предоставлять уведомления о готовящемся пуске баллистической ракеты. Стороны приложат усилия для того, чтобы в максимально возможной степени уменьшить или исключить возникновение таких случаев.

Статья 3

Уведомления предоставляются об осуществляемых с территории государств Сторон пусках:

баллистических ракет, находящихся во владении, распоряжении или под контролем Сторон;

космических ракет-носителей, находящихся во владении, распоряжении или под контролем Сторон, международных организаций или юридических лиц (как государственных, так и частных).

Статья 4

Уведомления предоставляются о любых пусках баллистических ракет и космических ракет-носителей, пуск которых предполагается осуществить с территории государств Сторон, если такой пуск осуществляет государство, не являющееся участником настоящего Соглашения, или если какая-либо Сторона осуществляет такой пуск с территории государства, не являющегося участником настоящего Соглашения.

Статья 5

1. Уведомление о готовящемся пуске предоставляется не более чем за 30 дней, но не менее чем за 24 часа до даты и времени готовящегося пуска. Такое уведомление остается действительным в течение 14 дней, начиная с даты, указанной в уведомлении.

2. В случаях если планируются групповые одновременные или почти одновременные пуски из одного и того же места пуска, каждая из Сторон может предоставлять либо одно уведомление обо всех таких планируемых пусках, либо отдельные уведомления о каждом из планируемых пусков.

3. Уведомление о готовящихся пусках включает:

в отношении баллистических ракет: категория пуска – баллистическая ракета; район пуска; планируемые дату и время пуска по Гринвичу; предполагаемый район падения боеголовок (географические координаты точек этого района, либо географические координаты центра круга с указанием радиуса в километрах или морских милях, определяемых уведомляющей Стороной по своему усмотрению); информацию о том, является ли пуск одиночным или групповым;

в отношении космических ракет-носителей: категория пуска – космическая ракета-носитель; район пуска и азимут пуска; планируемые

дату и время пуска по Гринвичу; информацию о том, является ли пуск одиночным или групповым;

применительно к пускам баллистических ракет и космических ракет-носителей, проводимых из морской акватории, в качестве места пуска в уведомлении указывается либо квадрант океана, либо водный массив (например, море или залив), откуда планируется осуществить пуск.

Статья 6

1. Уведомление о состоявшемся пуске предоставляется не позднее 48 часов после пуска. Такое уведомление включает дату осуществления пуска.

2. Для одновременных пусков из одного и того же места пуска каждая из Сторон может предоставлять одно уведомление обо всех состоявшихся пусках, либо отдельные уведомления о каждом из состоявшихся пусков.

В случае предоставления отдельного уведомления о каждом готовящемся пуске, предоставляется отдельное уведомление о каждом состоявшемся пуске.

Статья 7

Каждая из Сторон обеспечивает точность и своевременность предоставляемых ею данных и сообщает другой Стороне через уполномоченный орган об обнаружении каких-либо ошибок.

Статья 8

1. Порядок передачи уведомлений, применяемые технологии и форматы уведомлений определяются совместно уполномоченными органами Сторон.

2. Каждая из Сторон в отдельности несет ответственность за техническое обслуживание оборудования и программного обеспечения, которые она использует.

Статья 9

Ни одна из Сторон не разглашает третьим сторонам содержание полученных в рамках настоящего Соглашения уведомлений без получения на то письменного согласия другой Стороны.

Статья 10

1. Для рассмотрения вопросов, связанных с осуществлением положений настоящего Соглашения, уполномоченные органы Сторон проводят консультации.

Такие консультации проводятся по взаимной договоренности уполномоченных органов Сторон не менее одного раза в течение года (календарного года), а также в случае возникновения необходимости, и поочередно на территории каждой из Сторон.

2. В целях эффективной реализации настоящего Соглашения уполномоченные органы Сторон по согласованию могут включить в повестку консультаций, указанных в пункте 1 настоящей Статьи, вопросы раннего оповещения и мониторинга, связанные с уведомлением о пусках баллистических ракет и космических ракет-носителей.

Статья 11

По согласию Сторон в настоящее Соглашение могут быть внесены изменения.

Статья 12

Спорные вопросы между Сторонами, возникающие при толковании и применении настоящего Соглашения, разрешаются путем консультаций и переговоров между Сторонами.

Статья 13

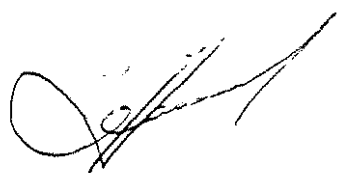
1. Настоящее Соглашение вступает в силу в день получения последнего письменного уведомления о выполнении Сторонами внутригосударственных процедур, необходимых для его вступления в силу.

2. Настоящее Соглашение действует в течение десяти лет. Не позднее чем за один год до истечения 10-летнего срока Стороны проводят консультации для рассмотрения вопроса о продлении срока действия настоящего Соглашения.

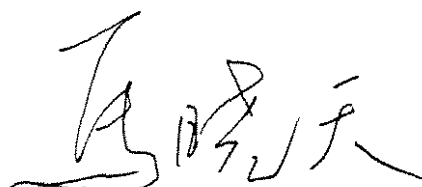
3. Каждая из Сторон может прекратить действие настоящего Соглашения путем направления другой Стороне письменного уведомления не менее чем за шесть месяцев до предполагаемой даты прекращения его действия.

Совершено в г. Пекине 13 октября 2009 года в двух экземплярах, каждый на русском и китайском языках, причем оба текста имеют одинаковую силу.

За Правительство
Российской Федерации



За Правительство
Китайской Народной Республики



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MEMORANDUM OF UNDERSTANDING

BETWEEN

THE SECRETARY OF DEFENSE
ON BEHALF OF THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF AMERICA

AND

THE MINISTER OF DEFENCE
OF THE KINGDOM OF THE NETHERLANDS

CONCERNING

OPERATIONS AND SUPPORT OF THE
ADVANCED EXTREMELY HIGH FREQUENCY
MILITARY SATELLITE COMMUNICATIONS SYSTEM

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INTRODUCTION

The Department of Defense (DoD) of the United States of America and the Minister of Defence of the Kingdom of the Netherlands (MOD), hereinafter referred to as the "Parties":

Having a common interest in defense;

Recognizing the benefits to be obtained from standardization, rationalization, and interoperability of military equipment;

Seeking to make the best use of their respective operations and support capabilities, eliminate unnecessary duplication of work and obtain the most efficient and cost-effective results;

Recognizing the need to develop emerging technologies collectively to field and maintain technologically superior military satellite communications (MILSATCOM) systems;

Having a mutual need for increased capacity on the Advanced Extremely High-Frequency (AEHF) MILSATCOM System to satisfy common operational requirements;

Recognizing the ongoing cooperation under the Memorandum of Understanding (MOU) between the Department of Defense of the United States of America and Minister of Defence of the Kingdom of the Netherlands Concerning Development, Documentation, Production and Initial Fielding of Advanced Extremely High Frequency (AEHF) Military Satellite Communications (MILSATCOM), which entered into effect November 8, 2002 (hereinafter referred to as the "2002 MOU");

Have agreed as follows:

ARTICLE I

DEFINITIONS AND ACRONYMS

The Parties have agreed upon the following definitions and acronyms for terms used in this MOU:

DEFINITIONS

Advanced Extremely High Frequency (AEHF) Communications Security (COMSEC)/ Transmission Security (TRANSEC) System (ACTS)	Suite of cryptographic equipment being developed by the U.S. National Security Agency (NSA) to protect the AEHF MILSATCOM System.
AEHF MILSATCOM Operations and Support Project (Project)	The cooperative effort (hereinafter referred to as the "Project") by the DoD and MOD to operate and support their respective portions of the AEHF Program to meet DoD and MOD national needs. This effort is a subset of the operations and support phase of the AEHF Program.
AEHF Program	A DoD MILSATCOM program to develop, field, operate, and support the AEHF Space and Control Segments, which provide highly protected communications for strategic and tactical warfighters. These communications are characterized by jam-resistance, low probability of detection and intercept, hardening, and anti-scintillation.
AEHF MILSATCOM System	An advanced extremely high frequency satellite communications system, which includes a Space Segment, a Control Segment, and a Terminal Segment.
Allocation	The process of assigning Resources contained in an Apportionment. Allocation authority is vested in the DoD or MOD user that has received the apportioned Resources.
Antenna Controllers (AC)	Terminals responsible for the management of steerable antenna beams.
Apportionment	The AEHF resources provided to Combatant Commands and international partners to plan, manage, and operate for the purposes of fulfilling their mission requirements.

Assured Access	The certainty that the agreed upon amounts of AEHF MILSATCOM Resources are immediately available and accessible for the user when and where needed in accordance with the 2002 MOU and Annex A (AEHF System Description and Capacity Sharing Terms and Conditions) to that MOU. Assured Access does not include loss of communications due to jamming, weather, or atmospheric effects.
Baseline Resources	AEHF system Resources the MOD receives in accordance with Annex A (AEHF Project System Description and Capacity Sharing Terms and Conditions) to the 2002 MOU and Annex A (Operations and Support of AEHF MILSATCOM System Project) to this MOU.
Classified Information	Official Information that requires protection in the interests of national security and is so designated by the application of a security classification. This Information may be in oral, visual, magnetic, or documentary form or in the form of equipment or technology.
Communications Controllers (CC)	Terminals responsible for the management of communication services and associated communication Resources.
Communications Security (COMSEC)	Measures and controls taken to deny unauthorized persons Information from, or access to, user communications.
Contract	Any mutually binding legal relationship under national laws which obligates a Contractor to furnish supplies or services, and obligates one or both of the Parties to pay for them.
Contracting	The obtaining of supplies or services by Contract from sources outside the governmental organizations of the Parties. Contracting includes a description (but not determination) of supplies and services required solicitation and selection of sources, preparation and award of Contracts, and all phases of Contract administration.
Contracting Agency	The entity within the governmental organization of a Party that has authority to enter into, administer, and terminate contracts.
Contracting Officer	A person representing a Contracting Agency of a Party who has the authority to enter into, administer, and terminate contracts.
Contractor	Any entity awarded a Contract under a Project by a Party's Contracting Agency.
Contractor Support Personnel	Persons specifically identified as providing administrative, managerial, scientific, or technical support services to a Party under a support

	Contract that prohibits those persons from using Information received under the Contract for any purpose other than those authorized under this MOU.
Control Segment	The portion of AEHF MILSATCOM System responsible for the overall control of the system, including satellite operations, payload health, total system monitoring, and Apportionment planning support and execution. It includes equipment used to control satellite bus and payload on AEHF satellites as well as the tools required to plan and manage communications Resources.
Controlled Unclassified Information	Unclassified Information to which access or distribution limitations have been applied in accordance with applicable national laws or regulations, including Information that has been declassified but remains controlled.
Cooperative Project Personnel (CPP)	Military members or civilian employees of a Party, who are assigned to work on the Project in a country other than their own and perform managerial, engineering, technical, administrative, Contracting, logistics, financial, planning, or other functions in furtherance of the Project.
Defense Purposes	Manufacture or other use in any part of the world by or for the armed forces of either Party.
Designated Security Authority (DSA)	The security office approved by national authorities to be responsible for the security aspects of this MOU.
Fence	A Fence is a subset of the AEHF satellite communications Resources identified by a Fence identification (Fence ID). The AEHF apportioned Resources shall take the form of a Fence.
Fence Controllers (FC)	Terminals responsible for monitoring resource utilization within its fence to ensure that no resource abuse takes place.
Fence Privileged Terminal	Privileged terminals responsible for the management of Fences. Fence Privileged Terminals have the power to affect the use of system Resources within the primary Fence (Fence ID) associated with a given Apportionment and all sub-Fences and sub-sub-Fences derived from it.
Financial Costs	Project costs met with monetary contributions.
Financial Cost Ceiling	The maximum amount to which the cost target may move without the prior written approval of the Parties.
Financial Cost Target	The accepted planning figure of the total cost of the Project.
Host Party	The DoD or MOD to which the CPP has been assigned by the Parent

Party.

Information	Knowledge that can be communicated by any means, regardless of form or type, including, but not limited to, that of a scientific, technical, business, or financial nature, and also including photographs, reports, manuals, threat data, experimental data, test data, computer software, designs, specifications, processes, techniques, inventions, drawings, technical writings, sound recordings, pictorial representations, and other graphical presentations, whether in magnetic tape, computer memory, or any other form, and whether or not subject to intellectual property rights.
International Partner (IP)	A U.S. ally that has committed, via an MOU, to the joint development of a portion of the AEHF Program with the United States for the satisfaction of the International Partner's (IP's) national MILSATCOM requirements. Currently, these include the Netherlands, Canada, and the United Kingdom.
Key Management Plan	Document describing the management of all keys used by a system throughout its lifetime.
Non-financial Costs	Project costs met with non-monetary contributions.
Operations and Support (O&S)	All personnel, equipment, supplies, software, services, including Contractor support associated with operating, modifying, maintaining, supplying, training, and supporting a system.
Over-the-Air Rekeying (OTAR)	Changing traffic encryption key or transmission security key in remote crypto-equipment by sending new key directly to the remote crypto-equipment over the communications path it secures.
Parent Party	The DoD or MOD from which the CPP was assigned.
Party	A signatory to this MOU represented by its military and civilian personnel. Contractors and Contractor Support Personnel shall not be representatives of a Party under this MOU.
Patent	Grant by any Government or a regional office acting for more than one Government of the right to exclude others from making, using, importing, selling, or offering to sell an invention. The term refers to any and all patents including, but not limited to, patents of implementation, improvement or addition, petty patents, utility models, appearance design patents, registered designs, and inventor certificates or like statutory protection, as well as divisions, reissues, continuations, renewals, and extensions of any of these.

Precedence	A service resource attribute that the AEHF onboard resource controller uses to determine the relative importance of a request for resource assignment.
Priority	A terminal attribute that identifies to the AEHF system what system Resources/services a terminal may access.
Privilege	Refers to an AEHF terminal's ability to perform functions such as network or point-to-point call tear down, Communications Controller ID change, antenna controller ID change, and resource monitoring queries. A satellite payload recognizes a privileged terminal by its terminal ID.
Project Background Information	Information not generated in the performance of the Project.
Project Equipment	Any material, equipment, end item, subsystem, component, special tooling or test equipment jointly acquired or provided for use in the Project.
Project Foreground Information	Information generated in the performance of the Project.
Project Information	Any Information provided to, generated in, or used in the Project.
Project Invention	Any invention in any field of technology, provided it is new, involves an inventive step, is capable of industrial application, and is formulated or made, either conceived or "first actually reduced to practice" in the course of work performed under a Project. The term "first actually reduced to practice" means the first demonstration, sufficient to establish to one skilled in the art to which the invention pertains, of the operability of an invention for its intended purpose and in its intended environment.
Project Manager for Development (PMDEV)	Individual from the DoD acquisition community responsible for development, production, and fielding of the Project.
Project Manager for Support (PMSUP)	Individual from the DoD support community responsible for life-cycle support and assigned to manage the sustainment aspects of the Project after transition from development to O&S.
Project Purposes	Use by or for the Parties to meet the objectives of this Memorandum of Understanding.
Project Team Leader	Individual assigned to lead the MOD AEHF MILSATCOM project.

Prospective Contractor	Any entity that seeks to enter into a Contract to be awarded by a Party's Contracting Agency and that, in the case of a solicitation involving the release of export-controlled Information, is eligible to receive such Information.
Resources	Uplink channels, downlink slots (hops), crosslink slots, coverage beams, service IDs, terminal IDs, Fence IDs, and a number of privileged terminals.
SATCOM Operational Manager (SOM)	The DoD organization responsible for the management and control of MILSATCOM Resources to ensure access for Combatant Commands and other users, including in the Netherlands.
SATCOM System Expert (SSE)	The DoD organization assigned to provide technical and engineering support to a SATCOM system.
Space Segment	Consists of the AEHF spacecraft and all related components.
Terminal Segment	The portion of AEHF MILSATCOM System consisting of all terminals that can access the AEHF MILSATCOM System. The Terminal Segment includes terminals hosted on aircraft, ships and submarine platforms or installed at fixed sites and in ground mobile and transportable configurations, and packaged as man-portable units.
Then-Year Dollars	Then-Year Dollars represent amounts in U.S. dollars that shall be paid for Resources in the actual years in which payments shall be made. A Then-Year Dollar contains implicit adjustment for variation in the purchasing power of a dollar over time.
Third Party	A government other than the Government of a Party and any person or other entity whose Government is not the Government of a Party.
Transmission Security (TRANSEC)	Measures and controls taken to deny unauthorized persons information derived from telecommunication signals and ensure the authenticity of such telecommunications.

ACRONYMS

AC	Antenna Controllers
ACTS	AEHF COMSEC/TRANSEC System
AEHF	Advanced Extremely High Frequency
AFSPC	Air Force Space Command
CC	Communications Controller
CG	Classification Guide
CNIP	Coalition Network Interoperability Plan

COMSEC	Communications Security
CONOPS	Concept of Operations
CONSUP	Concept of Support
CPP	Cooperative Project Personnel
DoD	Department of Defense
DPO	DoD/MOD Project Office
DSA	Designated Security Authorities
EHF	Extremely High Frequency
EU	European Union
FC	Fence Controller
FMPD	Financial Management and Procedures Document
FY	U.S. Fiscal Year
GSSC	Global SATCOM Support Center
ID	Identification
IP	International Partner
ITAR	International Traffic in Arms Regulations
JCSC	Joint Communications Satellite Center
LAKMS	Local AEHF Key Management Station
MILSATCOM	Military Satellite Communications
MOD	Minister of Defence
MOU	Memorandum of Understanding
MPE	Mission Planning Element
NCSA	National Communication Security Agency
NSA	National Security Agency
O&S	Operations and Support
OTAR	Over-the-Air Rekeying
OSD	Office of the Secretary of Defense
OSPO	Operations and Support Project Office
OSSC	Operations and Support Steering Committee
PMDEV	Project Manager for Development
PMSUP	Project Manager for Support
PSI	Project Security Instruction
RSSC	Regional SATCOM Support Center
SATCOM	Satellite Communications
SC	Steering Committee
SIPRNET	Secret Internet Protocol Router Network
SOC	Satellite Operations Center
SOFA	Status of Forces Agreement
SOM	SATCOM Operational Manager
SSE	SATCOM System Expert
TRANSEC	Transmission Security
U.S.	United States
USSTRATCOM	United States Strategic Command

ARTICLE II
OBJECTIVES

2.1. The objectives of this MOU are:

2.1.1. To operate, maintain, and cooperate jointly on portions of the O&S of the AEHF MILSATCOM Program, in accordance with the provisions of this MOU and Annex A (Operations and Support of the AEHF MILSATCOM System Project) to this MOU.

2.1.2. To establish technical and operational interoperability requirements and determine the means to meet these requirements during O&S of the AEHF Program in accordance with Annex A (Operations and Support of the AEHF MILSATCOM System Project) to this MOU, and the mutual defense objectives of the United States and the Netherlands.

2.1.3. To determine the flexibility and constraints associated with the Parties' cooperation on portions of the O&S of the AEHF MILSATCOM Program, and to document them in concepts of operation, operating instructions, and operating procedures.

2.1.4. To set the basis for long-term cooperation for the AEHF MILSATCOM System that is mutually beneficial for the Parties.

2.2. This MOU does not preclude the Parties from entering into any other bilateral or multilateral arrangements regarding the AEHF MILSATCOM System.

2.3. This MOU supplements and supports the 2002 MOU, and it achieves the objective in the 2002 MOU of developing a follow-on MOU for cooperation on the O&S of the AEHF MILSATCOM System.

ARTICLE III

SCOPE OF WORK

3.1. This MOU shall be implemented in accordance with the O&S provisions of the Annexes to this MOU. The Parties may enter into other arrangements within the scope of this MOU, as necessary. Annex A (Operations and Support of the AEHF MILSATCOM System Project) to this MOU sets out the details for AEHF O&S cooperation. The overall work to be undertaken under this MOU, as detailed in the Annexes to this MOU, includes, but is not limited to, the following:

3.1.1. Cooperation on the operations of the AEHF MILSATCOM System, including the communications planning, network/resource control, and Terminal Segment;

3.1.2. Maintaining the technical and operational requirements and solutions that enable the DoD and MOD users of the AEHF MILSATCOM System to be interoperable;

3.1.3. Cooperation on the portions of the support of the AEHF MILSATCOM System that are cooperatively developed and fielded, for the operational life of the AEHF MILSATCOM System; and

3.1.4. Under DoD lead, with MOD support and collaboration, develop, document, procure, and field modifications and enhancements to the AEHF MILSATCOM System to meet national and coalition requirements.

3.2. In the event that portions of the AEHF MILSATCOM System Space Segment are completed with a follow-on capability instead of the AEHF satellites, the Baseline Resources that MoD receives in accordance with Annex A (AEHF Project System Description and Capacity Sharing Terms and Conditions) to the 2002 MOU shall be provided through a combination of the original AEHF satellites and a subsequent AEHF-compatible satellite systems.

3.4. If, as designed, the AEHF MILSATCOM System operational life extends beyond the current Fiscal Year (FY) 2024 budget projection, the Parties' financial responsibilities as detailed in Article V (Financial Arrangements) of this MOU shall be extended, but only upon the mutual written agreement of the Parties. This shall cover the associated extension of services provided under this MOU.

ARTICLE IV

MANAGEMENT (ORGANIZATION AND RESPONSIBILITIES)

4.1. In accordance with the 2002 MOU, this Project is directed and administered on behalf of the Parties by an organization consisting of a Steering Committee (SC) and a DoD/MOD Project Office (DPO) headed by a Project Manager for Development (PMDEV). After development and fielding, the Project shall be directed and administered on behalf of the Parties by an organization consisting of an O&S Steering Committee (OSSC) and an O&S Project Office (OSPO) headed by a Project Manager for Support (PMSUP). Except as set out in paragraph 4.5. of this Article, it is envisioned that OSPO members shall not be co-located, but they shall execute their duties from their respective host nation organizations.

4.1.1. The Operational Transition Group shall develop a plan outlining the sequence of events that shall transition the Project from development, documentation, production and initial fielding established by the 2002 MOU to the Project established by this MOU. Following this transition, the SC shall transfer its duties and responsibilities to OSSC.

4.1.1.1. The MOD shall participate in any appropriate operational working groups, as necessary.

4.1.2. The Parties may decide to hold the OSSC meetings in partnership with the other IPs in accordance with the OSSC Charter to be approved by the Parties and the other IPs. The Parties shall ensure that the bilateral nature of this MOU is safeguarded within the composition and terms of the OSSC Charter by holding bilateral sessions of the OSSC as needed.

4.1.3. The OSSC shall consist of a representative designated by each Party. The OSSC shall meet at least annually with additional meetings held at the request of either representative. The representative of the Party hosting the meeting shall chair that meeting of the OSSC.

4.1.4. Decisions of the OSSC shall be made unanimously. In the event that the OSSC is unable to reach a timely decision on an issue, each OSSC representative shall refer the issue to its higher authority for resolution. The approved Project shall continue to be implemented without interruption under the direction of the AEHF PMSUP while the issue is being considered by the appropriate higher authorities.

4.2. The OSSC shall be responsible for:

4.2.1. Exercising executive-level oversight of the Project;

4.2.2. Reviewing progress towards accomplishing the tasks prescribed in Article II (Objectives) and Article III (Scope of Work) of this MOU;

4.2.3. Approving the O&S Financial Management and Procedures Document (FMPD), and revisions thereto, in accordance with Article XVI (General Provisions) of this MOU, and conducting revalidations every five years of the mid and long-term O&S Financial Cost Target for the Project in accordance with procedures established in the FMPD.

4.2.4. Recommending amendments to this MOU, including additional Annexes within the scope of this MOU, in accordance with Article XVI (General Provisions) of this MOU.

4.2.5. Resolving operational issues brought forth by the Parties.

4.2.6. Approving amendments to Annexes to this MOU, in accordance with Article XVI (General Provisions) of this MOU.

4.2.7. Approving arrangements within the scope of this MOU, in accordance with Article XVI (General Provisions) of this MOU.

4.2.8. Discussing and employing their best efforts to resolve through the relevant export control authorities any export control issues raised by the Parties.

4.2.9. Monitoring Third Party sales and transfers authorized in accordance with Article XII (Third Party Sales and Transfers) of this MOU.

4.2.10. Approving modifications to the Project Security Instruction (PSI) and a Classification Guide (CG) for the Project.

4.3. As the DoD SATCOM Operational Manager (SOM), U.S. Strategic Command (USSTRATCOM) shall be responsible for:

4.3.1. Managing day-to-day operations of the AEHF MILSATCOM System.

4.3.2. Maintaining a direct liaison with the U.S. Military Departments, Joint Staff, Defense Information Systems Agency, MOD, Office of the Secretary of Defense (OSD), other IPs, and users of SATCOM systems to support DoD SATCOM architecture development, and integrating SATCOM into the defense information infrastructure/defense information systems network.

4.3.3. Ensuring MOD Baseline Resources that MOD receives in accordance with Annex A (AEHF Project System Description and Capacity Sharing Terms and Conditions) to the 2002 MOU are provided over the life of the AEHF MILSATCOM System.

4.3.4. Executing policy and directions as they relate to the AEHF MILSATCOM System

4.3.5. Coordinating technical aspects of the AEHF MILSATCOM System with the applicable SATCOM Systems Expert (SSE).

- 4.3.6. Coordinating day-to-day operations with DoD and MOD operational elements and other IPs.
- 4.3.7. Preparing periodic operational status reports for submission to the OSSC.
- 4.3.8. Referring to the OSSC issues that cannot be resolved by the SOM.
- 4.4. As the DoD lead for AEHF development and support, U.S. Air Force Space Command (AFSPC) shall designate the PMDEV and the PMSUP.
 - 4.4.1. PMDEV shall:
 - 4.4.1.1. Execute the financial aspects of the Project in accordance with the provisions of Article V (Financial Arrangements) of this MOU.
 - 4.4.1.2. Prepare the O&S FMPD that establishes the detailed financial management procedures under which the Project shall operate. These procedures must be in accordance with the national accounting and audit requirements of the Parties.
 - 4.4.1.3. Maintain the PSI and CG until the transition referenced in paragraph 4.1. occurs.
 - 4.4.1.4. Monitor export control arrangements required to implement this MOU and, if applicable, discuss and resolve export control issues through the export control authorities of the Parties.
 - 4.4.1.5. Transition management of this Project to PMSUP as development is completed and the system becomes operational.
 - 4.4.2. PMSUP shall:
 - 4.4.2.1. Maintain a direct liaison with the U.S. Military Departments, Joint Staff, Defense Information Systems Agency, MOD, OSD, other IPs, and users of the AEHF MILSATCOM System to identify system logistical provisioning requirements.
 - 4.4.2.2. Manage the cost, schedule, performance, requirements, technical, security and financial aspects in accordance with Article V (Financial Arrangements) of this MOU.
 - 4.4.2.3. Maintain the O&S FMPD that establishes the detailed financial management procedures under which the Project shall operate. These procedures shall be in accordance with the national accounting and audit requirements of the Parties.

4.4.2.4. Monitor export control arrangements required to implement this MOU and, if applicable, discuss and resolve export control issues through the export control authorities of the Parties.

4.4.2.5. Maintain oversight of the security aspects of the Project, including compliance with the PSI and the CG applicable to this MOU, and maintain the PSI and CG after the transition referenced in paragraph 4.1. of this Article occurs.

4.4.2.6. Coordinate amendments to this MOU in accordance with Article XVI (General Provisions) of this MOU.

4.4.2.7. Refer to the OSSC issues that cannot be resolved by the PMSUP.

4.4.2.8. Be assisted by the PMDEV and shall fully coordinate issues with operational implications with the SOM.

4.5. The DoD and MOD may assign qualified personnel to organizations contributing to the Project. Such personnel shall be integrated into an organizational element of the Parties and be responsible for executing tasks associated with the Project. These personnel may have been previously assigned to organizations contributing to the AEHF MILSATCOM Program in accordance with Annex B (The Exchange of Cooperative Project Personnel) to the 2002 MOU. Provisions for personnel assigned to organizations of the Parties contributing to this Project are set out in Annex B (Exchange of Cooperative Project Personnel) to this MOU.

4.6. In addition to the operations, oversight, management, and control of AEHF MILSATCOM System Resources as defined in Annex A (Operations and Support of the AEHF MILSATCOM System Project) to this MOU, the MOD shall follow the procedures established by the SOM for safe and efficient use of the system. Any issues associated with this arrangement shall be referred initially to the OSSC for resolution except that:

4.6.1. The MOD shall conduct reviews of MOD MILSATCOM requirements in accordance with internal MOD instructions for internal MOD consideration.

4.6.2. The MOD MILSATCOM requirements need not be incorporated in the DoD SATCOM Database (SDB) (i.e., MOD requirements shall not need a validated SDB number to use MOD Resources).

4.6.3. The MOD shall not be required to forward to DoD a listing of prioritized requirements, including requirements that cannot be filled using apportioned assets to the Joint Staff (this Information shall be kept internal to MOD).

4.6.4. The MOD shall not be required to prepare an annual report to DoD (Joint Staff and the Assistant Secretary of Defense (Networks and Information Integration)) (ASD/NII), or their successors in the event of reorganization, on commercial SATCOM operational use and associated costs.

ARTICLE V

FINANCIAL ARRANGEMENTS

5.1. Each Party shall contribute its equitable share of the full Financial Costs and Non-financial Costs of the Project including overhead costs, administrative costs, and costs of claims, and shall receive an equitable share of the results of the Project in accordance with this MOU.

5.2. All dollar references in this MOU are expressed in U.S. Then-Year Dollars. All time periods will be the U.S. Fiscal Year. No Non-financial contributions shall be made under this MOU.

5.2.1. The MOD estimated financial contribution for the period of U.S. FY2010 through U.S. FY2024 is \$12.697M, or 0.83%, of the total Project costs, plus \$2.133M, or 12.97%, of the total IP-specific support for a total MOD Financial Cost Ceiling that will not exceed \$14.830M. These percentages represent the MOD's equitable share of their use of the AEHF MILSATCOM System Resources.

5.2.2. The DoD estimated financial contribution for the period of U.S. FY2010 through U.S. FY2024 shall not exceed a DoD Financial Cost Ceiling of \$1529.809M.

5.2.3. The estimated total financial contributions under this MOU for the period of U.S. FY2010 through U.S. FY2024 shall not exceed a total Financial Cost Ceiling of \$1544.639M. The DoD and MOD contributions shall be adjusted annually, upon approval of the Parties, based on the actual O&S costs of the AEHF Program and reflected in the FMPD in accordance with subparagraph 4.2.3. of Article IV (Management (Organization and Responsibilities)) of this MOU.

5.3. Each Party shall make funds available in accordance with the schedule of estimated financial contributions as described in the O&S FMPD. The schedule of financial contributions shall be consistent with the funding requirements of paragraph 5.2. of this Article.

5.4. The Parties may determine that it is necessary for one Party, consistent with its national laws and regulations, to incur contractual obligations for the benefit of the Parties. When so determined by the Parties, in the event one Party enters into a Contract or incurs other such contractual obligations for the benefit of the other Party, each Party shall pay its equitable share of such Contracts or other obligations. Each Party, on whose behalf the Contract or other obligation was incurred, shall make funds available in such amounts and at such times as may be required by the Contract and other obligations within the Financial Cost Ceiling and shall pay its equitable share of any damages and costs that may accrue from the performance of or cancellation of the Contract or other contractual obligation in advance of the time such payments, damages, or costs are due. Whenever possible, prior to Contract cancellation or amendment, the Contracting Party shall consult with the other Party concerning Contract cancellation or amendment.

5.5. Each Party shall bear the costs it incurs by performing, managing, and administering its activities under this MOU and all such costs shall be included as part of each Party's contribution to the Project. These costs include salaries, travel and per diem for its Project personnel, as well as any Contract costs.

5.6. The following costs shall be borne entirely by the Party incurring the costs or on whose behalf the costs are incurred:

5.6.1. Costs associated with national representation at meetings; and

5.6.2. Costs associated with any unique national requirements, such as:

5.6.2.1. Costs associated with establishing and maintaining communications path(s) between the DoD and MOD for O&S Information transfer necessitated by the MOD's participation in the Project.

5.6.2.2. Costs associated with follow-on training for MOD personnel on the AEHF MILSATCOM System, terminal operations and support, and planning and management tools.

5.6.2.3. Costs associated with installing hardware and software partitions to maintain separation between the Information of the Parties in systems planning, management, and control systems supporting the AEHF MILSATCOM System.

5.6.2.4. Any other costs not expressly stated as shared costs or any costs that are outside the scope of this MOU.

5.6.2.4.1. Costs associated with procurement, maintenance, and sustainment of Mission Planning Element (MPE) hardware and associated commercial software licenses and drivers are beyond the scope of this MOU. The DoD shall provide the MOD with access to U.S. MPE support infrastructure, whether government depot or Contractor support, for use by MOD on a reimbursable basis as outlined by future arrangements.

5.7. A Party shall notify the other Party promptly if available funds are not adequate to fulfill its responsibilities under this MOU. If a Party notifies the other Party that it is terminating or reducing its funding for the Project, both Parties shall consult immediately with a view toward continuation on a modified basis. In the event that the Parties mutually conclude, following consultation, that continuation on a modified basis is not practicable, then the provisions of Article XVI (General Provisions) of this MOU shall apply.

5.8. Each Party shall be responsible for internal audit scrutiny of the Project activities carried out by it, in accordance with its own national practices.

ARTICLE VI

CONTRACTING PROVISIONS

6.1. The DoD (acting through the Department of the Air Force) shall be responsible for Contracting for the Project in accordance with U.S. Contracting laws, regulations and procedures, including Federal Acquisition Regulation and Defense Federal Acquisition Regulation Supplement provisions, if any, specifically relating to Dutch products or Contractors. The DoD Contracting Officer(s) is the exclusive source for providing contractual direction and instructions to Contractors.

6.2. The PMSUP, assisted by the PMDEV prior to the transition from development to O&S referenced in paragraph 4.1. of Article IV (Management (Organization and Responsibilities)) of this MOU, shall be responsible for coordinating with the responsible Contracting Officer(s) in the areas of Contract procedures, Contract negotiation, evaluation of offers, and Contract award. The MOD may send representatives to the proposal evaluation team(s), subject to the approval of the source selection authority(ies). The PMDEV shall review statements of work prior to the development of solicitations to ensure that they are in accordance with this MOU. The DoD shall provide the MOD the opportunity to review statements of work related to the Project prior to development of solicitations. In addition, the Contracting Officer(s) shall keep the PMDEV/PMSUP advised of all financial arrangements with the prime Contractor(s).

6.3. Each Party's Contracting Agency shall insert into its prospective Contracts (and require its Contractors to insert in subcontracts) suitable provisions to satisfy the requirements of this MOU, including Article VIII (Disclosure and Use of Project Information), Article IX (Controlled Unclassified Information), Article XI (Security), Article XII (Third Party Sales and Transfers), and Article XVI (General Provisions), including suitable provisions to ensure compliance with the Parties' respective export control laws and regulations.

6.4. Each Party shall establish legal arrangements with its Contractors to ensure that Contractors do not retransfer or otherwise use export-controlled Information furnished by the other Party for any purpose other than the purposes authorized under this MOU. Such legal arrangements shall also provide that the Contractor shall also be legally bound to not retransfer the export-controlled Information to another Contractor or subcontractor unless that Contractor or subcontractor has been legally bound to limit use of the Information to the purposes authorized under this MOU. Export-controlled Information furnished by one Party under this MOU may only be retransferred by the other Party to its Contractors if the legal arrangements required by this paragraph have been established.

6.5. Each Party shall establish legal arrangements with its Prospective Contractors to ensure that its Prospective Contractors do not retransfer or otherwise use export-controlled Information furnished by the other Party for any purpose other than responding to a solicitation issued in furtherance of the purposes authorized under this MOU. Prospective Contractors shall not be authorized any other end use if they are not awarded a Contract. Such legal arrangements shall also provide that the Prospective Contractors shall not retransfer the export-controlled Information to a prospective subcontractor unless that prospective subcontractor has been legally

bound to limit use of the export-controlled Information for the purpose of responding to the solicitation. Export-controlled Information furnished by one Party under this MOU may only be retransferred by the other Party to its Prospective Contractors if the legal arrangements required by this paragraph have been established. Upon request, either Party shall provide the identity of Prospective Contractors and prospective subcontractors receiving export-controlled Information.

6.6. In the event the Contracting Officer is unable to secure adequate rights to use and disclose Project Information as required by Article VIII (Disclosure and Use of Project Information), or is notified by Contractors or Prospective Contractors of any restrictions on the disclosure and use of information, the matter shall be referred to the OSSC for resolution.

6.7. The PMSUP shall advise immediately the SOM and MOD Project Team Leader of any cost growth, schedule change, or performance problems that may affect MOD's contribution, Baseline Resources, or access to the AEHF MILSATCOM System.

6.8. No requirement shall be imposed by either Party for work sharing or other industrial or commercial compensation in connection with this MOU that is not in accordance with this MOU.

ARTICLE VII

PROJECT EQUIPMENT

7.1. Each Party may provide Project Equipment identified as being necessary for executing this MOU to the other Party. Project Equipment shall remain the property of the providing Party. A list of all Project Equipment, in the format of Appendix 1 to Annex A of this MOU, provided by one Party to another Party shall be developed and maintained by the PMDEV or PMSUP and shall be approved by the OSSC.

7.2. The receiving Party shall maintain any such Project Equipment in good order, repair, and operable condition. Unless the providing Party has authorized the Project Equipment to be expended or otherwise consumed without reimbursement to the providing Party, the receiving Party shall return the Project Equipment to the providing Party in as good condition as received, normal wear and tear excepted, or return the Project Equipment and pay the costs to restore it. If the Project Equipment is damaged beyond economical repair, the receiving Party shall return the Project Equipment to the providing Party (unless otherwise specified in writing by the providing Party) and pay its replacement value as computed pursuant to the providing Party's national laws, regulations, and procedures. If the Project Equipment is lost while in the custody of the receiving Party, the receiving Party shall issue a certificate of loss to the providing Party and pay the replacement value as computed pursuant to the providing Party's national laws, regulations, and procedures.

7.3. The providing Party shall deliver Project Equipment to the receiving Party at a mutually determined location. Possession of the Project Equipment shall pass from the providing Party to the receiving Party at the time of receipt of the Project Equipment. Any further transportation is the responsibility of the receiving Party.

7.4. All Project Equipment that is transferred shall be used by the receiving Party only for the purposes of carrying out this MOU unless otherwise consented to in writing by the providing Party. In addition, in accordance with Article XII (Third Party Sales and Transfers) of this MOU, Project Equipment shall not be retransferred to a Third Party without the prior written consent of the providing Party.

7.5. Project Equipment transferred to one Party under this MOU shall be returned to the providing Party prior to the termination or expiration of this MOU.

7.6. Any Project Equipment that is jointly acquired on behalf of both Parties for use under this MOU shall be disposed of during this Project or when the Project ceases, as approved by the OSSC.

7.7. Disposal of jointly acquired Project Equipment may include a transfer of the interest of one Party in such Project Equipment to the other Party, or the sale of such equipment to a Third Party in accordance with Article XII (Third Party Sales and Transfers) of this MOU. The Parties shall share the consideration from jointly acquired Project Equipment transferred or sold to a Third Party in the same ratio as costs are shared under this MOU.

ARTICLE VIII

DISCLOSURE AND USE OF PROJECT INFORMATION

8.1. General

8.1.1. The Parties recognize that successful collaboration depends on full and prompt exchange of Information necessary to carry out the Project. The Parties intend to acquire sufficient Project Information and rights to use such Information to enable the operation and support of the AEHF MILSATCOM Systems. The nature and amount of Project Information to be acquired shall be in accordance with this MOU and in particular Article II (Objectives), Article III (Scope of Work), and Article VI (Contracting Provisions) of this MOU.

8.1.2. The follow export control provisions shall apply to the transfer of Project Information:

8.1.2.1. Transfer of Project Information shall be consistent with the furnishing Party's applicable export control laws and regulations.

8.1.2.2. Unless otherwise restricted by duly authorized officials of the furnishing Party at the time of transfer to the other Party, all export-controlled Information furnished by one Party to the other Party may be retransferred to the other Party's Contractors, subcontractors, Prospective Contractors, and prospective subcontractors, subject to the requirements of paragraphs 6.4. and 6.5. of Article XI (Contracting Provisions) of this MOU.

8.1.2.3. Export-controlled Information may be furnished by Contractors, subcontractors, Prospective Contractors, and prospective subcontractors of one Party to the Contractors, subcontractors, Prospective Contractors, and prospective subcontractors of the other Party pursuant to this MOU, subject to the conditions established in licenses or other approvals issued by the Government of the former Party in accordance with its applicable export control laws and regulations.

8.1.2.4. If a Party finds it necessary to exercise a restriction on the retransfer of export-controlled Information as set out in subparagraph 8.1.2.2. of this Article, it shall promptly inform the other Party's OSSC representative. If a restriction is then exercised and the affected Party objects, that Party's OSSC representative shall promptly notify the other Party's OSSC representatives and they shall immediately consult in order to discuss ways to resolve such issues or mitigate any adverse effects.

8.1.3. Notwithstanding any other provision of this MOU, disclosure of Project Information shall only be in accordance with the Party's respective national disclosure policies. The Parties shall use their best efforts to maximize disclosure of Project

Information under this MOU to the extent permitted by their respective national disclosure policies.

8.1.4. Communications Security (COMSEC)/Transmission Security (TRANSEC) Information shall not be exchanged under this MOU but may be exchanged separately in accordance with arrangements made between the U.S. NSA and the National Communication Security Agency (NL NCSA) of the Netherlands.

8.2. Government Project Foreground Information: The following provisions shall apply to Project Foreground Information generated by a Party's military or civilian employees (hereinafter referred to as "Government Project Foreground Information").

8.2.1. All Government Project Foreground Information shall be disclosed without charge to both Parties.

8.2.2. Each Party may use all Government Project Foreground Information without charge for Defense Purposes. The Party generating Government Project Foreground Information shall also retain its rights of use thereto. Any sale or other transfer to a Third Party shall be subject to the provisions of Article XII (Third Party Sales and Transfers) of this MOU.

8.3. Government Project Background Information

8.3.1. Each Party, upon request, shall disclose promptly and without charge to the other Party any relevant Government Project Background Information generated by its military or civilian employees, provided that:

8.3.1.1. Such Government Project Background Information is necessary to or useful in the Project. The Party in possession of the Information shall determine whether it is "necessary to" or "useful in" the Project.

8.3.1.2. Such Government Project Background Information may be made available only if the rights of holders of intellectual property rights are not infringed.

8.3.1.3. Disclosure or transfer of such Government Project Background Information to Contractors is consistent with the furnishing Party's national disclosure laws and regulations.

8.3.1.4. Any disclosure or transfer of such Government Project Background Information to Contractors is consistent with the furnishing Party's export control laws and regulations.

8.3.2. Government Project Background Information disclosed by one Party to the other may be used without charge by the other Party for Project Purposes only; however, the

furnishing Party shall retain all its rights with respect to such Project Background Information.

8.4. Contractor Project Foreground Information: The following provisions shall apply to Project Foreground Information generated and delivered by Contractors (hereinafter referred to as "Contractor Project Foreground Information").

8.4.1. Contractor Project Foreground Information generated and delivered by Contractors shall be disclosed promptly and without charge to both Parties.

8.4.2. Each Party may use or have used, without charge for its Defense Purposes, all Contractor Project Foreground Information generated and delivered by Contractors of the other Party. The Party whose Contractors generate and deliver Contractor Project Foreground Information shall also retain all its rights of use thereto in accordance with the applicable Contract(s). Any sale or other transfer to a Third Party of Contractor Project Foreground Information shall be subject to the provisions of Article XII (Third Party Sales and Transfers) of this MOU.

8.5. Contractor Project Background Information: The following provisions shall apply to Project Background Information generated and delivered by Contractors (hereinafter referred to as "Contractor Project Background Information").

8.5.1. A Contracting Party shall make available to the other Party promptly and without charge all Contractor Project Background Information generated by Contractors that is delivered under Contracts awarded in accordance with this MOU. Any other Project Background Information that is generated by Contractors and that is in the possession of one Party shall be made available promptly and without charge to the other Party, upon its request, provided the following conditions are met:

8.5.1.1. Such Contractor Project Background Information is necessary to or useful in the Project, with the Party in possession of the Information determining whether it is "necessary to" or "useful in" the Project.

8.5.1.2. Such Contractor Project Background Information may be made available without incurring liability to holders of proprietary rights.

8.5.1.3. Disclosure of such Contractor Project Background Information is consistent with national disclosure policies and regulations of the furnishing Party.

8.5.1.4. Any disclosure or transfer of such Contractor Project Background Information to Contractors is consistent with the furnishing Party's export control laws and regulations.

8.5.2. Project Background Information furnished by one Party's Contractors and disclosed to the other Party may be used without charge by the other Party for Project

Purposes only, and may be subject to further restrictions by holders of proprietary rights; however, the furnishing Party shall retain all its rights with respect to such Project Background Information.

8.6. Alternative Uses of Project Information

8.6.1. Any Project Background Information provided by one Party shall be used by the other Party only for the purposes set forth in this MOU, unless otherwise consented to in writing by the providing Party.

8.7. Proprietary Project Information

8.7.1. All Project Information that is subject to disclosure and use restrictions with respect to intellectual property rights shall be identified and marked, and it shall be handled as Controlled Unclassified Information or as Classified Information, depending on its security classification.

8.7.2. The provisions of the NATO Agreement on the Communication of Technical Information for Defence Purposes, done at Brussels on October 19, 1970, and the Implementing Procedures for the NATO Agreement on the Communication of Technical Information for Defence Purposes, approved by the North Atlantic Council on January 1, 1971 (or any successor agreement and procedures) shall apply to Project Information that is subject to intellectual property rights.

8.8. Patents

8.8.1. Each Party shall include in its Project-related Contracts a provision governing the disposition of rights in regard to Project Inventions and Patent rights relating thereto, which either:

8.8.1.1. Provides that the Party shall hold title to all Project Inventions together with the right to make Patent application for the same, free of encumbrance from the Contractor; or

8.8.1.2. Provides that the Contractor shall hold title (or may elect to retain title) for Project Inventions together with the right to make Patent applications for the same, while securing for the Party a license for the Project Inventions, and any Patents therefore, on terms in compliance with the provisions of paragraph 8.8.2. below.

8.8.2. In the event that a Contractor holds title (or elects to retain title) for a Project Invention, the Contracting Party shall secure for the Parties non-exclusive, irrevocable, royalty-free licenses under all Patents secured for that invention, to practice or have practiced the patented Project Invention throughout the world for Defense Purposes.

8.8.3. The provisions of subparagraphs 8.8.4. through 8.8.7. of this Article shall apply in regard to Patent rights for all Project Inventions made by the Parties' military or civilian employees, including those within Government-owned facilities, and for all Project Inventions made by Contractors for which the Contracting Party holds title or is entitled to acquire title.

8.8.4. When a Party has or can secure the right to file a Patent application with regard to a Project Invention, that Party shall consult the other Party regarding the filing of such Patent application. The Party having such rights shall in other countries, file, cause to be filed, or provide the other Party with the opportunity to file on behalf of the Party holding such rights, or its Contractors, as appropriate, Patent applications covering any such Project Invention. A Party shall immediately notify the other Party that a Patent application has been filed. If a Party having filed or caused to be filed a Patent application abandons prosecution of the application or ceases maintaining the Patent granted or issued on the application, that Party shall notify the other Party of that decision and shall permit the other Party to continue the prosecution or maintain the Patent as the case may be.

8.8.5. Each Party shall be furnished by the other Party with the applications and Patent numbers of the Patent applications filed and Patents granted with regard to Project Inventions, and an English copy of the Patent specification for each invention filed.

8.8.6. Each Party shall grant to the other Party a non-exclusive, irrevocable, royalty-free license under its Patents for Project Inventions, to practice or have practiced the patented Project Invention throughout the world for Defense Purposes.

8.8.7. Patent applications to be filed, or assertions of other intellectual property rights under this MOU that contain Classified Information, shall be protected and safeguarded in a manner no less stringent than the requirements contained in the NATO Agreement for the Mutual Safeguarding of Secrecy of Inventions Relating to Defence and for Which Applications for Patents Have Been Made, done in Paris on September 21, 1960, and its Implementing Procedures (or any successor agreement and procedures).

8.8.8. Each Party shall notify the other Party of any intellectual property infringement claims brought against that Party arising in the course of work performed under the Project on behalf of the other Party. Insofar as possible, the other applicable Party shall provide Information available to it that may assist in defending such claims. Each Party shall be responsible for handling such intellectual property infringement claims brought against it, and shall consult with the other Party during the handling, and prior to any settlement, of such claims. The Parties shall share the costs of resolving such intellectual property infringement claims in proportion to their financial contributions for that work specified in Article V (Financial Arrangements) of this MOU.

8.8.9. The Parties shall, as permitted by their national laws, regulations, and practices, give their authorization and consent for all use and manufacture in the course of work performed under the Project of any invention covered by Patent, or as determined to be

necessary for work under the Project, authorization and consent for non-commercial copyright granted or otherwise provided by their respective countries.

ARTICLE IX

CONTROLLED UNCLASSIFIED INFORMATION

9.1. Except as otherwise provided in this MOU, or authorized in writing by the originating Party, Controlled Unclassified Information provided or generated pursuant to this MOU shall be controlled as follows:

9.1.1. Such Information shall be used only for the purposes authorized for use of Project Information as specified in Article VIII (Disclosure and Use of Project Information) of this MOU.

9.1.2. Access to such Information shall be limited to personnel whose access is necessary for the permitted use under subparagraph 9.1.1. of this Article, and shall be subject to the provisions of Article XII (Third Party Sales and Transfers) of this MOU.

9.1.3. Each Party shall take all lawful steps, which may include national classification, available to it to keep such Information free from further disclosure (including requests under any legislative provisions), except as provided in subparagraph 9.1.2. of this Article, unless the originating Party consents to such disclosure. In the event of unauthorized disclosure, or if it becomes probable that the Information may have to be disclosed further under any legislative provision, immediate notification shall be given to the originating Party.

9.2. To assist in providing the appropriate controls, the originating Party shall ensure that Controlled Unclassified Information is appropriately marked to ensure its "in confidence" nature. The Parties' export-controlled information shall be marked in accordance with the applicable Party's export control markings as documented in the Project Security Instruction (PSI). The Parties shall also decide, in advance and in writing, on the markings to be placed on any other types of Controlled Unclassified Information and describe such markings in the PSI.

9.3. Controlled Unclassified Information provided or generated pursuant to this MOU shall be handled in a manner that ensures control as provided for in paragraph 9.1. of this Article.

9.4. Prior to authorizing the release of Controlled Unclassified Information to Contractor(s), the Parties shall ensure the Contractor(s) are legally bound to control such Information in accordance with the provisions of this Article.

ARTICLE X

VISITS TO ESTABLISHMENTS

10.1. Each Party shall permit visits to its Government establishments, agencies and laboratories, and Contractor industrial facilities by employees of the other Party, or by employees of the other Party's Contractor(s), provided that the visit is authorized by both Parties and the employees have any necessary and appropriate security clearances and a need-to-know.

10.2. All visiting personnel shall be required to comply with security regulations of the hosting Party. Any Information disclosed or made available to visitors shall be treated as if supplied to the Party sponsoring the visiting personnel, and shall be subject to the provisions of this MOU.

10.3. Requests for visits by personnel of one Party to a facility of the other Party shall be coordinated through official channels, and shall conform with the established visit procedures of the hosting Party. Requests for visits shall bear the name of the Project.

10.4. Lists of personnel of each Party required to visit, on a continuing basis, facilities of the other Party shall be submitted through official channels in accordance with recurring international visit procedures.

ARTICLE XI

SECURITY

11.1. All Classified Information provided or generated pursuant to this MOU shall be stored, handled, transmitted and safeguarded in accordance with the General Security of Information Agreement between the Kingdom of The Netherlands and the United States of America, which entered into effect August 18, 1960, as amended, and including the Industrial Security Agreement of March 13, 2006.

11.2. Classified Information shall be transferred only through official Government-to-Government channels or through channels approved by the Designated Security Authorities (DSAs) of the Parties. Such Classified Information shall bear the level of classification, denote the country of origin, and the conditions of release, declassification instructions and the fact that the Information relates to this MOU.

11.3. Each Party shall take all lawful steps available to ensure that Information provided or generated pursuant to this MOU is protected from further disclosure, except as provided by this Article unless the other Party consents to such disclosure. Accordingly, each Party shall ensure that the recipient:

11.3.1. Shall not release Classified Information to any government, national, organization, or other entity of a Third Party without the prior written consent of the originating Party, in accordance with the procedures set forth in Article XII (Third Party Sales and Transfers) of this MOU.

11.3.2. Shall not use Classified Information for other than the purposes provided for in this MOU.

11.3.3. Shall comply with any distribution and access restrictions on Information that is provided under this MOU.

11.4. The Parties shall investigate all cases in which it is known or in which there are grounds for suspecting that Classified Information or material provided or generated pursuant to this MOU has been lost or disclosed to unauthorized persons. Each Party also shall promptly and fully inform the other Party of the details of any such occurrences, and of the final results of the investigation and of the corrective action taken to preclude recurrence.

11.5. The PSI and a CG, as developed in accordance with the 2002 MOU, shall be maintained for the Project in accordance with subparagraphs 4.4.1.3. and 4.4.2.5. of Article IV (Management (Organization and Responsibilities)) of this MOU. The PSI and the CG shall describe the methods by which Project Information shall be classified, marked, used, transmitted, and safeguarded, and shall require that markings for all export-controlled Classified Information shall include the applicable export control markings identified in the PSI in accordance with paragraph 9.2. of Article IX (Controlled Unclassified Information) of this MOU. The PSI and the CG shall be reviewed and forwarded to the Parties' DSAs for approval and shall be applicable to all

Government and Contractor personnel participating in the Project. The CG shall be subject to regular review and revision with the aim of downgrading the classification whenever this is appropriate. The PSI and the CG shall be approved by the appropriate DSA prior to the transfer of any Classified Information or Controlled Unclassified Information.

11.6. For any facility wherein Classified Information or material is to be used, the responsible Party shall approve the appointment of a person or persons to exercise effectively the responsibilities for safeguarding at such facility the Information or material pertaining to this MOU. Such official(s) shall be responsible for limiting access to Classified Information or material involved in this MOU to those persons who have been properly approved for access and have a need-to-know.

11.7. Each Party shall ensure that access to the Classified Information is limited to those persons who possess requisite security clearances and have a specific need for access to the Information in order to participate in this MOU.

11.8. The DSA of the country in which a classified Contract is awarded pursuant to this MOU shall assume responsibility for administering within its territory security measures for the protection of the Classified Information, in accordance with its laws and regulations. Prior to the release to a Contractor, Prospective Contractor, or subcontractor of any Classified Information received under this MOU, the DSAs shall:

11.8.1. Ensure that such Contractor, Prospective Contractor, or subcontractors and their facilities have the capability to protect the Classified Information adequately.

11.8.2. Grant a security clearance to the facilities, if appropriate.

11.8.3. Grant a security clearance for all personnel whose duties require access to Classified Information, if appropriate.

11.8.4. Ensure that all persons having access to the Classified Information are informed of their responsibilities to protect the Classified Information in accordance with Parties' national security laws and regulations, and the provisions of this MOU.

11.8.5. Carry out periodic security inspections of cleared facilities to ensure that the Classified Information is properly protected.

11.8.6. Ensure that access to the Classified Information is limited to those persons who have a need-to-know for purposes of this MOU.

11.9. Contractors, Prospective Contractors, or subcontractors that are determined by DSAs to be under financial, administrative, policy, or management control of nationals or entities of a Third Party, may participate in a Contract or subcontract requiring access to Classified Information provided or generated pursuant to this MOU only when enforceable measures are in effect to ensure that nationals or other entities of a Third Party shall not have access to Classified Information. If enforceable measures are not in effect to preclude access by nationals or other

entities of a Third Party, the other Party shall be consulted for approval prior to permitting such access.

11.10. Information or material provided or generated pursuant to this MOU may be classified as high as SECRET. The existence of this MOU is unclassified and the contents are unclassified.

ARTICLE XII

THIRD PARTY SALES AND TRANSFERS

12.1. The DoD shall retain the right to sell, transfer title to, disclose, or transfer possession of Project Foreground Information, jointly acquired or produced Project Equipment, or any item produced either wholly or in part from Project Foreground Information to Third Parties.

12.2. The MOD shall not sell, transfer title to, disclose, or transfer possession of Project Foreground Information (or any item produced either wholly or in part from the Project Foreground Information) or jointly acquired or produced Project Equipment to any Third Party without the prior written consent of the U.S. Government. Furthermore, the MOD shall not permit any such sale, disclosure, or transfer by others, including the owner of the item, without the prior written consent of the U.S. Government. The MOD recognizes that such sales, disclosure, or other transfers shall not be authorized by the U.S. Government unless the Government of the intended recipient confirms in writing to the DoD it shall:

12.2.1. Not retransfer or permit the further retransfer of any equipment or Information provided.

12.2.2. Use or permit the use of the equipment or Information provided only for the purposes specified by the contributing Parties.

12.3. A Party shall not sell, transfer title to, disclose, or transfer possession, grant, donate or transfer usage rights of Project Equipment or Project Background Information provided by the other Party to any Third Party without the prior written consent of the Government of the Party that provided such equipment or Information. The providing Party's Government shall be solely responsible for authorizing such transfers and, as applicable, specifying the method and provisions for implementing such transfers.

12.4. In accordance with paragraph 4.1. of Annex A (Operations and Support of the AEHF System Project) to this MOU, for the purpose of one IP loaning apportioned satellite Resources to another IP, the exchange of Project Background and Project Foreground Information between the IPs in support of such loan shall not be considered a Third Party transfer. Accordingly, usage of one IPs apportioned satellite Resources by another IP shall not be considered a Third Party transfer.

12.5. Employees and agents of Contractors are not considered civilian personnel of a Party for the purposes of this Section.

ARTICLE XIII

LIABILITY AND CLAIMS

13.1. Claims against either Party or its personnel shall be dealt with in accordance with the terms of Article VIII of the NATO Status of Forces Agreement (NATO SOFA), dated June 19, 1951. Civilian employees of the Parties assigned to duty within their government's Defense Department or Ministry shall be deemed for the purpose of Article VIII of NATO SOFA to be members of a civilian component within the meaning of Article I of the NATO SOFA while present in the territory of the other Party for the purpose of this MOU.

13.2. Claims arising under or related to any Contract awarded pursuant to Article VI (Contractual Arrangements) shall be resolved in accordance with the provision of the Contract.

13.3. Employees and agents of Contractors shall not be considered to be civilian personnel employed by a Party for the purpose of paragraph 13.1. of this Article.

ARTICLE XIV

CUSTOMS DUTIES, TAXES AND SIMILAR CHARGES

14.1. Customs duties, import and export taxes, and similar charges shall be administered in accordance with each Party's respective laws and regulations. Insofar as existing national laws and regulations permit, the Parties shall endeavor to ensure that such readily identifiable duties, import and export taxes, and similar charges, as well as quantitative or other restrictions on imports and exports, are not imposed in connection with work carried out under this MOU.

14.2. Each Party shall use its best efforts to ensure that customs duties, import and export taxes, and similar charges are waived or otherwise administered in a manner favorable to the efficient and economical conduct of the work of this Project. If any such duties, import and export taxes, or similar charges are levied, the Party in whose country they are levied shall bear such costs.

14.3. If, in order to apply European Union (EU) regulations, it is necessary to levy duties, then these shall be met by the Netherlands. To this end, parts or components of the equipment coming from outside of the EU shall proceed to their final destination accompanied by the relevant customs document enabling settlement of duties to take place. The duties shall be paid as a cost over and above the Netherlands costs of this MOU.

ARTICLE XV

SETTLEMENT OF DISPUTES

15.1. Disputes between the Parties arising under or relating to this MOU shall be resolved only by consultation between the Parties and shall not be referred to a national court, an international tribunal, or to any other person or entity for settlement.

ARTICLE XVI

GENERAL PROVISIONS

16.1. All activities of the Parties under this MOU shall be carried out in accordance with their respective national laws and regulations, including their respective export control laws and regulations. The obligations of the Parties shall be subject to the availability of funds for such purposes.

16.2. Annexes to this MOU are an integral part of this MOU. In the event of a conflict between an Article of this MOU and any Annex to this MOU, the MOU Article shall control.

16.3. This MOU may only be amended by the mutual written consent of the Parties. Annexes to this MOU may be amended by the written approval of the OSSC, after having secured appropriate national approval. The OSSC may enter into arrangements that are within the scope of this MOU, after having secured appropriate national approval.

16.4. This MOU may be terminated at any time upon the mutual written consent of the Parties. In the event both Parties consent to terminate this MOU, the Parties shall consult prior to the date of termination to ensure termination on the most economical and equitable terms.

16.5. Either Party may terminate this MOU upon 90 days written notification to the other Party. Such notice shall be the subject of immediate consultation by the OSPO to decide upon the appropriate course of action to be recommended to the OSSC. In the event of such termination, the following rules apply:

16.5.1. If, as a result of the termination of this MOU by the DoD, the MOD is denied access to the AEHF Baseline Resources guaranteed to the MOD under Annex A of the 2002 MOU, the DoD shall provide the MOD with compensation for the loss of this access.

16.5.2. The Party terminating shall continue participation, financial and otherwise, up to the effective date of termination.

16.5.3. Except as to Contracts awarded on behalf of both Parties, each Party shall be responsible for its own Project-related costs associated with termination of the Project. For contracts awarded on behalf of both Parties, the terminating Party shall pay all Contract modification or termination costs that would not otherwise have been incurred but for the decision to terminate; in no event, however, shall a terminating Party's total financial contribution, including Contract termination costs, exceed that Party's total share of the Financial Cost Ceiling for financial contributions as established in Article V (Financial Arrangements) of this MOU.

16.5.4. All Project Information and rights therein received under the provisions of this MOU prior to the termination shall be retained by the Parties, subject to the provisions of this MOU.

16.6. The respective rights and responsibilities of the Parties regarding Article VII (Project Equipment), Article VIII (Disclosure and Use of Project Information), Article IX (Controlled Unclassified Information), Article XI (Security), Article XII (Third Party Sales and Transfers), Article XIII (Liability and Claims), Article XV (Settlements of Disputes), and this Article of this MOU shall continue notwithstanding termination or expiration of this MOU.


16.7. This MOU, which consists of sixteen (16) Articles and two (2) Annexes, shall enter into force upon signature by both Parties and shall remain in force until September 30, 2024, unless earlier terminated, superseded, or amended. However, it is anticipated that the Parties shall extend this MOU until the last AEHF satellite is removed from service. Upon expiration or termination of the 2002 MOU, the Baseline Resources defined in the 2002 MOU shall continue to be provided and governed by the terms of this MOU, until expiration or termination of this MOU.

The foregoing represents the understandings reached between the Department of Defense of the United States of America and the Minister of Defence of the Kingdom of The Netherlands upon the matters referred to therein.

IN WITNESS WHEREOF, the undersigned being duly authorized by their governments, have signed this MOU.

SIGNED in duplicate.

FOR THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF
AMERICA:



Signature

RICHARD E. PERRAUT, JR., Maj Gen, USAF

Name

Deputy Under Secretary of the Air Force
International Affairs (Acting)

Title

21 AUG 10

Date

Pentagon, Washington DC

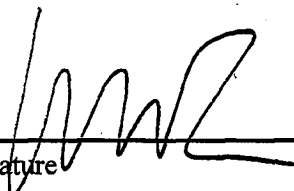
Location

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SIGNED in duplicate.

FOR THE MINISTER OF DEFENCE OF
THE KINGDOM OF THE
NETHERLANDS:



Signature

Mels de Zeeuw, Maj Gen

Name

Director Projects and Procurement

Title

26 August 2010

Date

The Hague, The Netherlands

Location

ANNEX A

TO THE

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE SECRETARY OF DEFENSE
ON BEHALF OF THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF AMERICA

AND

THE MINISTER OF DEFENCE
OF THE KINGDOM OF THE NETHERLANDS

CONCERNING

THE OPERATIONS AND SUPPORT OF THE
ADVANCED EXTREMELY HIGH-FREQUENCY
MILITARY SATELLITE COMMUNICATIONS SYSTEM
PROJECT

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1.0. Introduction

1.1. This is an Annex to the Memorandum of Understanding (MOU) between the Department of Defense (DoD) of the United States of America and the Minister of Defence (MOD) of the Kingdom of the Netherlands Concerning Operations and Support of AEHF Military Satellite Communications (MILSATCOM) System. This Annex provides details of the Operations and Support (O&S) provisions for integrating MOD O&S requirements into the AEHF MILSATCOM System.

2.0. System Description

2.1. System Overview. The AEHF Program shall purchase a worldwide Extremely High Frequency (EHF) capability that shall replace the Milstar system. The AEHF system shall provide a new Space Segment in addition to the mission Control Segment for survivable, jam-resistant, worldwide, and secure communications for strategic and tactical warfighters. The AEHF Program shall use as much commercial off-the-shelf technology as possible and shall ensure that technology development produces a satellite that can be launched on a medium-class launch vehicle. Launches of the four AEHF satellites shall occur beginning in Calendar Year 2010. Worldwide coverage shall be provided through the launch of subsequent AEHF and/or AEHF-compatible satellites. MOD requirements shall be integrated into the DoD's operations and support architecture and the MOD shall be provided their Baseline Resources in accordance with Annex A (AEHF Project System Description and Capacity Sharing Terms and Conditions) to the 2002 MOU.

2.2. Baseline Resources.

2.2.1. The Baseline Resources, which are set forth in the 2002 MOU, were based on specific Information regarding orbital positions at that time. U.S. operational priorities, International Telecommunication Union orbital position approval, and other considerations may require the DoD SATCOM Operations Manager (SOM) to place the satellites in orbital positions that are different from those identified in paragraph 3.1. of the 2002 MOU. If this occurs then the DoD shall coordinate with the MOD to a.) reapportion the MOD Baseline Apportionment to other DoD EHF satellites in a manner that best approximates the resource usage identified in Annex A (AEHF Project System Description and Capacity Sharing Terms and Conditions) of the 2002 MOU, or b.) maintain the Baseline Apportionment as identified in Annex A of the 2002 MOU, which shall require MOD terminals to be under the field of view of the repositioned satellite(s) to access the MOD Resources.

2.3. AEHF Owner. The AEHF MILSATCOM System shall be DoD-owned and operated. The DoD shall assign/allocate satellite communications resources to the MOD, and the MOD shall then control its Baseline Resources. The MOD, as the "controller" of its Resources, shall manage its Baseline Resources and have the right to use those Baseline Resources as documented within the terms and conditions of this Annex.

2.4. AEHF Segments. The AEHF MILSATCOM System consists of three segments: Space, Control, and Terminal. General responsibilities for each segment are outlined below.

2.4.1. Space Segment. The AEHF MILSATCOM System Space Segment shall consist of the AEHF spacecraft and all related components. The DoD shall retain all responsibilities including launch operations, payload configuration, crosslink connectivity, and satellite bus maintenance.

2.4.2. Control Segment. The AEHF MILSATCOM System Control Segment includes the DoD systems used to control the satellite bus and payloads on AEHF capable satellites as well as the tools required to plan and manage communications Resources. The DoD shall retain full and exclusive satellite bus control. The DoD shall use a communication control, planning, and management system to control the AEHF satellite payloads. The DoD shall provide the MOD with a communication control, planning, and management capability to enable the MOD to control their Baseline Resources as detailed in this Annex. In the event that this system is not available for use by MOD, the system at the Global SATCOM Support Center (GSSC) International Partner (IP) Support Cell shall provide planning and monitoring support. This support shall continue until the MOD system is available or at the request of the MOD.

2.4.3. Terminal Segment. The DoD is developing multiple terminals to operate with the AEHF MILSATCOM System and the MOD may purchase these terminals from the responsible AEHF Terminal Program Office (TPO). Terminals with the AEHF Communications Security (COMSEC)/Transmissions Security (TRANSEC) System (ACTS) cryptographic components shall be purchased via Foreign Military Sales (FMS). Support of these terminals is outside the purview of this Annex. Support arrangements must be made with the respective TPO for support of the terminals at the time of purchase.

3.0. SATCOM Operations

3.1. Organizational Management Structure. As depicted in Figure A-1, the current concept for management of the AEHF MILSATCOM System shall have three levels: oversight, system level staff support, and 24-hour operations centers. The MOD shall be able to control its AEHF Baseline Resources consistent with the SATCOM Operation Management structure as depicted below in Figure A-1 and the DoD-MOD coordinated CONOPS and CNIP. In particular, the MOD shall be able to control its Space Segment Baseline Resources directly, obtaining support from the DoD SATCOM Operational Management structure, when required.

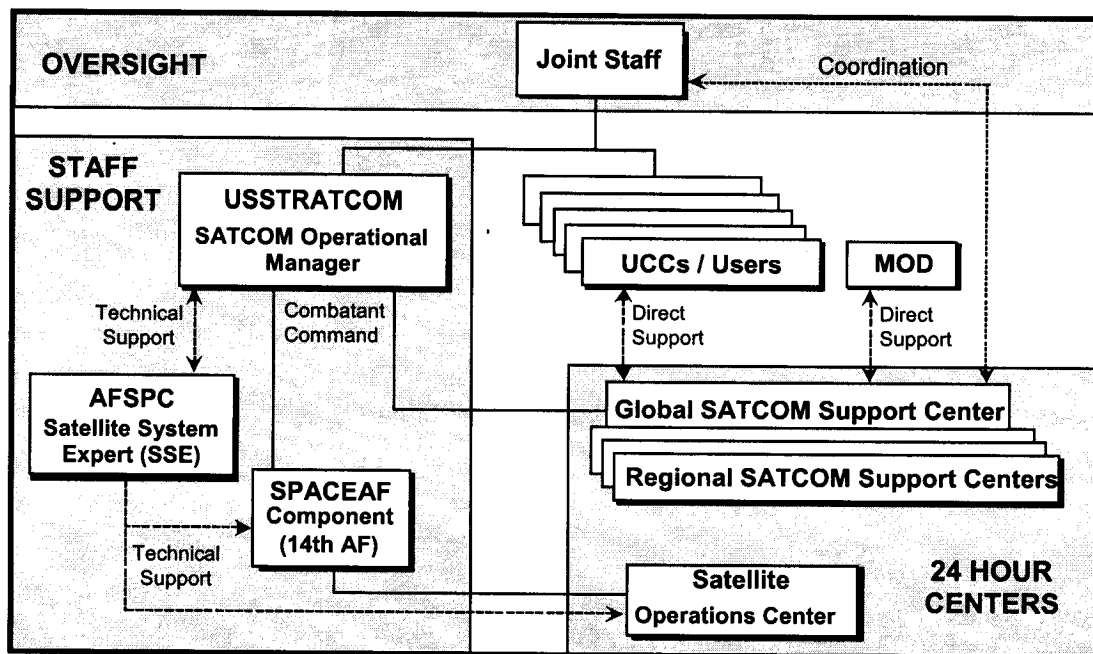


Figure A-1. AEHF SATCOM Operational Management Structure

3.1.1. Oversight. The U.S. DoD performs operational oversight functions. These functions are currently accomplished primarily via the JS/J6. The JCSC shall adjudicate Apportionment and Allocation contention between two or more authorized DoD and/or non-DoD users for the same on-orbit satellite assets during all phases of operations, from peacetime to war. In the event the MOD believes that it has not received its Baseline Resources, the MOD may directly request the JCSC initiate the adjudication process to resolve the baseline Apportionment issues. The MOD shall have an organization with similar responsibilities for the MOD owned assets. The MOD shall conform to the technical and operational rules of the AEHF MILSATCOM System as outlined in subparagraph 4.6. of Article IV (Management (Organization and Responsibilities)) of this MOU.

3.1.2. System Level Staff Support. U.S. Strategic Command (USSTRATCOM), as the SOM, and the U.S. Air Force Space Command (AFSPC) as the SATCOM System Expert (SSE), shall perform staff support and management functions for the AEHF MILSATCOM System. Direct support personnel at the GSSC shall assist IPs with activities such as Apportionment requirements and planning and direct support for change management. The MOD shall use these support personnel as required to satisfy their national requirements.

3.1.3. 24-Hour Operations Centers. The GSSC and Regional SATCOM Support Centers (RSSCs) provide the operational interface with users on a 24-hour basis. The primary support for the MOD shall be the GSSC. The support personnel at the support centers shall assist with global and regional direct support to DoD and

MOD SATCOM users. The USSTRATCOM Satellite Operations Center (SOC) is responsible for satellite control and payload control execution.

3.1.4. **Crypto and Key Management.** The MOD shall receive AEHF keys from the IP Local AEHF Key Management Stations. Keys shall be transmitted in accordance with the Key Management Plan.

3.1.5. **Key Management Plan.** The MOD shall submit an Appendix to the Key Management Plan prepared by the TPOs for each terminal they procure.

3.2. **SATCOM Operational Manager (SOM).** The DoD organization responsible for the Apportionment, Allocation, management, and control of MILSATCOM Resources to ensure access for Combatant Commands and other users.

3.3. **Global SATCOM Support Center (GSSC).** The GSSC shall provide DoD and MOD users the day-to-day operational interface. The GSSC shall support Combatant Commands and other users in managing their apportioned SATCOM Resources and real-time Allocation of non-apportioned Resources.

3.3.1. **Organizational Concept.** SATCOM support centers include both global and regional elements (GSSC and RSSCs). MOD users shall make use of the GSSC as their focal point for SATCOM planning, management, and access support. The GSSC has the responsibility to maintain the global system-of-systems SATCOM picture, coordinate the activities of the regional centers, and support national or global users not assigned to regions. The GSSC shall provide planning, management, and access support to the MOD on the same basis as it does for U.S. Combatant Commands.

3.3.2. **GSSC Functions Supporting the MOD.** The GSSC provides the central operational focus for global constellation payload management. The GSSC shall support the MOD, as necessary, by:

3.3.2.1. Performing “what if” drills, analyzing scenarios, and providing assessments.

3.3.2.2. Assisting users in day-to-day management of apportioned and non-apportioned Resources, accepting and analyzing SATCOM requirements and developing solutions, and coordinating resource sharing, as well as administering satellite access authorizations for Apportionment owners.

3.3.2.3. Providing assistance to the MOD when there is a disruption in service and coordinating anomaly resolution between the AEHF SOC and the MOD.

3.4. **System Planning.** DoD and MOD System planning and management for the AEHF Resources shall be accomplished through the Mission Planning Element (MPE). The

MPE shall be a dynamic, flexible system that shall allow planners to perform requirements analysis, develop system configuration changes, perform communications resource monitoring, and support the contingency planning process. The MPE shall provide the distributed planning capability necessary to support the AEHF philosophy of centralized control and decentralized execution.

3.4.1. MPE Configuration. DoD MPEs shall be connected via the Secret Internet Protocol Router Network (SIPRNET) to DoD planners. The SIPRNET is a U.S.-only network; therefore, the DoD and MOD shall need to identify a separate communications path for coordination and dissemination of planning and operational Information to MOD MPE users. DoD and MOD MPEs shall be located at the GSSC level, at MOD communications planning staff locations, and lower-level communications planning locations as identified by the MOD. Locations shall have access to different categories and quantities of data and be able to perform various planning functions. Figure A-2 shows the notional MPE interface with the AEHF MILSATCOM System.

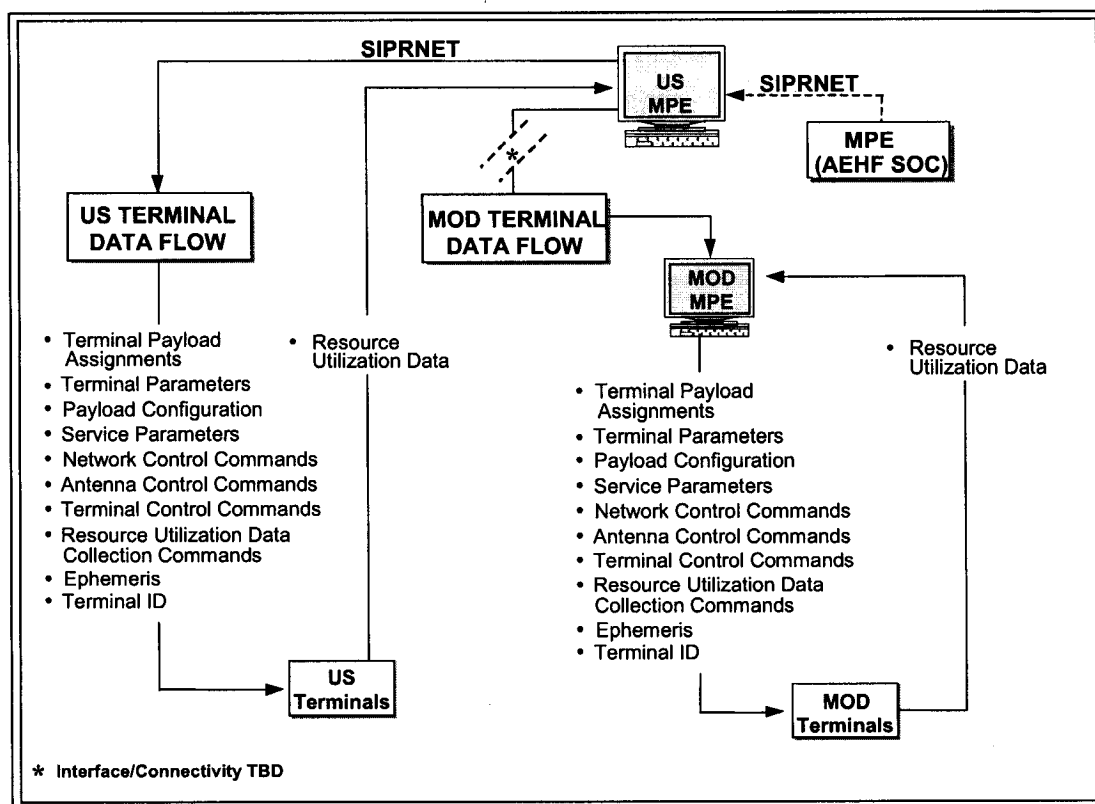


Figure A-2. Notional AEHF Mission Planning Element Interfaces

3.4.2. System Level Planning. The AEHF SSE/SOC/GSSC shall use the MPE for system-level planning, requirements analysis, generation of payload table values, preparation of recommended Apportionment, and distribution of terminal

operational parameters to U.S. Combatant Commanders, service terminal data nodes, and to the MOD. System monitoring and trend analysis shall be performed at the AEHF SSE/SOC/GSSC level.

3.4.3. Combatant Commander/MOD Communications Planning Staffs. The MPE at the GSSC/Combatant Commander/MOD level shall be used for planning, executing, controlling, and monitoring communications networks. It shall provide an integrated set of planning tools for Allocation of AEHF Resources to lower-level components. Capability shall be provided to AEHF Users, including the MOD, to access data necessary for monitoring the status of their Baseline Resources. The Combatant Commands shall not be able to monitor the status of MOD Baseline Resources, and vice versa. The MOD may use the MPE to produce terminal network parameters for development of terminal images and terminal execution plans. The MPE shall provide the following capabilities for the MOD:

3.4.3.1. Allow for Allocation and partitioning of MOD Baseline Resources.

3.4.3.2. Provide MOD communications planners visibility into the availability of Resources under their control.

3.4.3.3. Provide MOD communications planners the ability to produce network configuration data and reconfigure networks to meet mission needs (e.g., assign Priority, Precedence, and Privilege levels, data rates, modulation modes, etc. for terminals).

3.4.3.4. Provide the Information required to loan and borrow Resources to/from U.S. Combatant Commanders or other IPs.

3.4.3.5. Support contingency planning for exercises or real-world events.

3.4.3.6. Support terminal data flow.

3.4.4. Subordinate Level Communications Planners. Lower-level communications planners shall use the MPE to produce terminal image data. Each Party has a different mechanism for distributing this data; appropriate DoD and MOD personnel shall determine the method used for support. The type of terminal may also be a determining factor.

3.4.5. System Access Levels. The AEHF MILSATCOM System shall make available specific Information concerning system utilization. Three levels for access of resource utilization data shall be used: the system level (AEHF SSE/SOC/GSSC), the U.S. Combatant Commander/MOD Planner level, and the Communications Controller (CC)/Fence Controller (FC) level. Each level shall have access to a certain category of data. The AEHF SSE/SOC/GSSC shall have

access to data at the systems level, the MOD Planners/FCs shall have access to their resource utilization data, and the CCs shall have access to network data within allocated Resources under their control.

4.0. Resource Management and Control

4.1. Apportionment Planning. The MOD and DoD shall consider reapportionments at the request of another Party.

4.1.1. Baseline Resources as described in Annex A in the 2002 MOU. MOD users shall have Assured Access to MOD apportioned (fenced) Baseline Resources via the AEHF access control protocols. If at any time Baseline Resources are not in use, the system shall make these Baseline Resources available to other AEHF users. The MOD shall be able to preempt any users operating within the MOD Fence. The MOD Baseline Resources shall not be reduced except as a result of Allocation renegotiations as described in subparagraph 4.1.5. of this Annex.

4.1.2. Unused Resources Outside the MOD Baseline Apportionment. MOD users may access Resources outside the MOD fenced Apportionment, but those Resources are subject to pre-emption in the same manner as described in paragraph 4.1.1 of this Annex. If unused Resources are available, the MOD shall be able to use these Resources until they are reclaimed by the Fence owner or a higher priority user. Arrangements for the modeling and use of unfenced non-baseline Resources shall be defined in the CONSUP and CNIP.

4.1.3. Fenced Non-Baseline Resources. If a Combatant Commander or MOD requires Resources above the agreed upon Apportionment, they may request to formally borrow Resources. During this period, the original owner can reclaim loaned Resources in an emergency. Borrowed Resources shall take the form of a Sub-Fence or a Subsub-Fence. Borrowed Resources shall not affect the Baseline Apportionment, but may be compensated in accordance with national laws of the Parties. Arrangements for the modeling use of fenced non-baseline Resources shall be defined in the CONSUP and CNIP.

4.1.4. Exchanging Resources. The DoD and MOD may decide to exchange AEHF Resources for Resources on other MILSATCOM systems or other Resources. Such exchanges are not within the scope of this MOU but may be accomplished in accordance with national laws.

4.1.5. System Degradation. The MOD shall participate in the Apportionment process (as defined in Annex A to the 2002 MOU) in the event of system degradation.

4.2. Resource Control.

4.2.1. Antenna Pointing and Control. The pointing of antenna beams is accomplished by the antenna controller terminal through use of established AEHF protocols.

4.2.1.1. Controlling MOD Apportioned Antennas. MOD terminals designated as Antenna Controllers shall have the capability via terminal-to-satellite access control protocols to point the MOD antenna beams anywhere within the satellite field of view. Access to the satellite for the purpose of antenna control does not indicate access to any other system resource outside the MOD Fence. Arrangements for the controlling of MOD apportioned antennas shall be defined in the CONSUP and CNIP.

4.2.1.2. Releasing MOD Apportioned Antennas. A MOD-owned antenna beam that has been released can be re-claimed by the MOD at any time.

4.2.1.3. Coverage Via Non-MOD Apportioned Antenna. In crisis or contingency situations, the MOD may request access to a non-MOD allocated beam through the GSSC. The DoD shall make every effort to satisfy the MOD requirement, but DoD makes no guarantee that access to non-MOD apportioned Resources shall be authorized.

4.2.2. Constellation Configuration Changes. The SOM approves the AEHF constellation based on U.S. operational needs.

4.2.2.1. Routine Support. Routine Support is defined as support required to maintain the day-to-day operation of the satellite or constellation. The DoD shall perform Routine Support scheduled support on the satellite constellation. The MOD shall be included in the coordination of all satellite support to ensure the MOD is made aware when the constellation may be unavailable for operations.

4.2.2.2. Non-Routine Support. Non-Routine Support is defined as support required due to an anomaly (e.g., an emergency or threatening situation) that may hamper the health, welfare or communications of the satellite or constellation. Combatant Commands, MOD, Services and users may not be notified until after the anomaly has been rectified. However, the SOM shall make every effort to notify Combatant Commands, MOD, Services and users of the anomaly, status, and consequences as soon as possible.

4.2.3. Satellite Positioning. The DoD, in consultation with the MOD shall make satellite-positioning decisions consistent with U.S. national requirements. The DoD is solely responsible for the management and deployment of the AEHF constellation. In the event a satellite needs to be moved to support U.S. operational needs, the DoD shall coordinate with the MOD to reapportion the MOD baseline Apportionment. The reapportionment shall be conducted in a

manner that best approximates the resource usage outlined in Annex A to the 2002 MOU, paragraph 3.1.

4.3. Life Cycle Support. The DoD shall maintain and upgrade the AEHF MPE throughout the life of the AEHF constellation. The DoD shall purchase, on behalf of the MOD, upgrades to MPE software the DoD develops for these systems. Recommendations made by the MOD for system improvements that are incorporated shall be reviewed to determine cost liability.

4.3.1. The DoD shall make available to the MOD all MPE software upgrades, enhancements, and accompanying technical documentation that are not specifically precluded by U.S. security policies. The MOD shall be provided the opportunity to submit annually a prioritized list of deficiency corrections and enhancements desired to the GSSC for consideration. Final adjudication of priorities shall be at the sole discretion of the DoD based on U.S. operational needs and fiscal constraints.

4.3.2. This MOU provides for MOD-funding of MOD-unique software modifications and accompanying technical documentation. In the event the MOD requires MPE software modifications that are not implemented by AFSPC, provision shall be made for the MOD to fund the modification. Any MOD-funded modifications shall be incorporated into the overall MPE configuration and made available to all AEHF MPE users.

4.3.3. MPE software enhancements shall be installed on IP MPE hardware via the U.S. MPE support infrastructure, whether government depot or Contracting Officer support.

4.4. Coalition Operations. The AEHF MILSATCOM System may be available to support coalition operations. Due to the unique nature of each operation, the DoD and MOD shall discuss and identify the best approach in which AEHF Resources can satisfy coalition operational needs.

5.0. Terminal Operations

5.1. IP Terminals used to communicate through or manage the Resources on the AEHF MILSATCOM System must be operated in accordance with the capabilities and limitations documented in this Annex and all terminal operation procedures, which shall be provided with the terminals. Modifications of AEHF-capable terminals must be coordinated with the appropriate TPO in accordance with the FMS case. Any terminal developed by the MOD must comply with the appropriate AEHF Specifications, Interface Control Documents, and System Security Requirements and must obtain system certification from the DoD before the terminal can be used with the AEHF MILSATCOM System. Modifications of MOD-developed AEHF-capable terminals must be coordinated with the DoD.

5.2. MOD Terminal Operations. Required insularity between MOD and DoD users may be established through the use of separate and different Communications Security (COMSEC) keys and separate uplink, downlink, crosslink, and antenna Resources fenced for MOD use.

5.3. Terminal Upgrades. The DoD, through the PMSUP, shall notify the MOD at least annually, of the status of U.S. terminal procurement efforts including sustainment updates, available enhancements, or future upgrades that have any application to MOD terminals.

6.0. Cryptographic Equipment

6.1. TRANSEC. TRANSEC shall be assured on the AEHF MILSATCOM System through the use of frequency hopped spread spectrum signaling and other pseudo-random signaling techniques. All pseudo-random TRANSEC signaling techniques performed in AEHF terminals shall be under the control of the AEHF Computer Security COMSEC TRANSEC System (ACTS) cryptographic equipment purchased through foreign military sales (FMS). If there is a requirement to build terminals, a separate MOU must be negotiated with the U.S. National Security Agency (NSA). The ACTS cryptographic equipment must be purchased from NSA under an FMS case. Negotiation with NSA is required to satisfy the terms and conditions upon which the TRANSEC devices shall be made available. The NSA terms and conditions are outside the scope of this MOU.

6.1.1. TRANSEC Operational Concept. The MOD shall share one uplink and one downlink TRANSEC hopping key with DoD users and shall use "session" keys (terminal unique and group keys) that shall be under control of the MOD individual user groups. The DoD shall control Resources and resource access on AEHF shall be maintained through cryptologic control of uplink and downlink access control messages through use of individually assigned keys. These security measures and implementation of an enhanced electronic key management procedure allow the DoD to prevent unauthorized access to AEHF Resources.

6.1.2. Key Control and Distribution. NSA shall generate and the DoD shall manage all AEHF MILSATCOM System keys.

6.1.2.1. The DoD shall control and distribute TRANSEC hopping keys and may use Over-the-Air-Rekeying (OTAR) to distribute the keys. Re-keying of all AEHF terminals shall normally be accomplished by the United States via OTAR. For non-OTAR (e.g., ground-based) re-keying of MOD terminals, the DoD shall assume responsibility for providing keys for re-keying of MOD terminals. Session keys shall be provided automatically from the satellite during network setup. Session keys shall provide the necessary segregation of service between user groups. The DoD shall distribute keys to a single location for the MOD. The MOD shall be responsible for further delivery to its users.

6.1.2.2. The MOD shall use the approved AEHF cryptographic key management and distribution architecture as prescribed by the United States for all AEHF MILSATCOM System keys. Terminals shall be operated in accordance with the applicable doctrine.

6.1.3. COMSEC. Communications Security (COMSEC) is an end-to-end, user defined, function on the AEHF MILSATCOM System.

6.1.3.1. The DoD and MOD shall be separately and individually responsible for the operation and support of any and all COMSEC equipment used in satisfaction of their separate national MILSATCOM requirements through the use of the AEHF MILSATCOM System.

6.1.3.2. For DoD and MOD allied interoperable communications over AEHF, COMSEC interoperability shall be achieved through the use of U.S.-developed COMSEC devices and associated key material. The MOD shall be responsible for operation of the COMSEC devices IAW the applicable doctrine provided by the United States.

Appendix 1
Sample Format for Project Equipment

Project Equipment to be loaned shall be listed in a supplement to this Annex in the following format.

Providing Party(s)	Receiving Party(s)	Qty	Description	Part/ Stock #	Consumables/ Non- Consumables	Approx Value	Loan Period
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ANNEX B

TO THE

MEMORANDUM OF UNDERSTANDING

BETWEEN THE SECRETARY OF DEFENSE ON BEHALF OF
THE DEPARTMENT OF DEFENSE OF THE
UNITED STATES OF AMERICA

AND

THE MINISTER OF DEFENCE
OF THE KINGDOM OF THE NETHERLANDS

CONCERNING

OPERATIONS AND SUPPORT OF THE

ADVANCED EXTREMELY HIGH FREQUENCY

MILITARY SATELLITE COMMUNICATIONS SYSTEM

RELATING TO THE EXCHANGE OF

COOPERATIVE PROJECT PERSONNEL

1.0. Purpose and Scope

1.1. This Annex to the Memorandum of Understanding between the Department of Defense of the United States of America and the Minister of Defence of the Kingdom of the Netherlands Concerning Operations and Support of Advanced Extremely High Frequency Military Satellite Communications System (MOU) establishes the provisions that shall govern the conduct of Cooperative Project Personnel (CPP). The Parent Party shall assign military members or civilian employees to the Project offices in accordance with Article IV (Management (Organization and Responsibilities)) of this MOU. CPP must be able to perform all the responsibilities assigned to them under this MOU. Commencement of assignments shall be subject to any requirements that may be imposed by the Host Party or its Government regarding acceptance of CPP, such as, but not limited to, visas and visit request documentation. The Host Party and Parent Party shall determine the length of tour for the positions at the time of initial assignment.

1.2. CPP shall be assigned to the facilities of the other Party for Project work and shall report to their designated Host Party supervisor regarding that work. The Host PM shall be responsible for the creation of a document describing the duties of each CPP position, which shall be subject to approval by the Operations and Support (O&S) Steering Committee (OSSC). CPP shall not act as liaison officers on behalf of the Parent Party. CPP may act from time to time on behalf of the Parent Party if the Host Party so authorizes in writing.

1.3. CPP shall not be assigned to command or other positions that would require them to exercise responsibilities that are reserved by law or regulation to an officer or employee of the Host Party's Government.

2.0. Security

2.1. The Host Party shall establish the maximum level of security clearance required, if any, to permit CPP to have access to Classified Information and facilities in which Classified Information is used in accordance with the Project Security Instruction (PSI) and Classification Guide (CG). Access to Classified Information and facilities in which Classified Information is used shall be consistent with, and limited by, Article II (Objectives) and Article III (Scope of Work) of this MOU, and shall be kept to the minimum required to accomplish the work assignments.

2.2. The Parent Party shall file visit requests for the CPP through prescribed channels in compliance with the Host Party's procedures. As part of the visit request procedures, the Parent Party shall cause security assurances to be filed through the Parent Party's Government embassy in the Host Party's country specifying the security clearances for the CPP being assigned.

2.3. The Host Party and Parent Party shall use their best efforts to ensure that CPP are aware of, and comply with, applicable laws and regulations as well as the requirements of Article IX (Controlled Unclassified Information), Article X (Visits to Establishments),

Article XI (Security), and Article XVI (General Provisions) of this MOU and the provisions of the PSI and CG. Prior to commencing assigned duties, CPP shall, if required by the Host Party's Government laws, regulations, policies, or procedures, sign a certification concerning the conditions and responsibilities of CPP.

2.4. CPP shall at all times be required to comply with the security and export control laws, regulations, and procedures of the Host Party's Government. Any violation of security procedures by CPP during their assignment shall be reported to the Parent Party for appropriate action. CPP committing significant violations of security and export control laws, regulations, or procedures during their assignments shall be withdrawn from the Project with a view toward appropriate administrative or disciplinary action by their Parent Party.

2.5. All Classified Information made available to CPP shall be considered as Classified Information furnished to the Parent Party, and shall be subject to all provisions and safeguards provided for in Article XI (Security) of this MOU, the PSI, and the CG.

2.6. CPP shall not have personal custody of Classified Information or Controlled Unclassified Information unless approved by the Host Party and as authorized by the Parent Party. CPP shall be granted access to such Information in accordance with Article IX (Controlled Unclassified Information), Article XI (Security) of this MOU, and the PSI during normal duty hours and when access is necessary to perform Project work.

2.7. CPP shall not serve as a conduit between the Host Party and Parent Party for requests and/or transmission of Classified Information or Controlled Unclassified Information unless specifically authorized by the PSI.

3.0. Technical and Administrative Matters

3.1. Consistent with Host Party laws and regulations, CPP shall be subject to the same restrictions, conditions, and privileges as Host Party personnel of comparable rank and in comparable assignments. Further, CPP and the CPP's authorized accompanying dependents shall be accorded status in accordance with the NATO SOFA.

3.2. On arrival CPP and their dependents shall be provided briefings about applicable laws, orders, regulations, and customs and the need to comply with them. CPP shall also be provided briefings regarding entitlements, privileges, and responsibilities, such as:

3.2.1. Any medical and dental care that may be provided to CPP and their dependants at local medical facilities, subject to the requirements of applicable laws and regulations, including reimbursement when required.

3.2.2. Purchasing and patronage privileges at military commissaries, exchanges, theaters, and clubs for CPP and the CPP's accompanying dependents, subject to the requirements of applicable laws and regulations.

3.2.3. The Host Party shall provide, if available, housing and messing facilities for CPP and the CPP's accompanying dependents on the same basis and priority as for its own personnel. CPP shall pay messing and housing charges to the same extent as Host Party personnel. At locations where facilities are not provided by the Host Party for its own personnel, the Parent Party shall make suitable arrangements for its CPP.

3.2.4. Responsibility of CPP and the CPP's accompanying dependents to obtain motor vehicle liability insurance coverage in accordance with the laws and regulations applicable in the area where they are residing. In case of claims involving the use of private motor vehicles by CPP, the recourse shall be against such insurance.

3.5. The Host Party shall, in consultation with the CPP, establish standard operating procedures for CPP, in the following areas:

3.5.1. Working hours, including holiday schedules.

3.5.2. Leave authorization, consistent to the extent possible with the military and civilian personnel regulations and practices of the Host Party and Parent Party.

3.5.3. Dress regulations, consistent to the extent possible with the military and civilian personnel regulations and practices of the Host Party and Parent Party.

3.5.4. Performance evaluations, recognizing that such evaluations shall be rendered in accordance with the Parent Party's military or civilian personnel regulations and practices.

3.4. CPP committing an offense under the laws of the Government of the Host Party or Parent Party may be withdrawn from this Project with a view toward further administrative or disciplinary action by the Parent Party. Disciplinary action, however, shall not be taken by the Host Party against CPP, nor shall CPP exercise disciplinary powers over the Host Party's personnel. In accordance with Host Party's laws and regulations, the Host Party shall assist the Parent Party in carrying out investigations of offenses involving CPP.

3.5. During their assignment, CPP shall not be placed in the following duty status or environments unless decided by the Parent Party:

3.5.1. Areas of political sensitivity where their presence may jeopardize the interests of either the Host Party or Parent Party, or where, in the normal course of their duty, they may become involved in activities that may embarrass either Party.

3.5.2. Deployments in non-direct hostility situations, such as United Nations peacekeeping or multi-national operations, or third countries.

3.5.3. Duty assignments in which direct hostilities are likely. Should the Host Party organization to which CPP are assigned become involved in hostilities unexpectedly, CPP shall not be involved in the hostilities. Any such CPP approved by the Parent Party for involvement in hostilities shall be given specific guidance as to the conditions under which the assignment shall be carried out by the appropriate authorities of the Host Party and Parent Party.

3.6. The provisions of applicable international agreements regarding the rights of a sending State's military and civilian personnel and their dependents present in the territory of a receiving State shall apply to CPP.

**SAMPLE CERTIFICATION OF CONDITIONS AND RESPONSIBILITIES FOR
COOPERATIVE PROJECT PERSONNEL**

I understand and acknowledge that I have been accepted for assignment to (*insert name and location to which assigned*) pursuant to the Memorandum of Understanding Between the Department of Defense of the United States of America and the Minister of Defence of the Kingdom of the Netherlands Concerning Operations and Support of Advanced Extremely High Frequency Military Satellite Communications System. Capitalized terms in this certification have the meanings defined in the MOU. In connection with this assignment, I further understand, acknowledge, and certify that I shall comply with the following conditions and responsibilities:

1. The purpose of the assignment is to provide my expertise to the program. I shall not seek access to Information (other than Parent Party Information) except as required to perform the duties described in the position description (PD) of the position to which I am assigned, as determined by my designated supervisor. I shall immediately report to my designated supervisor if I have access to Classified, proprietary, or Controlled Unclassified Information that is not required to perform such duties.
2. I shall perform only functions that are properly assigned to me as described in the PD for my assignment and shall not act in any other capacity to the Host Party on behalf of my Government or my Parent Party.
3. All Project Information to which I may have access during this assignment shall be treated as Information provided to my Government in confidence and shall not be further released or disclosed by me, except as authorized by the MOU.
4. When dealing with individuals outside of my immediate office of assignment on official matters, I shall inform such individuals that I am a foreign Cooperative Project Person.
5. I have been briefed on, understand, and shall comply with all applicable regulations concerning the protection of proprietary Information (such as patents, copyrights, know-how and trade secrets), Classified Information, and Controlled Unclassified Information.
6. I shall immediately report to my designated supervisor all attempts to obtain Classified Information, proprietary Information, or Controlled Unclassified Information to which I may have access as a result of this assignment.

(Typed Name)

(Signature)

(Rank/Title)

(Date)

TREATY BETWEEN THE UNITED STATES OF AMERICA AND THE RUSSIAN
FEDERATION ON MEASURES FOR THE FURTHER REDUCTION AND
LIMITATION OF STRATEGIC OFFENSIVE ARMS

The United States of America and the Russian Federation,
hereinafter referred to as the Parties,

Believing that global challenges and threats require new
approaches to interaction across the whole range of their
strategic relations,

Working therefore to forge a new strategic relationship
based on mutual trust, openness, predictability, and
cooperation,

Desiring to bring their respective nuclear postures into
alignment with this new relationship, and endeavoring to
reduce further the role and importance of nuclear weapons,

Committed to the fulfillment of their obligations under
Article VI of the Treaty on the Non-Proliferation of Nuclear
Weapons of July 1, 1968, and to the achievement of the
historic goal of freeing humanity from the nuclear threat,

Expressing strong support for on-going global efforts in
non-proliferation,

Seeking to preserve continuity in, and provide new impetus
to, the step-by-step process of reducing and limiting nuclear
arms while maintaining the safety and security of their
nuclear arsenals, and with a view to expanding this process in
the future, including to a multilateral approach,

Guided by the principle of indivisible security and
convinced that measures for the reduction and limitation of
strategic offensive arms and the other obligations set forth
in this Treaty will enhance predictability and stability, and
thus the security of both Parties,

Recognizing the existence of the interrelationship between strategic offensive arms and strategic defensive arms, that this interrelationship will become more important as strategic nuclear arms are reduced, and that current strategic defensive arms do not undermine the viability and effectiveness of the strategic offensive arms of the Parties,

Mindful of the impact of conventionally armed ICBMs and SLBMs on strategic stability,

Taking into account the positive effect on the world situation of the significant, verifiable reduction in nuclear arsenals at the turn of the 21st century,

Desiring to create a mechanism for verifying compliance with the obligations under this Treaty, adapted, simplified, and made less costly in comparison to the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms of July 31, 1991, hereinafter referred to as the START Treaty,

Recognizing that the START Treaty has been implemented by the Republic of Belarus, the Republic of Kazakhstan, the Russian Federation, Ukraine, and the United States of America, and that the reduction levels envisaged by the START Treaty were achieved,

Deeply appreciating the contribution of the Republic of Belarus, the Republic of Kazakhstan, and Ukraine to nuclear disarmament and to strengthening international peace and security as non-nuclear-weapon states under the Treaty on the Non-Proliferation of Nuclear Weapons of July 1, 1968,

Welcoming the implementation of the Treaty Between the United States of America and the Russian Federation on Strategic Offensive Reductions of May 24, 2002,

Have agreed as follows:

Article I

1. Each Party shall reduce and limit its strategic offensive arms in accordance with the provisions of this Treaty and shall carry out the other obligations set forth in this Treaty and its Protocol.
2. Definitions of terms used in this Treaty and its Protocol are provided in Part One of the Protocol.

Article II

1. Each Party shall reduce and limit its ICBMs and ICBM launchers, SLBMs and SLBM launchers, heavy bombers, ICBM warheads, SLBM warheads, and heavy bomber nuclear armaments, so that seven years after entry into force of this Treaty and thereafter, the aggregate numbers, as counted in accordance with Article III of this Treaty, do not exceed:
 - (a) 700, for deployed ICBMs, deployed SLBMs, and deployed heavy bombers;
 - (b) 1550, for warheads on deployed ICBMs, warheads on deployed SLBMs, and nuclear warheads counted for deployed heavy bombers;
 - (c) 800, for deployed and non-deployed ICBM launchers, deployed and non-deployed SLBM launchers, and deployed and non-deployed heavy bombers.
2. Each Party shall have the right to determine for itself the composition and structure of its strategic offensive arms.

Article III

1. For the purposes of counting toward the aggregate limit provided for in subparagraph 1(a) of Article II of this Treaty:

- (a) Each deployed ICBM shall be counted as one.
- (b) Each deployed SLBM shall be counted as one.
- (c) Each deployed heavy bomber shall be counted as one.

2. For the purposes of counting toward the aggregate limit provided for in subparagraph 1(b) of Article II of this Treaty:

(a) For ICBMs and SLBMs, the number of warheads shall be the number of reentry vehicles emplaced on deployed ICBMs and on deployed SLBMs.

(b) One nuclear warhead shall be counted for each deployed heavy bomber.

3. For the purposes of counting toward the aggregate limit provided for in subparagraph 1(c) of Article II of this Treaty:

- (a) Each deployed launcher of ICBMs shall be counted as one.
- (b) Each non-deployed launcher of ICBMs shall be counted as one.
- (c) Each deployed launcher of SLBMs shall be counted as one.
- (d) Each non-deployed launcher of SLBMs shall be counted as one.

(e) Each deployed heavy bomber shall be counted as one.

(f) Each non-deployed heavy bomber shall be counted as one.

4. For the purposes of this Treaty, including counting ICBMs and SLBMs:

(a) For ICBMs or SLBMs that are maintained, stored, and transported as assembled missiles in launch canisters, an assembled missile of a particular type, in its launch canister, shall be considered to be an ICBM or SLBM of that type.

(b) For ICBMs or SLBMs that are maintained, stored, and transported as assembled missiles without launch canisters, an assembled missile of a particular type shall be considered to be an ICBM or SLBM of that type.

(c) For ICBMs or SLBMs that are maintained, stored, and transported in stages, the first stage of an ICBM or SLBM of a particular type shall be considered to be an ICBM or SLBM of that type.

(d) Each launch canister shall be considered to contain an ICBM or SLBM from the time it first leaves a facility at which an ICBM or SLBM is installed in it, until an ICBM or SLBM has been launched from it, or until an ICBM or SLBM has been removed from it for elimination. A launch canister shall not be considered to contain an ICBM or SLBM if it contains a training model of a missile or has been placed on static display. Launch canisters for ICBMs or SLBMs of a particular type shall be distinguishable from launch canisters for ICBMs or SLBMs of a different type.

5. Newly constructed strategic offensive arms shall begin to be subject to this Treaty as follows:

(a) an ICBM, when it first leaves a production facility;

(b) a mobile launcher of ICBMs, when it first leaves a production facility;

(c) a silo launcher of ICBMs, when the silo door is first installed and closed;

(d) an SLBM, when it first leaves a production facility;

(e) an SLBM launcher, when the submarine on which that launcher is installed is first launched;

(f) a heavy bomber equipped for nuclear armaments, when its airframe is first brought out of the shop, plant, or building in which components of such a heavy bomber are assembled to produce complete airframes; or when its airframe is first brought out of the shop, plant, or building in which existing bomber airframes are converted to such heavy bomber airframes.

6. ICBMs, SLBMs, ICBM launchers, SLBM launchers, and heavy bombers shall cease to be subject to this Treaty in accordance with Parts Three and Four of the Protocol to this Treaty. ICBMs or SLBMs of an existing type shall cease to be subject to this Treaty if all ICBM or SLBM launchers of a type intended for such ICBMs or SLBMs have been eliminated or converted in accordance with Part Three of the Protocol to this Treaty.

7. For the purposes of this Treaty:

(a) A missile of a type developed and tested solely to intercept and counter objects not located on the surface of the Earth shall not be considered to be a ballistic missile to which the provisions of this Treaty apply.

(b) Within the same type, a heavy bomber equipped for nuclear armaments shall be distinguishable from a heavy bomber equipped for non-nuclear armaments.

(c) Heavy bombers of the same type shall cease to be subject to this Treaty or to the limitations thereof when the last heavy bomber equipped for nuclear armaments of that type is eliminated or converted, as appropriate, to a heavy bomber equipped for non-nuclear armaments in accordance with Part Three of the Protocol to this Treaty.

8. As of the date of signature of this Treaty:

(a) Existing types of ICBMs are:

(i) for the United States of America, the Minuteman II, Minuteman III, and Peacekeeper;

(ii) for the Russian Federation, the RS-12M, RS-12M2, RS-18, RS-20, and RS-24.

(b) Existing types of SLBMs are:

(i) for the Russian Federation, the RSM-50, RSM-52, RSM-54, and RSM-56;

(ii) for the United States of America, the Trident II.

(c) Existing types of heavy bombers are:

(i) for the United States of America, the B-52G, B-52H, B-1B, and B-2A;

(ii) for the Russian Federation, the Tu-95MS and Tu-160.

(d) Existing types of ICBM launchers and SLBM launchers are:

(i) for the Russian Federation, ICBM launchers RS-12M, RS-12M2, RS-18, RS-20, and RS-24; SLBM launchers RSM-50, RSM-52, RSM-54, and RSM-56;

(ii) for the United States of America, ICBM launchers Minuteman II, Minuteman III, and Peacekeeper; the SLBM launchers Trident II.

Article IV

1. Each Party shall base:

- (a) deployed launchers of ICBMs only at ICBM bases;
- (b) deployed heavy bombers only at air bases.

2. Each Party shall install deployed launchers of SLBMs only on ballistic missile submarines.

3. Each Party shall locate:

(a) non-deployed launchers of ICBMs only at ICBM bases, production facilities, ICBM loading facilities, repair facilities, storage facilities, conversion or elimination facilities, training facilities, test ranges, and space launch facilities. Mobile launchers of prototype ICBMs shall not be located at maintenance facilities of ICBM bases;

(b) non-deployed ICBMs and non-deployed SLBMs only at, as appropriate, submarine bases, ICBM or SLBM loading facilities, maintenance facilities, repair facilities for ICBMs or SLBMs, storage facilities for ICBMs or SLBMs, conversion or elimination facilities for ICBMs or SLBMs, test ranges, space launch facilities, and production facilities. Prototype ICBMs and prototype SLBMs, however, shall not be located at maintenance facilities of ICBM bases or at submarine bases.

4. Non-deployed ICBMs and non-deployed SLBMs as well as non-deployed mobile launchers of ICBMs may be in transit. Each Party shall limit the duration of each transit between facilities to no more than 30 days.

5. Test launchers of ICBMs or SLBMs may be located only at test ranges.

6. Training launchers may be located only at ICBM bases, training facilities, and test ranges. The number of silo training launchers located at each ICBM base for silo launchers of ICBMs shall not exceed one for each type of ICBM specified for that ICBM base.

7. Each Party shall limit the number of test heavy bombers to no more than ten.

8. Each Party shall base test heavy bombers only at heavy bomber flight test centers. Non-deployed heavy bombers other than test heavy bombers shall be located only at repair facilities or production facilities for heavy bombers.

9. Each Party shall not carry out at an air base joint basing of heavy bombers equipped for nuclear armaments and heavy bombers equipped for non-nuclear armaments, unless otherwise agreed by the Parties.

10. Strategic offensive arms shall not be located at eliminated facilities except during their movement through such facilities and during visits of heavy bombers at such facilities.

11. Strategic offensive arms subject to this Treaty shall not be based outside the national territory of each Party. The obligations provided for in this paragraph shall not affect the Parties' rights in accordance with generally recognized principles and rules of international law relating to the passage of submarines or flights of aircraft, or relating to visits of submarines to ports of third States. Heavy bombers may be temporarily located outside the national territory, notification of which shall be provided in accordance with Part Four of the Protocol to this Treaty.

Article V

1. Subject to the provisions of this Treaty, modernization and replacement of strategic offensive arms may be carried out.
2. When a Party believes that a new kind of strategic offensive arm is emerging, that Party shall have the right to raise the question of such a strategic offensive arm for consideration in the Bilateral Consultative Commission.
3. Each Party shall not convert and shall not use ICBM launchers and SLBM launchers for placement of missile defense interceptors therein. Each Party further shall not convert and shall not use launchers of missile defense interceptors for placement of ICBMs and SLBMs therein. This provision shall not apply to ICBM launchers that were converted prior to signature of this Treaty for placement of missile defense interceptors therein.

Article VI

1. Conversion, elimination, or other means for removal from accountability of strategic offensive arms and facilities shall be carried out in accordance with Part Three of the Protocol to this Treaty.
2. Notifications related to conversion, elimination, or other means for removal from accountability shall be provided in accordance with Parts Three and Four of the Protocol to this Treaty.
3. Verification of conversion or elimination in accordance with this Treaty shall be carried out by:

(a) national technical means of verification in accordance with Article X of this Treaty; and

(b) inspection activities as provided for in Article XI of this Treaty.

Article VII

1. A database pertaining to the obligations under this Treaty shall be created in accordance with Parts Two and Four of the Protocol to this Treaty. Categories of data for this database are set forth in Part Two of the Protocol to this Treaty.
2. Each Party shall notify the other Party about changes in data and shall provide other notifications in a manner provided for in Part Four of the Protocol to this Treaty.
3. Each Party shall use the Nuclear Risk Reduction Centers in order to provide and receive notifications, unless otherwise provided for in this Treaty.
4. Each Party may provide additional notifications on a voluntary basis, in addition to the notifications specified in paragraph 2 of this Article, if it deems this necessary to ensure confidence in the fulfillment of obligations assumed under this Treaty.
5. The Parties shall hold consultations within the framework of the Bilateral Consultative Commission on releasing to the public data and information obtained during the implementation of this Treaty. The Parties shall have the right to release to the public such data and information following agreement thereon within the framework of the Bilateral Consultative Commission. Each Party shall have the right to release to the public data related to its respective strategic offensive arms.

6. Geographic coordinates relating to data provided for in Part Two of the Protocol to this Treaty, unique identifiers, site diagrams of facilities provided by the Parties pursuant to this Treaty, as well as coastlines and waters diagrams provided by the Parties pursuant to this Treaty shall not be released to the public unless otherwise agreed by the Parties within the framework of the Bilateral Consultative Commission.

7. Notwithstanding paragraph 5 of this Article, the aggregate numbers of deployed ICBMs, deployed SLBMs, and deployed heavy bombers; the aggregate numbers of warheads on deployed ICBMs, deployed SLBMs, and nuclear warheads counted for deployed heavy bombers; and the aggregate numbers of deployed and non-deployed ICBM launchers, deployed and non-deployed SLBM launchers, and deployed and non-deployed heavy bombers, may be released to the public by the Parties.

Article VIII

In those cases in which one of the Parties determines that its actions may lead to ambiguous situations, that Party shall take measures to ensure the viability and effectiveness of this Treaty and to enhance confidence, openness, and predictability concerning the reduction and limitation of strategic offensive arms. Such measures may include, among other things, providing information in advance on activities of that Party associated with deployment or increased readiness of strategic offensive arms, to preclude the possibility of misinterpretation of its actions by the other Party. This information shall be provided through diplomatic or other channels.

Article IX

By mutual agreement of the Parties, telemetric information on launches of ICBMs and SLBMs shall be exchanged on a parity basis. The Parties shall agree on the amount of exchange of such telemetric information.

Article X

1. For the purpose of ensuring verification of compliance with the provisions of this Treaty, each Party undertakes:

(a) to use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law;

(b) not to interfere with the national technical means of verification of the other Party operating in accordance with this Article; and

(c) not to use concealment measures that impede verification, by national technical means of verification, of compliance with the provisions of this Treaty.

2. The obligation not to use concealment measures includes the obligation not to use them at test ranges, including measures that result in the concealment of ICBMs, SLBMs, ICBM launchers, or the association between ICBMs or SLBMs and their launchers during testing. The obligation not to use concealment measures shall not apply to cover or concealment practices at ICBM bases or to the use of environmental shelters for strategic offensive arms.

Article XI

1. For the purpose of confirming the accuracy of declared data on strategic offensive arms subject to this Treaty and ensuring verification of compliance with the provisions of this Treaty, each Party shall have the right to conduct inspection activities in accordance with this Article and Part Five of the Protocol to this Treaty.

2. Each Party shall have the right to conduct inspections at ICBM bases, submarine bases, and air bases. The purpose of such inspections shall be to confirm the accuracy of declared data on the numbers and types of deployed and non-deployed strategic offensive arms subject to this Treaty; the number of warheads located on deployed ICBMs and deployed SLBMs; and the number of nuclear armaments located on deployed heavy bombers. Such inspections shall hereinafter be referred to as Type One inspections.

3. Each Party shall have the right to conduct inspections at facilities listed in Section VII of Part Five of the Protocol to this Treaty. The purpose of such inspections shall be to confirm the accuracy of declared data on the numbers, types, and technical characteristics of non-deployed strategic offensive arms subject to this Treaty and to confirm that strategic offensive arms have been converted or eliminated.

In addition, each Party shall have the right to conduct inspections at formerly declared facilities, which are provided for in Part Two of the Protocol to this Treaty, to confirm that such facilities are not being used for purposes inconsistent with this Treaty.

The inspections provided for in this paragraph shall hereinafter be referred to as Type Two inspections.

4. Each Party shall conduct exhibitions and have the right to participate in exhibitions conducted by the other Party. The

purpose of such exhibitions shall be to demonstrate distinguishing features and to confirm technical characteristics of new types, and to demonstrate the results of conversion of the first item of each type of strategic offensive arms subject to this Treaty.

Article XII

To promote the objectives and implementation of the provisions of this Treaty, the Parties hereby establish the Bilateral Consultative Commission, the authority and procedures for the operation of which are set forth in Part Six of the Protocol to this Treaty.

Article XIII

To ensure the viability and effectiveness of this Treaty, each Party shall not assume any international obligations or undertakings that would conflict with its provisions. The Parties shall not transfer strategic offensive arms subject to this Treaty to third parties. The Parties shall hold consultations within the framework of the Bilateral Consultative Commission in order to resolve any ambiguities that may arise in this regard. This provision shall not apply to any patterns of cooperation, including obligations, in the area of strategic offensive arms, existing at the time of signature of this Treaty, between a Party and a third State.

Article XIV

1. This Treaty, including its Protocol, which is an integral part thereof, shall be subject to ratification in accordance with the constitutional procedures of each Party. This Treaty shall enter into force on the date of the exchange of instruments of ratification.

2. This Treaty shall remain in force for 10 years unless it is superseded earlier by a subsequent agreement on the reduction and limitation of strategic offensive arms. If either Party raises the issue of extension of this Treaty, the Parties shall jointly consider the matter. If the Parties decide to extend this Treaty, it will be extended for a period of no more than five years unless it is superseded earlier by a subsequent agreement on the reduction and limitation of strategic offensive arms.

3. Each Party shall, in exercising its national sovereignty, have the right to withdraw from this Treaty if it decides that extraordinary events related to the subject matter of this Treaty have jeopardized its supreme interests. It shall give notice of its decision to the other Party. Such notice shall contain a statement of the extraordinary events the notifying Party regards as having jeopardized its supreme interests. This Treaty shall terminate three months from the date of receipt by the other Party of the aforementioned notice, unless the notice specifies a later date.

4. As of the date of its entry into force, this Treaty shall supersede the Treaty Between the United States of America and the Russian Federation on Strategic Offensive Reductions of May 24, 2002, which shall terminate as of that date.

Article XV

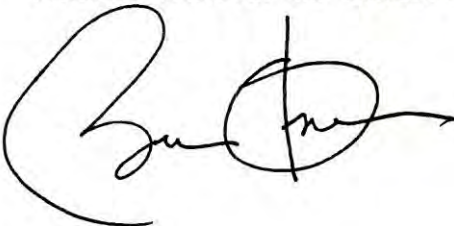
1. Each Party may propose amendments to this Treaty. Agreed amendments shall enter into force in accordance with the procedures governing entry into force of this Treaty.
2. If it becomes necessary to make changes in the Protocol to this Treaty that do not affect substantive rights or obligations under this Treaty, the Parties shall use the Bilateral Consultative Commission to reach agreement on such changes, without resorting to the procedure for making amendments that is set forth in paragraph 1 of this Article.

Article XVI

This Treaty shall be registered pursuant to Article 102 of the Charter of the United Nations.

Done at Prague, this eighth day of April, 2010, in two originals, each in the English and Russian languages, both texts being equally authentic.

FOR THE
UNITED STATES OF AMERICA:

A stylized, handwritten signature in black ink, featuring a large, sweeping initial 'C' followed by a series of loops and a final horizontal stroke.

FOR THE
RUSSIAN FEDERATION:

A handwritten signature in black ink, consisting of a series of fluid, connected loops and a long, sweeping horizontal stroke at the end.

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PROTOCOL TO THE TREATY BETWEEN THE UNITED STATES OF AMERICA
AND THE RUSSIAN FEDERATION ON MEASURES FOR THE FURTHER
REDUCTION AND LIMITATION OF STRATEGIC OFFENSIVE ARMS

Pursuant to Article I of the Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, hereinafter referred to as the Treaty, the Parties hereby agree upon the following provisions regarding implementation of the Treaty.

This Protocol is organized into ten Parts.

Part One, Terms and Their Definitions, contains the definitions of terms that are used in the Treaty and this Protocol.

Part Two, Categories of Data Pertaining to Strategic Offensive Arms, contains the categories of data with respect to items subject to the Treaty.

Part Three, Conversion or Elimination Procedures, contains procedures governing the conversion, elimination, or other means for removal from accountability of strategic offensive arms and facilities.

Part Four, Notifications, contains the list of notifications provided for in Article VII of the Treaty.

Part Five, Inspection Activities, contains provisions governing the conduct of inspection activities provided for in Article XI of the Treaty.

Part Six, Bilateral Consultative Commission, hereinafter referred to as the BCC, contains provisions governing the operation of the BCC, established pursuant to Article XII of the Treaty.

Part Seven, Telemetric Information, contains the procedures associated with the fulfillment of obligations concerning telemetric information, pursuant to Article IX of the Treaty.

Part Eight, Provisional Application, governs provisional application of certain provisions of the Treaty and this Protocol.

Part Nine, Agreed Statements, contains Agreed Statements regarding the Treaty and this Protocol.

Part Ten, Final Provisions, contains general provisions applicable to this Protocol.

PART ONE - TERMS AND THEIR DEFINITIONS

For the purposes of the Treaty and this Protocol:

1. (1.) The term "air base" means a facility at which deployed heavy bombers are based and their operation is supported.
2. (23.) The term "aircraft" means any manned machine that can derive support in the atmosphere from interaction with the air other than the interaction of the air with the Earth's surface.
3. (86.) The term "aircrew member" means an individual who performs duties related to the operation of an airplane and who is included on the inspecting Party's list of aircrew members.
4. (22.) The term "air-launched cruise missile" or "ALCM" means an air-to-surface cruise missile of a type, any one of which has been flight-tested from an aircraft or deployed on a bomber after December 31, 1986.
5. (70.) The term "airplane" means a power-driven, heavier-than-air aircraft that derives its lift in flight chiefly from aerodynamic reactions on surfaces that remain fixed under given conditions of flight.
6. (5.) The term "ballistic missile" means a missile that is a weapon-delivery vehicle that has a ballistic trajectory over most of its flight path.

() The number in parenthesis is the number in the Russian text.

7. (69.) The term "basing area" means an area within an ICBM base for mobile launchers of ICBMs, in which deployed mobile launchers of ICBMs are based and in which fixed structures for mobile launchers of ICBMs are located.

8. (9.) The term "bomber" means an airplane of a type, any one of which was initially constructed or later converted to be equipped for bombs or air-to-surface missiles.

9. (32.) The term "conversion or elimination facility" means:

(a) For ICBMs or SLBMs, a specified facility for the elimination of ICBMs, SLBMs, and launch canisters;

(b) For mobile launchers of ICBMs, a specified facility for the conversion or elimination of mobile launchers of ICBMs;

(c) For SLBM launchers, a specified facility for the conversion or elimination of SLBM launchers;

(d) For heavy bombers, a specified facility for the conversion of heavy bombers, or the elimination of heavy bombers.

10. (21.) The term "cruise missile" means a missile that is an unmanned, self-propelled weapon-delivery vehicle that sustains flight through the use of aerodynamic lift over most of its flight path.

11. (14.) The term "declared data" means, for the data the accuracy of which is confirmed during inspection activities:

(a) Data with respect to items subject to the Treaty, specified according to categories of data contained in Part Two of this Protocol;

(b) Data included in notifications provided in accordance with Part Four of this Protocol that update the data according to categories of data contained in Part Two of this Protocol;

(c) Information on technical characteristics of new types of strategic offensive arms included in notifications provided in accordance with Part Four of this Protocol that update the data according to categories of data contained in Part Two of this Protocol, and that have been confirmed during exhibitions; and

(d) Information that the inspected Party provides to inspection teams during pre-inspection procedures.

12. (67.) The term "deployed heavy bomber" means a heavy bomber equipped for nuclear armaments, other than a test heavy bomber or a heavy bomber located at a repair facility or at a production facility.

13. (63.) The term "deployed ICBM" means an ICBM that is contained in or on a deployed launcher of ICBMs.

14. (66.) The term "deployed launcher of ICBMs" means an ICBM launcher that contains an ICBM and is not an ICBM test launcher, an ICBM training launcher, or an ICBM launcher located at a space launch facility.

15. (65.) The term "deployed launcher of SLBMs" means an SLBM launcher installed on a submarine that has been launched, that contains an SLBM, and is not intended for testing or training.

16. (64.) The term "deployed mobile launcher of ICBMs" means a mobile launcher of ICBMs that contains an ICBM and is not a mobile test launcher or a mobile launcher of ICBMs located at a space launch facility.

17. (62.) The term "deployed SLBM" means an SLBM that is contained in a deployed launcher of SLBMs.

18. (46.) The term "distinguishable" means different on the basis of the totality of external and functional differences that are observable by national technical means of verification, or, when such observations may be inconclusive in the opinion of the inspecting Party, that are visible during inspection activities.

19. (11.) The term "each year" means during a period of 12 months commencing on the date of entry into force of the Treaty or on an anniversary of that date.

20. (43.) The term "facility" means an ICBM base, submarine base, air base, maintenance facility, basing area, silo launcher group, ICBM loading facility, SLBM loading facility, production facility, repair facility, storage facility, training facility, conversion or elimination facility, test range, heavy bomber flight test center, or space launch facility.

21. (74.) The term "fixed structure for mobile launchers of ICBMs" means a unique structure, within a basing area, designed to contain mobile launchers of ICBMs.

22. (12.) The term "front section" means that portion of the payload of the final stage that contains the reentry vehicle or reentry vehicles and may, depending on design, include a platform for a reentry vehicle or reentry vehicles, penetration aids, and a shroud.

23. (80.) The term "heavy bomber" means a bomber of a type, any one of which satisfies either of the following criteria:

- (a) Its range is greater than 8000 kilometers; or
- (b) It is equipped for long-range nuclear ALCMs.

A bomber shall not be considered to be a heavy bomber if it meets neither criterion (a) nor criterion (b) or if otherwise agreed by the Parties.

24. (81.) The term "heavy bomber equipped for non-nuclear armaments" means a heavy bomber that is not equipped for long-range nuclear ALCMs, nuclear air-to-surface missiles, or nuclear bombs.

25. (82.) The term "heavy bomber equipped for nuclear armaments" means a heavy bomber equipped for long-range nuclear ALCMs, nuclear air-to-surface missiles, or nuclear bombs.

26. (85.) The term "heavy bomber flight test center" means a facility, other than a production facility for heavy bombers, at which test heavy bombers are based and their operation is supported.

27. (3.) The term "ICBM base" means:

(a) For mobile launchers of ICBMs, an area in which one or more basing areas and one associated maintenance facility are located;

(b) For silo launchers of ICBMs, an area in which one or more groups of silo launchers of ICBMs and one associated maintenance facility are located.

28. (56.) The term "ICBM launcher" means a device intended or used to contain, prepare for launch, and launch an ICBM.

29. (27.) The term "ICBM loading facility" means a facility, outside an ICBM base and outside a test range, where ICBMs for mobile launchers of ICBMs are loaded onto or unloaded from mobile launchers of ICBMs.

30. (24.) The term "in-country escort" means a group of individuals designated by the inspected Party to accompany and

assist inspectors and aircrew members throughout the in-country period.

31. (48.) The term "in-country period" means the period of time from the arrival of the inspection team or aircrew members at the point of entry until their departure from the country through the point of entry.

32. (17.) The term "inspection activities" means inspections and exhibitions.

33. (30.) The term "inspection activity site" means a location at which inspections or exhibitions may be conducted.

34. (29.) The term "inspection site" means a location at which Type One or Type Two inspections may be conducted.

35. (16.) The term "inspection team" means the group of inspectors assigned by the inspecting Party to conduct a particular inspection activity.

36. (15.) The term "inspector" means an individual specified by one of the Parties to conduct inspection activities and included on that Party's list of inspectors.

37. (25.) The term "intercontinental ballistic missile" or "ICBM" means a land-based ballistic missile with a range in excess of 5500 kilometers.

38. (54.) The term "launch" means the initial motion and subsequent flight of an ICBM or SLBM.

39. (61.) The term "launch canister" means a container, directly associated with an ICBM or SLBM, that can be or has been used for transporting and storing an assembled ICBM or SLBM, with or without its front section, and from which an ICBM or SLBM can be or has been launched.

40. (60.) The term "launcher of missile defense interceptors" means a device intended or used to contain, prepare for launch, and launch missile defense interceptors.

41. (20.) The term "long-range ALCM" means an ALCM with a range in excess of 600 kilometers.

42. (89.) The term "long-range nuclear ALCM" means a long-range ALCM that is nuclear-armed.

43. (44.) The term "maintenance facility" means a facility that is part of an ICBM base and at which ICBMs and ICBM launchers are maintained and their operation is supported.

44. (52.) The term "missile defense interceptor" means a missile that was developed, tested, and deployed in order to intercept ICBMs, SLBMs, or their reentry vehicles.

45. (35.) The term "mobile launcher of ICBMs" means an erector-launcher mechanism for launching ICBMs and the self-propelled device on which it is mounted.

46. (42.) The term "new type" means, for ICBMs or SLBMs, a type of ICBM or a type of SLBM, the technical characteristics of which differ from the technical characteristics of an ICBM or SLBM, respectively, of each type declared previously in at least one of the following respects:

(a) Number of stages.

(b) Type of propellant of any stage.

(c) Either the length of the assembled missile without front section or the length of the first stage, by more than three percent.

(d) Diameter of the first stage, by more than three percent.

47. (41.) The term "non-deployed heavy bomber" means a test heavy bomber or a heavy bomber equipped for nuclear armaments located at a repair facility or at a production facility.

48. (37.) The term "non-deployed ICBM" means an ICBM not contained in a deployed launcher of ICBMs or on a deployed launcher of ICBMs.

49. (40.) The term "non-deployed launcher of ICBMs" means an ICBM test launcher, an ICBM training launcher, an ICBM launcher located at a space launch facility, or an ICBM launcher, other than a soft-site launcher, that does not contain a deployed ICBM.

50. (39.) The term "non-deployed launcher of SLBMs" means an SLBM launcher, other than a soft-site launcher, that is intended for testing or training, or an SLBM launcher that does not contain a deployed SLBM.

51. (38.) The term "non-deployed mobile launcher of ICBMs" means a mobile launcher of ICBMs that does not contain an ICBM, or a mobile test launcher of ICBMs, or a mobile launcher of ICBMs located at a space launch facility, unless otherwise agreed by the Parties.

52. (36.) The term "non-deployed SLBM" means an SLBM not contained in a deployed launcher of SLBMs.

53. (90.) The term "nuclear armaments" means, for heavy bombers, long-range nuclear ALCMs, nuclear air-to-surface missiles, or nuclear bombs.

54. (71.) The term "Open Skies airplane" means an airplane performing an observation flight in accordance with the Open Skies Treaty of March 24, 1992, that is simultaneously used for transporting an inspection team to or from a point of entry on the territory of the inspected Party.

55. (47.) The term "period of inspection activities" means, for an inspection or exhibition, the period of time from the

completion of pre-inspection procedures until the commencement of post-inspection procedures.

56. (51.) The term "produce" means build, construct, or manufacture in any quantity, and includes serial production as well as one-of-a-kind manufacturing.

57. (45.) The term "production facility" means:

(a) For ICBMs or SLBMs, a facility at which:

(i) ICBMs or SLBMs that are maintained, stored, and transported as assembled missiles in their launch canisters, are assembled, including the joining of all stages of such missiles and the loading of such missiles into launch canisters.

(ii) ICBMs or SLBMs that are maintained, stored, and transported as assembled missiles without launch canisters, are assembled, including the joining of two or more stages.

(iii) First stages of ICBMs or SLBMs that are maintained, stored, and transported in stages are assembled.

(b) For ballistic missile submarines, a facility at which construction of ballistic missile submarines is performed.

(c) For mobile launchers of ICBMs, a facility at which the erector-launcher mechanism of a mobile launcher of ICBMs is mounted on the self-propelled device.

(d) For heavy bombers, a facility at which assembly of a complete heavy bomber airframe is performed.

58. (53.) The term "prototype" means, for ICBMs or SLBMs, an ICBM or SLBM of a new type, no more than 20 missiles of which have been launched, and no launchers of missiles of which have been deployed.

59. (13.) The term "range" means:

(a) For an ALCM, the maximum distance that can be flown by an ALCM of that type in its standard design mode flying until fuel exhaustion, determined by projecting its flight path onto the Earth's sphere from the launch point to the point of impact.

(b) For a ballistic missile, the maximum distance determined by projecting the flight trajectory onto the Earth's sphere from the launch point of a missile of that type to the point of impact of a reentry vehicle.

(c) For an aircraft, the maximum distance that can be flown, without refueling, by an aircraft of that type when carrying an ordnance load of 7500 kilograms, with a full fuel load in the internal and external fuel tanks and a flight profile optimized to ensure minimum fuel consumption per kilometer, taking into account the distance covered during climb and descent. The fuel remaining in the fuel tanks after landing shall be no more than five percent of the maximum capacity of the fuel tanks.

60. (7.) The term "reentry vehicle" means that part of the front section that can survive reentry through the dense layers of the Earth's atmosphere and that is designed for delivering a weapon to a target or for testing such a delivery.

61. (33.) The term "repair facility" means:

(a) For ICBMs or SLBMs, a specified facility, outside an ICBM base or a submarine base, for the repair or maintenance of ICBMs or SLBMs.

(b) For mobile launchers of ICBMs, a specified facility, outside an ICBM base, for the repair or maintenance of mobile launchers of ICBMs.

(c) For heavy bombers, a specified facility, outside an air base, for the repair or maintenance of heavy bombers.

62. (19.) The term "rocket motor case" means the case that remains after the solid propellant is removed from the solid rocket motor.

63. (2.) The term "self-contained dispensing mechanism" means a device that separates from the final stage of a missile together with the front section and that independently targets and releases the reentry vehicle or reentry vehicles and penetration aids.

64. (49.) The term "sequential inspection" means an inspection, conducted at facilities associated with the same point of entry, by an inspection team that has not departed the territory of the inspected Party following the completion of the previous inspection.

65. (87.) The term "silo launcher of ICBMs" means an ICBM launcher in a silo structure located in the ground.

66. (88.) The term "silo training launcher" means a full-scale silo launcher of ICBMs specified for training purposes.

67. (55.) The term "SLBM launcher" means a device intended or used to contain, prepare for launch, and launch an SLBM.

68. (26.) The term "SLBM loading facility" means a shore-based facility, outside a submarine base, where SLBMs are loaded onto or unloaded from ballistic missile submarines.

69. (57.) The term "soft-site launcher" means any land-based fixed launcher of ICBMs or SLBMs other than a silo launcher.

70. (77.) The term "solid-fueled ICBM" means an ICBM for which all stages are equipped with solid rocket motors.

71. (76.) The term "solid-fueled SLBM" means an SLBM for which all stages are equipped with solid rocket motors.

72. (78.) The term "solid rocket motor" means that part of the stage that consists of the case filled with solid propellant.

73. (28.) The term "space launch facility" means a specified facility from which objects are delivered into the upper atmosphere or space using ICBMs or SLBMs.

74. (75.) The term "stage" means, for ICBMs or SLBMs, a section of a missile that is equipped with a propulsion unit, with the exception of the self-contained dispensing mechanism.

75. (34.) The term "storage facility" means:

(a) For ICBMs or SLBMs, a specified facility, outside an ICBM base, a submarine base, a test range, or a space launch facility, for the storage of ICBMs or SLBMs.

(b) For mobile launchers of ICBMs, a specified facility, outside an ICBM base, a test range, or a space launch facility, for the storage of mobile launchers of ICBMs.

(c) For heavy bombers, a specified facility, outside an air base, for the storage of heavy bombers.

76. (4.) The term "submarine base" means a facility at which ballistic missile submarines, as well as submarines that had been previously equipped with SLBM launchers but after conversion are incapable of launching SLBMs, are based, and at which shore-based support for such submarines, which may include the assembly, loading, maintenance, and storage of SLBMs, is provided.

77. (6.) The term "submarine-launched ballistic missile" or "SLBM" means a ballistic missile with a range in excess of 600 kilometers of a type, any one of which has been contained in, or launched from, a submarine.

78. (79.) The term "telemetric information" means information that originates on board a missile during its initial motion and subsequent flight that is broadcast.

79. (83.) The term "test heavy bomber" means a heavy bomber equipped for nuclear armaments designated exclusively for testing and based at a heavy bomber flight test center.

80. (58.) The term "test launcher" means an ICBM launcher or an SLBM launcher located within a test range.

81. (18.) The term "test range" means a designated land area, other than an ICBM base, from which launches of ICBMs or SLBMs are conducted.

82. (31.) The term "training facility" means a specified facility, outside an ICBM base or a submarine base, at which personnel are trained to use, operate, or maintain ICBMs or SLBMs and their launchers.

83. (59.) The term "training launcher" means a silo training launcher or a mobile training launcher.

84. (84.) The term "training model of a missile" means a full-scale, inert model of an ICBM or SLBM that is not capable of being launched and that differs from an ICBM or SLBM on the basis of external and functional differences that are visible during inspection activities.

85. (50.) The term "transit" means the one-way movement from one facility to another facility of:

- (a) A non-deployed ICBM;
- (b) A non-deployed SLBM; or
- (c) A non-deployed mobile launcher of ICBMs.

86. (72.) The term "unique identifier" or "UID" means a non-repeating alpha-numeric number that has been applied by the inspected Party to an ICBM, SLBM, or heavy bomber.

87. (10.) The term "variant" means:

(a) For heavy bombers, a classification, declared by the inspected Party, of airplanes of one type and one category that are distinguishable from other airplanes of the same type and the same category.

(b) For ICBMs and SLBMs, a classification, declared by the inspected Party, of ICBMs of one type or SLBMs of one type that are distinguishable from other ICBMs or SLBMs of the same type.

88. (68.) The term "version" means, for mobile launchers of ICBMs of a type, a classification, declared by the inspected Party, based on external or functional differences from other such items.

89. (8.) The term "warhead" means a unit of account used for counting toward the 1550 aggregate limit as applied to deployed ICBMs, deployed SLBMs, and deployed heavy bombers.

90. (73.) The term "weapon-delivery vehicle" means, for ballistic missiles and cruise missiles, a missile of a type, any one of which has been launched or flight-tested, or deployed to carry or be used as a weapon, that is, as any mechanism or any device that, when directed against any target, is designed to damage or destroy it.

PART TWO - CATEGORIES OF DATA PERTAINING TO STRATEGIC
OFFENSIVE ARMS

Section I. General Provisions

1. The Parties shall use the categories of data contained in this Part when providing data in accordance with the Treaty and this Protocol.
2. No later than 45 days after signature of the Treaty, each Party shall provide, in accordance with the Annex on Inspection Activities to this Protocol, site diagrams of facilities and, if applicable, coastlines and waters diagrams for each facility at which inspection activities may be conducted.
3. No later than 45 days after entry into force of the Treaty, the Parties shall carry out an initial exchange of data according to the categories of data contained in this Part, and shall provide, in accordance with the Annex on Inspection Activities to this Protocol, photographs, unless such photographs were previously provided in connection with fulfilling the requirements of the START Treaty.
4. For the purposes of this Part and exchanges of data, the mark "--" denotes that the entry is not applicable in such case. The mark "***" denotes that this data will be provided when available.
5. Each ICBM, each SLBM, and each heavy bomber shall have a unique identifier.
6. For the purposes of this Part, geographic coordinates shall be expressed in latitude and longitude to the nearest minute, except in cases where two or more locations for which geographic coordinates are specified that are within one minute of latitude and longitude of each other and that are of the same type or have the same appearance. In such cases, the latitude and longitude shall be expressed to include seconds.

7. In specifying geographic coordinates, each Party shall use the system of coordinates commonly employed by it.

8. Geographic coordinates for silo launchers of ICBMs located in a silo launcher group at an ICBM base and test launchers shall be expressed to the nearest minute.

Section II. Aggregate Numbers

For each Party, the data on aggregate numbers of strategic offensive arms limited by the Treaty are as follows:

	United States of America	Russian Federation
Deployed ICBMs, Deployed SLBMs, and Deployed Heavy Bombers	* * *	* * *
Warheads on Deployed ICBMs, on Deployed SLBMs, and Nuclear Warheads Counted for Deployed Heavy Bombers	* * *	* * *
Deployed and Non-deployed Launchers of ICBMs, Deployed and Non-deployed Launchers of SLBMs, and Deployed and Non-deployed Heavy Bombers	* * *	* * *

Section III. ICBMs, ICBM Launchers, and Warheads on Deployed ICBMs

For each Party, the numbers of deployed ICBMs, non-deployed ICBMs, deployed launchers of ICBMs, non-deployed launchers of ICBMs, warheads on deployed ICBMs, as well as data on facilities associated with ICBMs, are as follows:

1. Russian Federation

	ICBM Type or Variant of a Type	
	<TYPE>	Total
Deployed ICBMs	* * *	* * *
Warheads on Deployed ICBMs	* * *	* * *
Non-deployed ICBMs	* * *	* * *
Deployed and Non-deployed Launchers of ICBMs	* * *	* * *
Deployed Launchers of ICBMs	* * *	* * *
Non-deployed Launchers of ICBMs	* * *	* * *
Test Launchers	* * *	* * *

ICBM Base for Silo Launchers of ICBMs

Name/Location: <TITLE>
Coordinates: , <COORDINATES>

	ICBM Type or Variant of a Type
	<TYPE>
Deployed ICBMs	* * *
Warheads on Deployed ICBMs	* * *
Deployed Silo Launchers of ICBMs	* * *
Non-deployed Silo Launchers of ICBMs	* * *
Silo Launcher Group: <TITLE>	
Silo Launchers	Coordinates UID ICBM Type or Variant of a Type
<DESIGNATION>	<COORDINATES> <UID> <TYPE>
Maintenance Facility	
Name/Location: <TITLE>	
Coordinates: <COORDINATES>	
	ICBM Type or Variant of a Type
	<TYPE>
Non-deployed ICBMs	* * *

Designation	UID	ICBM Type or Variant of a Type
-------------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Silo Training Launchers	* * *
-------------------------	-------

Silo Launchers	Coordinates	ICBM Type or Variant of a Type
-------------------	-------------	-----------------------------------

<DESIGNATION>	<COORDINATES>	<TYPE>
---------------	---------------	--------

ICBM Base for Mobile Launchers of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Deployed ICBMs	* * *
----------------	-------

Warheads on Deployed ICBMs	* * *
-------------------------------	-------

Deployed Mobile Launchers of ICBMs	* * *
---------------------------------------	-------

Basing Area: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Deployed ICBMs	* * *
----------------	-------

Deployed Mobile
Launchers of ICBMs

* * *

Mobile Launchers	UID	ICBM Type or Variant of a Type
---------------------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Fixed Structures for
Mobile Launchers of ICBMs

* * *

Maintenance Facility

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation	UID	ICBM Type or Variant of a Type
-------------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Non-deployed Mobile
Launchers of ICBMs

* * *

ICBM Loading Facilities

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Non-deployed Mobile
Launchers of ICBMs

* * *

Production Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Production Facilities for Mobile Launchers of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed Mobile
Launchers of ICBMs
(Returned)

* * *

Storage Facilities for ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Storage Facilities for Mobile Launchers of ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed Mobile
Launchers of ICBMs

* * *

Repair Facilities for ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Repair Facilities for Mobile Launchers of ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed Mobile Launchers of ICBMs

* * *

Test Ranges

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Test Launchers

* * *

Mobile UID
Launchers

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Silo Coordinates
Launchers

UID ICBM Type or
Variant of a
Type

<DESIGNATION> <COORDINATES> <UID> <TYPE>

Training Facilities

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed Mobile
Launchers of ICBMs

* * *

Silo Training
Launchers

* * *

Silo Launchers	Coordinates	ICBM Type or Variant of a Type
-------------------	-------------	-----------------------------------

<DESIGNATION>	<COORDINATES>	<TYPE>
---------------	---------------	--------

Conversion or Elimination Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation	UID	ICBM Type or Variant of a Type
-------------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Conversion or Elimination Facilities for Mobile
Launchers of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed Mobile
Launchers of ICBMs

* * *

2. United States of America

	ICBM Type or Variant of a Type	
	<TYPE>	Total
Deployed ICBMs	* * *	* * *
Warheads on Deployed ICBMs	* * *	* * *
Non-deployed ICBMs	* * *	* * *
Deployed and Non-deployed Launchers of ICBMs	* * *	* * *
Deployed Launchers of ICBMs	* * *	* * *
Non-deployed Launchers of ICBMs	* * *	* * *
Test Launchers	* * *	* * *

ICBM Base for Silo Launchers of ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

	ICBM Type or Variant of a Type
	<TYPE>
Deployed ICBMs	* * *
Warheads on Deployed ICBMs	* * *

Deployed Silo Launchers
of ICBMs

* * *

Non-deployed Silo
Launchers of ICBMs

* * *

Silo Launcher Group: <TITLE>

Silo Launchers	Coordinates	UID	ICBM Type or Variant of a Type
-------------------	-------------	-----	--------------------------------------

<DESIGNATION>	<COORDINATES>	<UID>	<TYPE>
---------------	---------------	-------	--------

Maintenance Facility

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation	UID	ICBM Type or Variant of a Type
-------------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Silo Training Launchers

* * *

Silo Launchers	Coordinates	ICBM Type or Variant of a Type
-------------------	-------------	-----------------------------------

<DESIGNATION>	<COORDINATES>	<TYPE>
---------------	---------------	--------

ICBM Base for Mobile Launchers of ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Deployed ICBMs * * *

Warheads on
Deployed ICBMs * * *

Deployed Mobile
Launchers of ICBMs * * *

Basing Area: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Deployed ICBMs * * *

Deployed Mobile
Launchers of ICBMs * * *

Mobile Launchers	UID	ICBM Type or Variant of a Type
---------------------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Fixed Structures for
Mobile Launchers of ICBMs * * *

Maintenance Facility

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or Variant
of a Type

<DESIGNATION> <UID>

<TYPE>

Non-deployed Mobile
Launchers of ICBMs

* * *

ICBM Loading Facilities

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Non-deployed Mobile
Launchers of ICBMs

* * *

Production Facilities for ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Production Facilities for Mobile Launchers of ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed Mobile
Launchers of ICBMs
(Returned)

* * *

Storage Facilities for ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Storage Facilities for Mobile Launchers of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed Mobile
Launchers of ICBMs

* * *

Repair Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation	UID	ICBM Type or Variant of a Type
<DESIGNATION>	<UID>	<TYPE>

Repair Facilities for Mobile Launchers of ICBMs

Name/Location:	<TITLE>	
Coordinates:	<COORDINATES>	
		ICBM Type or Variant of a Type
		<TYPE>

Non-deployed Mobile
Launchers of ICBMs

* * *

Test Ranges

Name/Location:	<TITLE>	
Coordinates:	<COORDINATES>	
		ICBM Type or Variant of a Type
		<TYPE>

Non-deployed ICBMs

* * *

Designation	UID	ICBM Type or Variant of a Type
<DESIGNATION>	<UID>	<TYPE>

Test Launchers

* * *

Mobile Launchers	UID	ICBM Type or Variant of a Type
------------------	-----	--------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Silo Launchers	Coordinates	UID	ICBM Type or Variant of a Type
----------------	-------------	-----	--------------------------------

<DESIGNATION>	<COORDINATES>	<UID>	<TYPE>
---------------	---------------	-------	--------

Training Facilities

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant of a Type

<TYPE>

Non-deployed Mobile Launchers of ICBMs

* * *

Silo Training Launchers

* * *

Silo Launchers	Coordinates	ICBM Type or Variant of a Type
----------------	-------------	--------------------------------

<DESIGNATION>	<COORDINATES>	<TYPE>
---------------	---------------	--------

Conversion or Elimination Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Conversion or Elimination Facilities for Mobile
Launchers of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Type or Variant
of a Type

<TYPE>

Non-deployed Mobile
Launchers of ICBMs

* * *

Section IV. SLBMs, SLBM Launchers, and Warheads on Deployed SLBMs

For each Party, the numbers of deployed SLBMs, non-deployed SLBMs, deployed launchers of SLBMs, non-deployed launchers of SLBMs, warheads on deployed SLBMs, as well as data on facilities associated with SLBMs, are as follows:

1. United States of America

	SLBM Type or Variant of a Type	
	<TYPE>	Total
Deployed SLBMs	* * *	* * *
Warheads on Deployed SLBMs	* * *	* * *
Non-deployed SLBMs	* * *	* * *
Deployed and Non-deployed Launchers of SLBMs	* * *	* * *
Deployed Launchers of SLBMs	* * *	* * *
Non-deployed Launchers of SLBMs	* * *	* * *
Test Launchers	* * *	* * *

Submarine Base

Name/Location: <TITLE>
Coordinates: <COORDINATES>

	SLBM Type or Variant of a Type
	<TYPE>
Deployed SLBMs	* * *
Warheads on Deployed SLBMs	* * *

Non-deployed SLBMs * * *

Designation	UID	SLBM Type or Variant of a Type
-------------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Deployed Launchers
of SLBMs * * *

Non-deployed
Launchers of SLBMs * * *

Ballistic Missile Submarines Based
at this Submarine Base

Number of Submarines/Aggregate
Number of Launchers by SLBM Type

Submarine Type <NAME>	<TYPE> * * * / * * *
--------------------------	-------------------------

Submarine Name: <NAME>

Launchers	UID	SLBM Type or Variant of a Type
-----------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

SLBM Loading Facilities

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Production Facilities for SLBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Production Facilities for Ballistic Missile Submarines

Name/Location: <TITLE>

Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed
Launchers of SLBMs

* * *

Storage Facilities for SLBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Repair Facilities for SLBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Test Ranges

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Test Launchers

* * *

Launchers Coordinates

UID SLBM Type or
Variant of a
Type

<DESIGNATION> <COORDINATES> <UID> <TYPE>

Conversion or Elimination Facilities for SLBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Conversion or Elimination Facilities for SLBM Launchers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed
Launchers of SLBMs

* * *

2. Russian Federation

SLBM Type or
Variant of a Type

<TYPE> Total

Deployed SLBMs

* * * * * *

Warheads on Deployed SLBMs

* * * * * *

Non-deployed SLBMs

* * * * * *

Deployed and Non-deployed
Launchers of SLBMs

* * * * * *

Deployed Launchers
of SLBMs

* * * * * *

Non-deployed Launchers
of SLBMs

* * * * * *

Test Launchers

* * * * * *

Submarine Base

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Deployed SLBMs

* * *

Warheads on
Deployed SLBMs

* * *

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Deployed Launchers
of SLBMs

* * *

Non-deployed
Launchers of SLBMs

* * *

Ballistic Missile Submarines Based
at this Submarine Base

Number of Submarines/Aggregate
Number of Launchers by SLBM Type

<TYPE>

Submarine Type
<NAME>

* * * / * * *

Submarine Name: <NAME>

Launchers	UID	SLBM Type or Variant of a Type
-----------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

SLBM Loading Facilities

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation	UID	SLBM Type or Variant of a Type
-------------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Production Facilities for SLBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation	UID	SLBM Type or Variant of a Type
<DESIGNATION>	<UID>	<TYPE>

Production Facilities for Ballistic Missile Submarines

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed
Launchers of SLBMs

* * *

Storage Facilities for SLBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation	UID	SLBM Type or Variant of a Type
-------------	-----	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Repair Facilities for SLBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Test Ranges

Name/Location: <TITLE>

Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Test Launchers

* * *

Launchers Coordinates

UID SLBM Type or
Variant of a
Type

<DESIGNATION> <COORDINATES> <UID> <TYPE>

Conversion or Elimination Facilities for SLBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Conversion or Elimination Facilities for SLBM
Launchers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Type or Variant
of a Type

<TYPE>

Non-deployed
Launchers of SLBMs

* * *

Section V. Heavy Bombers and Nuclear Warheads Counted for
Deployed Heavy Bombers

For each Party, the numbers of deployed heavy bombers,
non-deployed heavy bombers, nuclear warheads counted for
deployed heavy bombers, as well as data on facilities
associated with heavy bombers, are as follows:

1. Russian Federation

	Heavy Bomber Type or Variant of a Type	
	<TYPE>	Total
Deployed Heavy Bombers	* * *	* * *
Nuclear Warheads Counted for Deployed Heavy Bombers	* * *	* * *
Non-deployed Heavy Bombers	* * *	* * *
Test Heavy Bombers	* * *	* * *
Heavy Bombers Equipped for Non-nuclear Armaments	* * *	* * *

Air Base

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type
<TYPE>

Heavy Bombers Based at this Air Base

Deployed Heavy
Bombers

* * *

Designation UID

Heavy Bomber Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Non-deployed Heavy
Bombers

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped
for Non-nuclear
Armaments

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Nuclear Warheads Counted
for Deployed Heavy Bombers

* * *

Heavy Bombers Located at this Air Base

Deployed Heavy
Bombers

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped
for Non-nuclear
Armaments

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Production Facilities for Heavy Bombers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Located at this
Production Facility

Non-deployed Heavy
Bombers

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped
for Non-nuclear
Armaments

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Storage Facilities for Heavy Bombers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Located at this
Storage Facility

Deployed Heavy Bombers * * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers * * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped
for Non-nuclear
Armaments

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Repair Facilities for Heavy Bombers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Located at this
Repair Facility

Non-deployed Heavy
Bombers

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped
for Non-nuclear
Armaments

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bomber Flight Test Centers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Based at this Flight
Test Center

Test Heavy Bombers	* * *
--------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Located at this Flight
Test Center

Deployed Heavy Bombers	* * *
------------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers	* * *
--------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped
for Non-nuclear
Armaments

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Conversion or Elimination Facilities for Heavy Bombers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Located at this Conversion
or Elimination Facility

Deployed Heavy Bombers	* * *
------------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers	* * *
--------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped
for Non-nuclear
Armaments

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

2. United States of America

Heavy Bomber Type or
Variant of a Type

<TYPE>	Total
--------	-------

Deployed Heavy Bombers	* * *	* * *
------------------------	-------	-------

Nuclear Warheads Counted for Deployed Heavy Bombers	* * *	* * *
--	-------	-------

Non-deployed Heavy Bombers	* * *	* * *
----------------------------	-------	-------

Test Heavy Bombers	* * *	* * *
--------------------	-------	-------

Heavy Bombers Equipped for Non-nuclear Armaments	* * *	* * *
---	-------	-------

Air Base

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Based at this Air Base

Deployed Heavy
Bombers

* * *

Designation UID

Heavy Bomber Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Non-deployed Heavy
Bombers

* * *

Designation UID

Heavy Bomber Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Heavy Bombers Equipped
for Non-nuclear
Armaments

* * *

Designation UID

Heavy Bomber Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Nuclear Warheads Counted
for Deployed Heavy Bombers

* * *

Heavy Bombers Located at this Air Base

Deployed Heavy
Bombers

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers		* * *
--------------------	--	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped for Non-nuclear Armaments		* * *
--	--	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Production Facilities for Heavy Bombers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Located at this
Production Facility

Non-deployed Heavy Bombers	* * *
-------------------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers	* * *
--------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped for Non-nuclear Armaments	* * *
--	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Storage Facilities for Heavy Bombers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Located at this
Storage Facility

Deployed Heavy Bombers	* * *
------------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers	* * *
--------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped for Non-nuclear Armaments	* * *
--	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Repair Facilities for Heavy Bombers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Located at this
Repair Facility

Non-deployed Heavy Bombers	* * *
-------------------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers	* * *
--------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped for Non-nuclear Armaments	* * *
--	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bomber Flight Test Centers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Based at this Flight
Test Center

Test Heavy Bombers	* * *
--------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Located at this Flight
Test Center

Deployed Heavy Bombers	* * *
------------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers	* * *
--------------------	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped for Non-nuclear Armaments	* * *
--	-------

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Conversion or Elimination Facilities for Heavy Bombers

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Heavy Bomber Type or
Variant of a Type

<TYPE>

Heavy Bombers Located at this Conversion
or Elimination Facility

Deployed Heavy Bombers * * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Test Heavy Bombers * * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Heavy Bombers Equipped
for Non-nuclear
Armaments

* * *

Designation	UID	Heavy Bomber Type or Variant of a Type
-------------	-----	---

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Section VI. Space Launch Facilities

For each Party, the numbers of non-deployed ICBMs and non-deployed SLBMs, and non-deployed launchers of ICBMs and non-deployed launchers of SLBMs, at space launch facilities, and the data on space launch facilities, are as follows:

1. United States of America

Total

Non-deployed ICBMs
and SLBMs

* * *

Non-deployed Launchers
of ICBMs and SLBMs

* * *

Space Launch Facilities

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Total

Non-deployed ICBMs

* * *

Designation UID

ICBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Non-deployed SLBMs

* * *

Designation UID

SLBM Type or
Variant of a Type

<DESIGNATION> <UID>

<TYPE>

Non-deployed
Launchers of ICBMs

* * *

Non-deployed
Launchers of SLBMs

* * *

2. Russian Federation

	Total
Non-deployed ICBMs and SLBMs	* * *

Non-deployed Launchers of ICBMs and SLBMs	* * *
--	-------

Space Launch Facilities

Name/Location: <TITLE>
Coordinates: <COORDINATES>

	Total
Non-deployed ICBMs	* * *
Designation UID	ICBM Type or Variant of a Type

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Non-deployed SLBMs	* * *
--------------------	-------

Designation UID	SLBM Type or Variant of a Type
----------------------	-----------------------------------

<DESIGNATION>	<UID>	<TYPE>
---------------	-------	--------

Non-deployed Launchers of ICBMs	* * *
------------------------------------	-------

Non-deployed Launchers of SLBMs	* * *
------------------------------------	-------

Section VII. ICBM and SLBM Technical Data

Classification A: Assembled ICBMs or SLBMs in Launch
Canisters

Classification B: Assembled ICBMs or SLBMs Without Launch
Canisters

Classification C: ICBMs or SLBMs Maintained, Stored, and
Transported in Stages

1. Russian Federation

(a) Intercontinental Ballistic Missiles

ICBM Type or Variant
of a Type

<TYPE>

Missile

Classification * * *

Number of Stages * * *

Length of Assembled
Missile Without Front
Section (m) * * *

Maximum Diameter of
Missile Airframe
(Without Stabilizers,
Raceways, Lug Guides,
or Other Protruding
Elements) (m) * * *

Total Length of a Missile
as a Unit With Launch
Canister

With Front Section (m)	* * *
Without Front Section (m)	* * *
Length of Launch Canister Body (m)	* * *
Diameter of Launch Canister Body (Without Protruding Elements) (m)	* * *
Missile Stages	
First Stage	
Length (m)	* * *
Length of First Stage Without Nozzle Attached (m)	* * *
Diameter (m)	* * *
Type of Propellant (Liq/Sol)	* * *
Second Stage	
Diameter (m)	* * *
Type of Propellant (Liq/Sol)	* * *
Third Stage	
Diameter (m)	* * *

Type of Propellant
(Liq/Sol)

* * *

Size Criteria for Conducting
Inspections

97% of the Length of
Launch Canister Body (m)

* * *

97% of the Diameter of
Launch Canister Body
(Without Protruding
Elements) (m)

* * *

97% of the Length
of First Stage (m)

* * *

97% of the Diameter
of First Stage (m)

* * *

Mobile Launchers of ICBMs

Type or Version of a
Type

<TYPE>

Mobile Launcher of ICBMs
(In Transport Position,
Without Missile)

Length (m)

* * *

Height (m)

* * *

Width (m)

* * *

Size Criteria for Conducting
Inspections

97% of the Length (m) * * *

97% of the Height (m) * * *

97% of the Width (m) * * *

External and Functional Differences Between Training
Models of Missiles and ICBMs of Corresponding Types

For Training Models of <TYPE> Types of Missiles:

* * *

(b) Submarine-Launched Ballistic Missiles

SLBM Type or Variant
of a Type

<TYPE>

Missile

Classification * * *

Number of Stages * * *

Length of Assembled
Missile Without
Front Section (m) * * *

Maximum Diameter of
Missile Airframe
(Without Stabilizers,
Raceways, Lug Guides,
or Other Protruding
Elements) (m)

* * *

Total Length of a
Missile as a Unit
With Launch Canister

With Front Section (m)

* * *

Without Front
Section (m)

* * *

Length of Launch
Canister Body (m)

* * *

Diameter of Launch
Canister Body
(Without Protruding
Elements) (m)

* * *

Missile Stages

First Stage

Length (m)

* * *

Length of First Stage
Without Nozzle
Attached (m)

* * *

Diameter (m)

* * *

Type of Propellant
(Liq/Sol)

* * *

Second Stage

Diameter (m) * * *

Type of Propellant
(Liq/Sol) * * *

Third Stage

Diameter (m) * * *

Type of Propellant
(Liq/Sol) * * *

Size Criteria for Conducting
Inspections

97% of the Length of
Launch Canister Body (m) * * *

97% of the Diameter of
Launch Canister Body
(Without Protruding
Elements) (m) * * *

97% of the Length
Of First Stage (m) * * *

97% of the Diameter of
First Stage (m) * * *

External and Functional Differences Between Training
Models of Missiles and SLBMs of Corresponding Types

For Training Models of <TYPE> Types of Missiles:

* * *

2. United States of America

(a) Intercontinental Ballistic Missiles

ICBM Type or Variant
of a Type

<TYPE>

Missile

Classification * * *

Number of Stages * * *

Length of Assembled
Missile Without Front
Section (m) * * *

Maximum Diameter of
Missile Airframe
(Without Stabilizers,
Raceways, Lug Guides,
or Other Protruding
Elements) (m) * * *

Total Length of a Missile
as a Unit With Launch
Canister

With Front Section (m) * * *

Without Front
Section (m) * * *

Length of Launch
Canister Body (m) * * *

Diameter of Launch Canister Body (Without Protruding Elements) (m)	* * *
--	-------

Missile Stages

First Stage

Length (m)	* * *
------------	-------

Length of First Stage Without Nozzle Attached (m)	* * *
---	-------

Diameter (m)	* * *
--------------	-------

Type of Propellant (Liq/Sol)	* * *
---------------------------------	-------

Second Stage

Diameter (m)	* * *
--------------	-------

Type of Propellant (Liq/Sol)	* * *
---------------------------------	-------

Third Stage

Diameter (m)	* * *
--------------	-------

Type of Propellant (Liq/Sol)	* * *
---------------------------------	-------

Size Criteria for Conducting
Inspections

97% of the Length of Launch Canister Body (m)	* * *
--	-------

97% of the Diameter of Launch Canister Body (Without Protruding Elements) (m)	* * *
--	-------

97% of the Length of First Stage (m)	* * *
---	-------

97% of the Diameter of First Stage (m)	* * *
---	-------

Mobile Launchers of ICBMs

Type or Version of a
Type

<TYPE>

Mobile Launcher of ICBMs
(In Transport Position,
Without Missile)

Length (m)	* * *
------------	-------

Height (m)	* * *
------------	-------

Width (m)	* * *
-----------	-------

Size Criteria for Conducting
Inspections

97% of the Length (m)	* * *
-----------------------	-------

97% of the Height (m)	* * *
-----------------------	-------

97% of the Width (m) * * *

External and Functional Differences Between Training
Models of Missiles and ICBMs of Corresponding Types

For Training Models of <TYPE> Types of Missiles:

* * *

(b) Submarine-Launched Ballistic Missiles

SLBM Type or Variant
of a Type

<TYPE>

Missile

Classification * * *

Number of Stages * * *

Length of Assembled
Missile Without
Front Section (m) * * *

Maximum Diameter of
Missile Airframe
(Without Stabilizers,
Raceways, Lug Guides,
or Other Protruding
Elements) (m) * * *

Total Length of a
Missile as a Unit
With Launch Canister

With Front Section (m) * * *

Without Front Section (m)	* * *
Length of Launch Canister Body (m)	* * *
Diameter of Launch Canister Body (Without Protruding Elements) (m)	* * *
Missile Stages	
First Stage	
Length (m)	* * *
Length of First Stage Without Nozzle Attached (m)	* * *
Diameter (m)	* * *
Type of Propellant (Liq/Sol)	* * *
Second Stage	
Diameter (m)	* * *
Type of Propellant (Liq/Sol)	* * *
Third Stage	
Diameter (m)	* * *

Type of Propellant
(Liq/Sol) * * *

Size Criteria for Conducting
Inspections

97% of the Length of
Launch Canister Body (m) * * *

97% of the Diameter of
Launch Canister Body
(Without Protruding
Elements) (m) * * *

97% of the Length
Of First Stage (m) * * *

97% of the Diameter of
First Stage (m) * * *

External and Functional Differences Between Training
Models of Missiles and SLBMs of Corresponding Types

For Training Models of <TYPE> Types of Missiles:

* * *

Section VIII. Heavy Bomber Distinguishing Features

1. United States of America

(a) Heavy Bombers Equipped for Nuclear Armaments

(i) For <TYPE> Heavy Bombers

(A) Externally Observable Distinguishing Features:

* * *

(B) Distinguishing Features Under Wing/Fuselage:

* * *

(C) Distinguishing Features of Weapons Bay:

* * *

(D) Technical Data for Recognition of Heavy Bombers:

* * *

(b) Heavy Bombers Equipped for Non-nuclear Armaments¹

Differences that make heavy bombers equipped for non-nuclear armaments distinguishable from heavy bombers of this type equipped for nuclear armaments:

(i) For <TYPE> Heavy Bombers

(A) Externally Observable Distinguishing Features:

* * *

¹ Distinguishing features of B-1B heavy bombers equipped for non-nuclear armaments shall be recorded in accordance with subparagraph 1(b) of this Section, based on the results of the exhibition conducted in accordance with the First Agreed Statement contained in Part Nine of this Protocol.

(B) Distinguishing Features Under
Wing/Fuselage:

* * *

(C) Distinguishing Features of Weapons Bay:

* * *

2. Russian Federation

(a) Heavy Bombers Equipped for Nuclear Armaments

(i) For <TYPE> Heavy Bombers

(A) Externally Observable Distinguishing
Features:

* * *

(B) Distinguishing Features Under
Wing/Fuselage:

* * *

(C) Distinguishing Features of Weapons Bay:

* * *

(D) Technical Data for Recognition of Heavy
Bombers:

* * *

(b) Heavy Bombers Equipped for Non-nuclear Armaments

Differences that make heavy bombers equipped for non-nuclear armaments distinguishable from heavy bombers of this type equipped for nuclear armaments:

(i) For <TYPE> Heavy Bombers

(A) Externally Observable Distinguishing
Features:

* * *

(B) Distinguishing Features Under
Wing/ Fuselage:

* * *

(C) Distinguishing Features of Weapons Bay:

* * *

Section IX. Other Data Required by the Treaty

1. Notwithstanding subparagraph 3(b) of Article IV of the Treaty, the first stage of an ICBM or SLBM may be located at the locations provided for in this paragraph where static testing or static firing is conducted. Such first stages of ICBMs or SLBMs shall continue to be declared for the facility at which such first stages of ICBMs and SLBMs were located prior to their movement to the locations provided for in this paragraph.

(a) Russian Federation

* * *

(b) United States of America

* * *

2. To each Party, ICBMs, SLBMs, submarines, heavy bombers, inspection airplanes, and, where applicable, variants referred to in the Treaty, are known as follows:

	In the United States of America	In the Russian Federation
ICBMs:	<TYPE>	<TYPE>
SLBMs:	<TYPE>	<TYPE>
Submarines:	<TYPE>	<TYPE>
Heavy Bombers:	<TYPE>	<TYPE>
Inspection Airplanes:	<TYPE>	<TYPE>

3. For each Party, the inspection activity sites associated with points of entry are as follows:

(a) United States of America

(i) Inspection activity sites associated with point of entry <NAME>

(A) Facilities Associated with ICBMs

ICBM Base for Silo Launchers of ICBMs
Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Base for Mobile Launchers of ICBMs
Name/Location: <TITLE>
Coordinates: <COORDINATES>

ICBM Loading Facilities
Name/Location: <TITLE>
Coordinates: <COORDINATES>

Storage Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Storage Facilities for Mobile Launchers
of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Repair Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Repair Facilities for Mobile Launchers of
ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Test Ranges

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Training Facilities

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Conversion or Elimination Facilities for
ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Conversion or Elimination Facilities for
Mobile Launchers of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(B) Facilities Associated with SLBMs

Submarine Base

Name/Location: <TITLE>

Coordinates: <COORDINATES>

SLBM Loading Facilities

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Storage Facilities for SLBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Repair Facilities for SLBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Test Ranges

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Conversion or Elimination Facilities for
SLBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(C) Facilities Associated with Heavy Bombers

Air Base

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Storage Facilities for Heavy Bombers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Conversion or Elimination Facilities for
Heavy Bombers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(b) Russian Federation

(i) Inspection activity sites associated with
point of entry <NAME>

(A) Facilities Associated with ICBMs

ICBM Base for Silo Launchers of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Base for Mobile Launchers of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

ICBM Loading Facilities

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Storage Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Storage Facilities for Mobile Launchers
of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Repair Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Repair Facilities for Mobile Launchers of
ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Test Ranges

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Training Facilities

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Conversion or Elimination Facilities for
ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Conversion or Elimination Facilities for
Mobile Launchers of ICBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

(B) Facilities Associated with SLBMs

Submarine Base

Name/Location: <TITLE>
Coordinates: <COORDINATES>

SLBM Loading Facilities

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Storage Facilities for SLBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Repair Facilities for SLBMs

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Test Ranges

Name/Location: <TITLE>
Coordinates: <COORDINATES>

Conversion or Elimination Facilities for
SLBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(C) Facilities Associated with Heavy Bombers

Air Base

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Storage Facilities for Heavy Bombers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Conversion or Elimination Facilities for
Heavy Bombers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

4. For each Party, the facilities not subject to inspection
are as follows:

(a) Russian Federation

(i) Facilities Associated with ICBMs

Production Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Production Facilities for Mobile Launchers of
ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(ii) Facilities Associated with SLBMs

Production Facilities for SLBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Production Facilities for Ballistic Missile
Submarines

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Conversion or Elimination Facilities for SLBM
Launchers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(iii) Facilities Associated with Heavy Bombers

Production Facilities for Heavy Bombers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Repair Facilities for Heavy Bombers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Heavy Bomber Flight Test Centers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(iv) Space Launch Facilities

Space Launch Facilities

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(b) United States of America

(i) Facilities Associated with ICBMs

Production Facilities for ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Production Facilities for Mobile Launchers of ICBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(ii) Facilities Associated with SLBMs

Production Facilities for SLBMs

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Production Facilities for Ballistic Missile Submarines

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Conversion or Elimination Facilities for SLBM Launchers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(iii) Facilities Associated with Heavy Bombers

Production Facilities for Heavy Bombers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Repair Facilities for Heavy Bombers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

Heavy Bomber Flight Test Centers

Name/Location: <TITLE>

Coordinates: <COORDINATES>

(iv) Space Launch Facilities

Space Launch Facilities

Name/Location: <TITLE>

Coordinates: <COORDINATES>

5. For each Party, the airports for the points of entry are as follows:

(a) United States of America

Point of Entry

Airports

(b) Russian Federation

Point of Entry

Airports

6. For each Party, the routes for flights of inspection airplanes to points of entry are as follows:

(a) For flights of inspection airplanes of the Russian Federation to the United States of America:

Route to Point
of Entry

Route from Point
of Entry

From <COUNTRY NAME> to <POINT OF ENTRY NAME>:

(i) * * *

(i) * * *

(b) For flights of inspection airplanes of the United States of America to the Russian Federation:

Route to Point
of Entry

Route from Point
of Entry

From <COUNTRY NAME> to <POINT OF ENTRY NAME>:

(i)* * *

(i)* * *

7. For each Party, formerly declared facilities that, in accordance with Section VII of Part Three of this Protocol, are considered eliminated for the purposes of the Treaty and notification of elimination of which has been provided in accordance with Section II of Part Four of this Protocol, are as follows:

(a) United States of America

Former Function of the Facility: <FACILITY TYPE>
Name/Location: <TITLE>
Coordinates: <COORDINATES>

(b) Russian Federation

Former Function of the Facility: <FACILITY TYPE>
Name/Location: <TITLE>
Coordinates: <COORDINATES>

8. For each Party, currently or formerly declared facilities, portions of which have been excluded, in accordance with the Annex on Inspection Activities to this Protocol, for the purposes of the Treaty from within the boundaries specified on the inspection site diagrams of such facilities, and notification of changes in the boundaries of which has been provided in accordance with Section VI of Part Four of this Protocol, are as follows:

(a) Russian Federation

Function of the Facility that Incorporated
Excluded Portions:

<FACILITY TYPE>

Name of the Facility that Incorporated Excluded Portions and, if Applicable, Subtitle/Location of the Facility:

<TITLE>

Coordinates: <COORDINATES>

Date of Preparation of the Inspection Site
Diagram of Excluded Portions of the Facility:

<DATE>

Reference to BCC Document on the Exclusion of
Portions of a Facility:

<BCC REFERENCE DOCUMENT>

(b) United States of America

Function of the Facility that Incorporated
Excluded Portions:

<FACILITY TYPE>

Name of the Facility that Incorporated Excluded Portions and, if Applicable, Subtitle/Location of the Facility:

<TITLE>

Coordinates: <COORDINATES>

Date of Preparation of the Inspection Site
Diagram of Excluded Portions of the Facility:

<DATE>

Reference to BCC Document on the Exclusion of
Portions of a Facility:

<BCC REFERENCE DOCUMENT>

PART THREE - CONVERSION OR ELIMINATION PROCEDURES

Section I. General Provisions

1. Conversion or elimination of strategic offensive arms subject to the Treaty shall be carried out *in situ* or at declared facilities.
2. Elimination of strategic offensive arms subject to the Treaty shall be carried out by rendering them inoperable, precluding their use for their original purpose. Upon completion of elimination, an eliminated strategic offensive arm shall cease to be subject to the Treaty.
3. If an ICBM launcher or SLBM launcher is converted to a launcher of ICBMs or a launcher of SLBMs of another type, it shall be considered to be a launcher of ICBMs or a launcher of SLBMs of the type to which it was converted. If an ICBM launcher, SLBM launcher, or heavy bomber is converted by rendering it incapable of employing ICBMs, SLBMs, or nuclear armaments, so that the other Party can confirm the results of the conversion, such a converted strategic offensive arm shall cease to be subject to the aggregate numbers provided for in Article II of the Treaty and may be used for purposes not inconsistent with the Treaty.
4. If one of the Parties decides to carry out a conversion or elimination of a type of strategic offensive arm subject to the Treaty using procedures that it developed in accordance with this Part, it shall notify the other Party of such procedures in accordance with Part Four of this Protocol. If, in the opinion of the other Party, the procedures developed by the Party carrying out the conversion or elimination are ambiguous or do not achieve the goals set forth in paragraph 2 or 3 of this Section, the Party carrying out the conversion or elimination shall conduct a demonstration, within the framework of the BCC, of the procedures that it developed. After the demonstration, such procedures shall be recorded within the framework of the BCC and may be used thereafter for

conversion or elimination of that type of strategic offensive arm.

5. Upon completion of conversion of the first item of a type of strategic offensive arm subject to the Treaty, the Party carrying out the conversion shall conduct an exhibition in accordance with Article XI of the Treaty.

6. The results of conversion or elimination of strategic offensive arms and facilities subject to the Treaty may be confirmed in accordance with Articles X and XI of the Treaty.

Section II. Procedures for Elimination of ICBMs and SLBMs

1. Procedures for elimination of liquid-fueled ICBMs or liquid-fueled SLBMs shall be determined by the Party carrying out the elimination. Upon completion of the elimination procedures, notification thereof shall be provided.

2. The elimination of solid-fueled ICBMs and solid-fueled SLBMs shall be carried out using any of the procedures provided for in this paragraph:

(a) If the first stage is destroyed by explosion, notification thereof shall be provided.

(b) If the fuel is removed by burning, the first stage rocket motor case shall have a hole, no less than one meter in diameter, cut or punched through the case along the lateral surface, or the first stage rocket motor case shall be cut into two parts of approximately equal size.

(c) If the fuel is removed by washing, the first stage rocket motor case shall be crushed, flattened, or cut into two parts of approximately equal size.

3. Upon completion of the elimination procedure in accordance with subparagraph 2(b) or 2(c) of this Section and provision

of notification thereof, the eliminated solid-fueled ICBMs and solid-fueled SLBMs shall remain visible to national technical means of verification for a 60-day period. The Party receiving such notification shall have the right, within a 30-day period beginning on the date of provision of notification, to conduct an inspection of the eliminated solid-fueled ICBMs and solid-fueled SLBMs. If a Party accumulates eliminated solid-fueled ICBMs and solid-fueled SLBMs, the specified eliminated solid-fueled ICBMs and solid-fueled SLBMs shall cease to be subject to the Treaty upon completion of the inspection or, if the inspection was not conducted, upon expiration of the 30-day period. Eliminated solid-fueled ICBMs and solid-fueled SLBMs that have not been accumulated shall cease to be subject to the Treaty upon completion of the inspection or, if an inspection was not conducted, upon expiration of the 60-day period.

4. The elimination of launch canisters for ICBMs and SLBMs shall be carried out by separating the launch canister into two parts. Upon completion of the elimination procedure and provision of notification thereof, the parts of the launch canister for ICBMs and SLBMs shall remain visible to national technical means of verification at the declared facility for a 60-day period. Upon expiration of the 60-day period, the launch canister shall be considered to be eliminated.

5. Upon completion of the elimination process for launch canisters for ICBMs and SLBMs, the launch canisters may be used for purposes not inconsistent with the Treaty but shall not be transferred to a third party.

Section III. Procedures for Conversion or Elimination of ICBM Launchers

1. A silo launcher of ICBMs shall remain visible to national technical means of verification during the entire elimination process and for a 60-day period following provision of notification of the completion of the elimination process.

2. The elimination of silo launchers of ICBMs shall be carried out using any of the procedures provided for in this paragraph:

(a) The silo door shall be removed, dismantled, or destroyed, and the silo headworks and the silo shall be destroyed by excavating them to a depth of no less than eight meters or by explosion to a depth of no less than six meters;

(b) The silo door shall be removed, dismantled, or destroyed and the silo shall be completely filled with debris resulting from demolition of infrastructure, and with earth or gravel. The silo door shall not be reinstalled; or

(c) Other procedures that are developed by the Party carrying out the elimination.

3. Upon completion of the elimination procedures in accordance with paragraph 2 of this Section and provision of notification thereof, the area where the eliminated silo launcher of ICBMs was located may be graded after expiration of the 60-day period. The Party receiving such notification shall have the right, within a 30-day period beginning on the date of provision of notification, to conduct an inspection of the eliminated silo launcher of ICBMs. Upon expiration of the 60-day period following provision of such notification or upon completion of the inspection, the silo launcher of ICBMs shall cease to be subject to the Treaty.

4. The elimination of mobile launchers of ICBMs shall be carried out by cutting the erector-launcher mechanism, leveling supports, and mountings of the erector-launcher mechanism from the launcher chassis and by removing the missile launch support equipment, including external instrumentation compartments, from the launcher chassis.

5. If the chassis of the eliminated mobile launcher of ICBMs is used at a declared facility for purposes not inconsistent with the Treaty, the upper surfaces of the vehicle and of the items mounted on the chassis, visible to national technical

means of verification, shall be painted so that they are distinguishable from the upper surfaces of a deployed mobile launcher of ICBMs.

6. Upon completion of the elimination procedure in accordance with paragraph 4 of this Section and provision of notification thereof, the eliminated mobile launcher of ICBMs shall remain visible to national technical means of verification for a 60-day period. The Party receiving such notification shall have the right, within a 30-day period beginning on the date of provision of notification, to conduct an inspection of the eliminated mobile launcher of ICBMs. If a Party accumulates eliminated mobile launchers of ICBMs, the specified launchers shall cease to be subject to the Treaty, with the exception of the provisions of paragraph 5 of this Section, upon completion of the inspection or, if an inspection was not conducted, upon expiration of the 30-day period. Eliminated mobile launchers of ICBMs that have not been accumulated shall cease to be subject to the Treaty, with the exception of the provisions of paragraph 5 of this Section, upon completion of the inspection or, if an inspection was not conducted, upon expiration of the 60-day period.

7. Upon completion of the elimination process for the mobile launcher of ICBMs, the vehicle may be used for purposes not inconsistent with the Treaty.

8. Conversion of an ICBM launcher to a launcher of ICBMs of another type shall be carried out using procedures developed by the Party carrying out the conversion. Upon completion of the conversion procedures and provision of notification thereof, the converted launcher of ICBMs shall be considered to be a launcher of ICBMs of the other type.

Section IV. Procedures for Conversion or Elimination of SLBM Launchers

1. The elimination of SLBM launchers shall be carried out by removing all missile launch tube hatches, their associated superstructure fairings, and, if applicable, gas generators.
2. Upon completion of the procedures provided for in paragraph 1 of this Section and provision of notification thereof, the SLBM launchers shall cease to be subject to the Treaty.
3. A submarine on which SLBM launchers have been eliminated in accordance with paragraph 1 of this Section shall remain visible to national technical means of verification for a 60-day period following provision of notification.
4. Upon expiration of the 60-day period provided for in paragraph 3 of this Section, scrapping of the submarine shall be carried out at the facility at which it is located, or the submarine may be moved for this purpose to another declared facility, notification of which shall be provided. After provision of notification of the completion of scrapping, the submarine shall cease to be subject to the Treaty.
5. Conversion of an SLBM launcher to a launcher of SLBMs of another type shall be carried out using procedures developed by the Party carrying out the conversion. Upon completion of the conversion procedures and provision of notification thereof, the converted launcher of SLBMs shall be considered to be a launcher of SLBMs of the other type.
6. Conversion of an SLBM launcher that precludes its use as an SLBM launcher shall be carried out using any of the procedures provided for in this paragraph:
 - (a) The height or diameter of the launcher shall be reduced so that the launcher can no longer contain the smallest SLBM deployed by the Party carrying out the conversion;

(b) Critical components required to launch an SLBM shall be removed. Such critical components may include, among other things, gas generators and launch-related subsystems; or

(c) Other procedures that are developed by the Party carrying out the conversion.

7. Upon completion of the conversion procedures in accordance with paragraph 6 of this Section and provision of notification thereof, the submarine shall be made available for viewing upon return to the submarine base. The Party receiving such notification shall have the right, within a 30-day period beginning on the date of provision of notification, to conduct an inspection of the converted launcher of SLBMs in order to confirm that the procedures provided for in paragraph 6 of this Section have been completed. The submarine shall remain at the submarine base until an inspection is completed, or, if an inspection was not conducted, until expiration of the 30-day period. Upon completion of the inspection, or, if an inspection was not conducted, upon expiration of the 30-day period, the SLBM launcher shall be considered to be converted.

Section V. Procedures for Conversion or Elimination of Heavy Bombers

1. The elimination of a heavy bomber shall be carried out by cutting a wing or tail section from the fuselage at locations obviously not assembly joints, or by cutting the fuselage into two parts at a location obviously not an assembly joint.

2. A heavy bomber shall remain visible to national technical means of verification during the entire elimination process and for a 60-day period following provision of notification of the completion of the elimination. Upon expiration of the 60-day period, the heavy bomber shall cease to be subject to the Treaty.

3. The conversion process for a heavy bomber equipped for nuclear armaments to a heavy bomber equipped for non-nuclear armaments shall be carried out using any of the procedures provided for in this paragraph:

(a) All weapons bays and all external attachments for pylons shall be modified so as to render them incapable of employing nuclear armaments;

(b) All internal and external launcher assemblies shall be modified so as to render them incapable of employing nuclear armaments; or

(c) Other procedures that are developed by the Party carrying out the conversion.

4. Upon completion of the conversion procedures in accordance with paragraph 3 of this Section and provision of notification thereof, the converted heavy bomber shall not be flown but shall be moved directly to the viewing site at the facility at which the conversion was carried out. The Party receiving such notification shall have the right, within a 30-day period beginning on the date of provision of notification, to conduct an inspection of the converted heavy bomber in order to confirm that the procedures provided for in paragraph 3 of this Section have been completed. The converted heavy bomber shall remain at the viewing site at the facility at which the conversion was carried out until an inspection is completed, or, if an inspection was not conducted, until expiration of the 30-day period. Upon completion of the inspection, or, if an inspection was not conducted, upon expiration of the 30-day period, the heavy bomber shall be considered to be converted.

Section VI. Other Means for Removal from Accountability

1. A strategic offensive arm shall cease to be subject to the Treaty if:

(a) A strategic offensive arm is lost as a result of an accident or is disabled beyond repair;

(b) A strategic offensive arm is placed on static display;

(c) A heavy bomber is converted for use as a ground trainer; or

(d) An ICBM or SLBM is eliminated by launch, static testing, or static firing.

2. Prior to the placement of a strategic offensive arm on static display or prior to the use of a heavy bomber as a ground trainer, such a strategic offensive arm shall be rendered inoperable.

3. An ICBM or SLBM shall cease to be subject to the Treaty on the date of the launch, static testing, or static firing as specified in the notification.

Section VII. Procedures for Elimination of Facilities

1. The elimination of declared facilities shall be subject to verification by national technical means of verification and shall be carried out by removal or elimination of all strategic offensive arms specified for such a facility, as well as training models of missiles, training launchers, fixed structures for mobile launchers of ICBMs, launch-associated vehicles, and driver training vehicles.

2. The elimination process for fixed structures for mobile launchers of ICBMs shall be carried out by dismantling and removing the superstructure of the fixed structure from the

facility. No structure or covering, permanent or temporary, shall be reinstalled or built over the remaining foundation.

3. The declared facility shall be considered to be eliminated following completion of the procedures provided for in paragraphs 1 and 2 of this Section and provision of notification thereof.

PART FOUR - NOTIFICATIONS

Section I. General Provisions

1. The Parties shall provide notifications provided for in Article VII of the Treaty in accordance with the provisions of this Part and of the Annex on Notifications to this Protocol.
2. The time and date in a notification shall be expressed in Greenwich Mean Time. The date of provision of notification shall be the date of receipt of the notification. The notification shall become effective either on the date it was received or on the date of the occurrence of the event specified in the notification.

Section II. Notifications Concerning Data Pertaining to Strategic Offensive Arms

1. Notification, to be provided no later than 45 days after entry into force of the Treaty, providing data current as of the date of entry into force of the Treaty for each category of data contained in Part Two of this Protocol.
2. Notification, to be provided no later than 30 days after the expiration of each six-month period following the entry into force of the Treaty, providing updated data for each category of data contained in Part Two of this Protocol. The first of these six-month periods shall begin the first day of the calendar month following the month in which the Treaty enters into force.
3. Notification, to be provided no later than five days after it occurs, of each change in data for each category of data contained in Part Two of this Protocol, unless the notification of such change in data has been provided in accordance with other provisions of this Part. Notification

of each change in data on warheads shall be provided only in accordance with paragraph 2 of this Section. The changes in data of which notifications are provided shall include, among other things:

(a) The loss of an item as the result of an accident, disablement of an item beyond repair, placement of an item on static display, conversion of a heavy bomber for use as a ground trainer, launch of an ICBM or SLBM, static testing, or static firing.

(b) The emergence of new facilities, new types, variants of ICBMs and SLBMs, and new versions of mobile launchers of ICBMs.

(c) Elimination of an ICBM, ICBM launcher, SLBM, SLBM launcher, heavy bomber, or declared facility.

(d) A change of category of an existing facility.

(e) A change of category of an item from deployed to non-deployed or from non-deployed to deployed.

4. Notification, to be provided no later than five days after the arrival at a declared facility, of the first prototype ICBM or prototype SLBM of a new type.

5. Notification, to be provided no later than 30 days after the twentieth launch of a prototype ICBM or prototype SLBM of a type or no less than 30 days in advance of the deployment of the first ICBM or SLBM of the same type, that the prototype ICBM or prototype SLBM shall be considered to be an ICBM or SLBM of a new type.

6. Notification, to be provided no later than five days after the decision has been made, of the cessation of development of a prototype ICBM or prototype SLBM of a new type.

7. Notification, to be provided no later than five days after it has been completed, of the transfer of SLBMs to or from a

third State in accordance with an existing pattern of cooperation.

8. Notification concerning a new kind of strategic offensive arm.

Section III. Notifications Concerning Movement of Strategic Offensive Arms

1. Notification, to be provided no less than 48 hours in advance of the exit of solid-fueled ICBMs and solid-fueled SLBMs from production facilities, specified in accordance with Part Two of this Protocol.

2. Notification, to be provided no later than five days after the completion of the movement of ICBMs to or from a test range located outside a Party's national territory, which a Party has used for conducting launches of ICBMs between December 5, 1994 and December 4, 2009.

3. Notification, to be provided no later than 24 hours after the visit of a heavy bomber of one of the Parties that is of a type subject to the Treaty has exceeded 24 hours in duration, of the visit of such a heavy bomber to a specific location inside its national territory or to a geographic region outside its national territory.

4. Notification, to be provided no later than 48 hours after departure, of the conclusion of the visit of a heavy bomber of a type subject to the Treaty, notification of which has been provided in accordance with paragraph 3 of this Section.

5. Notification, to be provided no less than 14 days in advance of the beginning of a major strategic exercise involving heavy bombers, of the beginning of such an exercise. Such notification shall be provided in accordance with the Agreement Between the Government of the United States of America and the Government of the Union of Soviet Socialist

Republics on Reciprocal Advance Notification of Major Strategic Exercises of September 23, 1989.

6. Notification, to be provided no later than 48 hours after the completion of a major strategic exercise involving heavy bombers, of the completion of such an exercise.

Section IV. Notifications Concerning Launches of ICBMs or SLBMs, and the Exchange of Telemetric Information

1. Notification, to be provided no less than 24 hours in advance of any launch of an ICBM or SLBM. Such notification shall be provided in accordance with the Agreement Between the United States of America and the Union of Soviet Socialist Republics on Notifications of Launches of Intercontinental Ballistic Missiles and Submarine-Launched Ballistic Missiles of May 31, 1988.

2. Notification, to be provided no later than 180 days after the receipt of the recording media and interpretive data, concerning the incomplete or insufficient quality of the recording media provided, the telemetric information recorded on it, or the interpretive data.

3. Notification, to be provided no later than 60 days after receipt of the notification provided for in paragraph 2 of this Section, containing an explanation concerning the incomplete or insufficient quality of the recording media provided, the telemetric information recorded on it, or the interpretive data.

4. Notification, to be provided no less than 30 days in advance of the demonstration, of the proposed date and place for the demonstration of the recording media and/or appropriate playback equipment.

5. Notification containing a request to acquire playback equipment for telemetric information, or its spare parts, or

the response to such a request. The response to such a request shall be provided no later than 30 days after receipt of the request.

6. Notification containing a request for maintenance or for training in the operation and maintenance of the telemetry playback equipment, or the response to such a request. The response to such a request shall be provided no later than 45 days after the receipt of the request.

Section V. Notifications Concerning Conversion or Elimination

1. For conversion or elimination of ICBMs and SLBMs, launch canisters for ICBMs and SLBMs, ICBM launchers and SLBM launchers, heavy bombers, and facilities:

(a) Notification, to be provided no less than 30 days in advance of the initiation of conversion or elimination, of the intent to carry out a conversion or elimination.

(b) Notification, to be provided no later than five days after the initiation of a conversion or elimination, of the initiation of a conversion or elimination.

(c) Notification, to be provided no later than five days after the completion of conversion or elimination procedures, of the completion of conversion or elimination procedures.

2. Notification, to be provided no later than 20 days after the beginning of each calendar year, of the number and types of strategic offensive arms scheduled for conversion or elimination during the year.

Section VI. Notifications Concerning Inspection Activities

1. Notification, to be provided no later than 30 days after entry into force of the Treaty, for the period until the end

of the current calendar year and thereafter no less than 30 days prior to the beginning of each following calendar year, for the period until the end of that calendar year, of the standing diplomatic clearance number for inspection airplanes.

2. Notification, to be provided by the inspecting Party no less than six hours in advance of the planned time of departure of an inspection airplane from the last airfield prior to its entry into the airspace of the inspected Party, containing the flight plan for such an airplane.

3. Notification, to be provided by the inspected Party no less than three hours in advance of the planned time of departure of an inspection airplane from the last airfield prior to its entry into the airspace of the inspected Party, of a flight plan approval for such an airplane.

4. Notification, to be provided by a Party no less than 30 days prior to the implementation of a change, of the change to flight routes for inspection airplanes to or from a point of entry established on the territory of that Party.

5. Notification, to be provided no later than 25 days after entry into force of the Treaty, containing the initial lists of inspectors and aircrew members.

6. Notification, to be provided no more than once in each 45-day period, of amendments to the lists of inspectors and aircrew members.

7. Notification, to be provided no later than 30 days after receipt of the notifications provided for in paragraphs 5 and 6 of this Section, of agreement with or objection to each inspector or aircrew member proposed for inclusion on the lists, as well as, in the case of objection to an inspector or aircrew member already on the lists, of such objection.

8. Notification, to be provided simultaneously with the notification provided for in paragraph 2 of Section II of this

Part, containing the agreed lists of inspectors and aircrew members.

9. Notification, to be provided only during normal working days no less than 32 hours in advance of the estimated time of arrival of the inspection team at the point of entry, of an intention to conduct an inspection.

10. Notification, to be provided by the inspected Party no later than 30 days after entry into force of the Treaty, of the determination of agreed geographic coordinates of reference points used at the point of entry. Thereafter, the inspected Party shall provide supplementary notifications on each change to these reference points.

11. Notification of changes to the site diagrams of facilities and coastlines and waters diagrams.

12. Notification, to be provided no less than 30 days in advance of the planned date of an exhibition, of the intent to conduct an exhibition.

13. Notification, to be provided no less than 72 hours in advance of the planned date of an exhibition, of the intent to take part in an exhibition.

14. Notifications, to be provided by the inspection team leader, in writing, to a member of the in-country escort during inspections:

(a) Notification of the designation of the type of inspection and of the inspection site, to be provided at the point of entry no later than four hours after arrival of the inspection team at the point of entry or its return to the point of entry after the previous inspection. In the event that the inspection team intends to conduct a sequential inspection without returning to the point of entry, such notification shall be provided prior to the completion of the post-inspection procedures of the previous inspection.

(b) Notification, to be provided simultaneously with the notification of the designation of the type of inspection and of the inspection site, of the intent to conduct a sequential inspection.

(c) Notification, to be provided at the point of entry or at the inspection site in the event of the cancellation of an inspection, of such cancellation.

(d) Notification, to be provided at the inspection site after completion of pre-inspection procedures, of the designation of an item intended for inspection.

Section VII. Notifications Concerning Activities of the BCC and Additional Messages

1. Notification, to be provided in accordance with Part Six of this Protocol, containing a request to convene a session of the BCC.
2. Notification, to be provided in accordance with Part Six of this Protocol, containing a response to a request to convene a session of the BCC.
3. Notifications containing other messages relating to the activities of the BCC.
4. Notification containing a request for clarification of a notification.
5. Notification containing clarification, correction, or modification of a notification.
6. Notification of an additional message with respect to the Treaty.

PART FIVE - INSPECTION ACTIVITIES

Section I. General Provisions

1. For the purposes of helping to ensure verification of compliance with the provisions of the Treaty, each Party shall facilitate the conduct of inspection activities by the other Party in accordance with the provisions of this Part.
2. Each Party shall have the right to begin inspection activities 60 days after entry into force of the Treaty and to conduct them thereafter.
3. Each Party shall provide to the other Party notifications relating to inspection activities in accordance with Part Four of this Protocol.
4. Each Party shall have the right to conduct no more than one inspection on the territory of the inspected Party at any one time.
5. In exceptional cases, and for purposes not inconsistent with the Treaty, the inspected Party may temporarily exempt from inspection activities appropriate facilities subject to Type One or Type Two inspections and appropriate facilities at which exhibitions are to be conducted. Notification thereof shall be provided through diplomatic channels along with an explanation of the reason for such exemption from inspection activities.

Section II. Legal Status of Inspectors and Aircrew Members

1. Inspection activities shall be conducted by inspectors. Inspectors shall be transported to and from the territory of the inspected Party by inspection airplanes, commercial flights, and Open Skies airplanes.

2. The list of inspectors shall not contain at any one time more than 300 individuals. The number of individuals on the list of aircrew members shall be determined at the discretion of each Party, based on the premise that the number of aircrew members for each inspection airplane shall not exceed ten. Inspectors and aircrew members shall be citizens of the inspecting Party.

3. Each Party shall have the right to amend the lists of its inspectors and aircrew members no more than once in each 45-day period. With each amendment, the number of inspectors whose names are entered in the list of inspectors shall not exceed 30, and the number of aircrew members whose names are entered in the list of aircrew members shall not exceed 25. The Party receiving notification of an amendment to lists of inspectors or aircrew members shall provide notification in accordance with Part Four of this Protocol to the other Party of its agreement with, or objection to, the designation of each such inspector or aircrew member.

4. For each proposed inspector and aircrew member, the lists shall contain first name, middle name or patronymic, and last name; day, month, and year of birth; place of birth (city, state or oblast, and country); and passport number, if available.

5. The initial exchange of lists of inspectors and aircrew members shall take place no later than 25 days after entry into force of the Treaty. No later than 30 days after the initial exchange of lists or after receipt of a notification of amendments to the lists of inspectors and aircrew members, the Party receiving such lists or proposed amendments thereto shall provide visas and, where necessary, such other documents to each individual to whom it has agreed, as may be required to ensure that each inspector or aircrew member may enter, remain in, and leave the territory of that Party throughout the in-country period. The inspected Party shall ensure that such visas and appropriate documents shall be valid for a period of no less than 24 months, and the inspecting Party shall ensure that individuals receiving such visas and

appropriate documents use them only for the purpose of conducting inspection activities in accordance with this Part.

6. An individual included on the list of inspectors may be objected to only if that individual is under indictment for a criminal offense on the territory of the inspected Party, if that individual has been convicted in a criminal prosecution or expelled by the Party reviewing the list, or if that individual has been previously deleted from the list at the request of the inspected Party for having violated the conditions governing inspection activities as provided for in this Part. An individual included on the list of aircrew members may be objected to if that individual is found unacceptable by the Party reviewing the list. The Party making an objection to such individual shall so notify the other Party in accordance with Part Four of this Protocol. Individuals who are objected to shall be deleted from the lists.

7. In order to exercise their functions effectively, for the purposes of implementing the Treaty and not for their personal benefit, the inspectors and aircrew members shall be accorded the following privileges and immunities for the entire time the inspectors or aircrew members are within the territory of the other Party:

(a) Such personnel shall be accorded the inviolability enjoyed by diplomatic agents in accordance with Article 29 of the Vienna Convention on Diplomatic Relations of April 18, 1961, and the immunities accorded to diplomatic agents in accordance with paragraphs 1, 2, and 3 of Article 31 of that Convention.

(b) The papers and correspondence of such personnel shall enjoy the inviolability accorded to the papers and correspondence of diplomatic agents in accordance with Article 30 of the Vienna Convention on Diplomatic Relations of April 18, 1961.

(c) Inspection airplanes transporting inspection teams to and from the points of entry shall be inviolable.

(d) Inspectors and aircrew members shall have the right to bring into the territory of the inspected Party, without payment of any customs duties and related taxes and charges, articles for their personal use, provided, however, that they shall not be permitted to bring into the territory of the inspected Party any articles, the import or export of which is prohibited by law or controlled by quarantine regulations of the inspected Party.

(e) If the inspected Party considers that there has been an abuse of privileges and immunities provided for in this paragraph, consultations shall be held between the Parties to determine whether such an abuse has occurred. If it is determined that such an abuse has occurred, the inspecting Party shall take necessary measures to prevent a repetition of such an abuse.

(f) During their stay in the territory of the inspected Party, without prejudice to the privileges and immunities provided for in this paragraph, inspectors and aircrew members shall be obliged to respect the laws and regulations of the inspected Party, shall be obliged not to interfere in its internal affairs, and shall not engage in any professional or commercial activity for personal profit on the territory of the inspected Party.

8. Upon completion of their official functions on the territory of the inspected Party, with respect to acts performed by inspectors and aircrew members in the exercise of their official functions, the immunity of such personnel shall continue to subsist to the extent that immunity continues to subsist with respect to persons enjoying privileges and immunities in accordance with paragraph 2 of Article 39 of the Vienna Convention on Diplomatic Relations of April 18, 1961.

Section III. Arrangements for Air Transportation

1. Each Party shall establish on its territory two points of entry. The points of entry, airports associated with them, and their associated inspection activity sites shall be provided in accordance with Part Two of this Protocol.
2. The inspecting Party shall have the right to use agreed types of inspection airplanes for the transportation of inspectors to the points of entry on the territory of the inspected Party. Such airplanes may, at the same time that they are transporting inspectors, carry equipment intended for inspection activities. The inspecting Party shall provide the relevant notification of each flight of an inspection airplane transporting inspectors.
3. The inspecting Party shall have the right to use airplanes making regularly scheduled commercial flights to transport inspectors to those points of entry that are served by such airplanes. The provisions of this Part shall not apply to airplanes making regularly scheduled commercial flights that are used for the transportation of inspectors to points of entry, and to their aircrews.
4. Each Party may use Open Skies airplanes making observation flights over the territory of the inspected Party for the transportation of inspectors to and/or from the points of entry so long as the inspecting Party complies with the provisions provided for in paragraph 19 of Section V of this Part.
5. The routes for flights of inspection airplanes to and from the points of entry shall be provided in accordance with Part Two of this Protocol. Flight plans shall be filed in accordance with Part Four of this Protocol.
6. The inspected Party shall provide parking, security protection, fueling, air navigation, airport facility, ground technical and commercial services, as well as additional services as requested, for inspection airplanes of the

inspecting Party at the point of entry. The cost of parking, security protection, fueling, air navigation, airport facility, ground technical and commercial services as well as additional services as requested, for each such airplane, shall be borne by the inspecting Party.

Section IV. Activities Beginning Upon Arrival at the Point of Entry

1. The inspection team and aircrew members shall arrive at the point of entry on the territory of the inspected Party that is associated with the inspection activity site. Upon arrival at the point of entry, the in-country escort shall meet the inspection team and aircrew members and shall expedite their entry and the entry of their baggage and equipment intended for use during inspection activities, which shall be exempt from all customs duties and related taxes and charges. The in-country escort shall accompany the inspection team and assist it in exercising its functions during the entire period it is in the territory of the inspected Party. Storage of equipment and supplies at each point of entry shall be within a secure structure or room.
2. As soon as an airplane lands, diplomatic officials from the embassy or consulate of the inspecting Party shall also meet the inspection team and aircrew members. Diplomatic officials may accompany inspectors only during their stay at the point of entry, but may accompany the aircrew members during the entire period they are in the territory of the inspected Party.
3. An inspector shall be considered to have assumed the duties of an inspector upon arrival at the point of entry on the territory of the inspected Party and shall be considered to have ceased performing those duties after departure from the territory of the inspected Party through the point of entry.

4. Equipment that the inspecting Party brings into the country shall be subject to examination each time it is brought into the country. Such equipment shall be examined by the in-country escort, in the presence of inspectors. The purpose of such examination shall be to ascertain to the satisfaction of each Party that the equipment cannot perform functions unconnected with the requirements of inspection activities. The examination of the equipment shall be completed prior to the departure of the inspection team from the point of entry to the inspection activity site. The list of inspection equipment and the procedures for its examination and use are specified in the Annex on Inspection Activities to this Protocol.

5. At the point of entry, the inspection team leader shall, at or before the time for the designation of the inspection site specified in the notification provided in accordance with Part Four of this Protocol, designate, in writing, to the inspected Party through the in-country escort, the type of inspection and the inspection site.

6. For Type One inspections:

(a) A member of the in-country escort shall inform the inspection team leader no later than two hours after designation of the inspection site, prior to the departure of the inspection team to the inspection site, of the number of deployed ICBMs or deployed SLBMs located at the designated base at the time pre-inspection restrictions were implemented, or deployed heavy bombers that are based at the designated base and those temporarily located at such a base at the time pre-inspection restrictions were implemented.

(b) If at the designated base, less than 50 percent of the deployed ICBMs based at the ICBM base are present, less than 30 percent of deployed SLBMs contained in SLBM launchers installed on ballistic missile submarines based at the submarine base are present, or less than 70 percent of the deployed heavy bombers based at the air base are present, no later than one hour after the information contained in

subparagraph (a) of this paragraph has been provided, the inspection team leader shall have the right to:

(i) Inform a member of the in-country escort that the inspection of the designated base shall take place; or

(ii) Designate another inspection site associated with the same point of entry; or

(iii) Decline to conduct the inspection and leave the territory of the inspected Party. In this event, the number of such inspections to which the inspecting Party is entitled shall not be reduced.

(c) For sequential inspections, the procedures provided for in subparagraphs (a) and (b) of this paragraph shall be carried out at the location at which the inspection team leader designates the subsequent inspection site.

7. The activities of inspection teams on the territory of the inspected Party may be covered by the mass media only at the point of entry. The inspected Party shall determine the appropriate procedures.

Section V. General Rules for the Conduct of Inspection Activities

1. Inspectors shall discharge their functions in accordance with this Part.

2. The inspected Party shall provide meals, lodging, work space, transportation, and, as necessary, medical and other urgent services for the inspectors and aircrew members of the inspecting Party throughout the in-country period. Costs of all such services shall be borne by the inspected Party.

3. The inspecting Party shall ensure that its inspectors not publicly disclose information obtained during inspection

activities except with the express consent of the inspecting Party. Such consent shall be granted only with the express consent of the inspected Party. The inspecting Party shall ensure that its inspectors remain bound by this obligation even after termination of their activities as inspectors.

4. The boundaries of the inspection sites shall be the boundaries depicted on the inspection site diagrams that are exchanged by the Parties in accordance with Part Two of this Protocol.

5. In discharging their functions, inspectors shall communicate with personnel of the inspected Party only through the in-country escort. Except as provided for in this Protocol, inspectors shall not interfere with activities being conducted at the inspected facility and shall not hamper or delay the operation of a facility. Inspectors shall take no actions affecting the safe operation of a facility. Inspectors shall observe safety regulations established at the inspection activity site. The in-country escort shall provide safety briefings. The inspected Party shall provide, as necessary, individual protective gear.

6. At the inspection activity site, representatives of the inspected facility shall be included among the in-country escort. The inspected Party shall ensure that a member of the in-country escort at the facility is continuously available to inspectors either in person or by telephone. Throughout the in-country period, the inspected Party shall ensure that the inspectors can be in communication with the embassy of the inspecting Party located on the territory of the inspected Party using telephonic communications provided by the inspected Party. The inspected Party shall also provide means of communication between inspection team subgroups at the inspection activity site. All such means of communication shall be under the control of the inspected Party.

The in-country escort shall ensure necessary lighting for inspectors at the inspection activity site to carry out the procedures provided for in this Protocol.

7. The inspected Party shall transport the inspection team, as well as its equipment and documents, from the point of entry to the inspection site no later than 24 hours after the time of the designation of the inspection site specified in the notification provided in accordance with Part Four of this Protocol.

8. During inspection activities, inspectors shall have the right to use any of the equipment in accordance with the Annex on Inspection Activities to this Protocol for specific kinds of inspection activities, except for cameras, which shall be used only by the inspected Party at the request of the inspecting Party.

9. During inspection activities, inspectors shall have the right to view and make linear measurements of items located at the inspection activity site in order to confirm the accuracy of the declared technical data provided in accordance with Part Two of this Protocol. Such measurements shall be recorded during inspection activities and shall be certified by the signatures of an inspector and a member of the in-country escort immediately after they are taken. Such certified data shall be included in the inspection activity report.

10. For the purposes of this Protocol, an item of inspection, about which technical data has been provided in accordance with Part Two of this Protocol, is understood to mean:

(a) For inspections of heavy bombers at air bases, storage facilities for heavy bombers, and conversion or elimination facilities for heavy bombers within the boundaries depicted on the inspection site diagram, a heavy bomber of the inspected Party.

(b) For inspections at facilities other than those specified in subparagraph (a) of this paragraph, an ICBM or SLBM, a first stage of an ICBM or SLBM maintained, stored, and transported in stages, or a mobile launcher of ICBMs of the inspected Party.

11. For each Party, the size criteria used during inspections shall be provided in accordance with Part Two of this Protocol.

12. During an inspection, inspectors shall have the right to request clarification through the in-country escort. The in-country escort shall provide clarifications that may be useful in resolving questions and ambiguities. In the event questions and ambiguities relating to an object or building located within the inspection site are not resolved, the inspected Party shall photograph such object or such building at the request of the inspecting Party.

13. An inspection team conducting inspection activities shall include no more than ten inspectors. Upon arrival at the inspection activity site, the inspection team leader shall have the right to establish subgroups consisting of no fewer than two inspectors each.

14. Pre-inspection procedures, including safety briefings and the provision of information relating to the conduct of the inspection activities and the inspection activity site, shall begin upon arrival of the inspection team at the inspection activity site and shall be completed within one hour, after which the inspection activities shall begin immediately.

15. Upon completion of pre-inspection procedures, no object, container, or vehicle large enough to be or contain an item of inspection shall leave the inspection site until inspected by the inspection team or released by the inspection team if it does not intend to inspect such object, container, or vehicle. Such inspections shall be conducted so as not to hamper or delay the operation of the facility.

16. Periods of inspection activities shall be as follows:

(a) For Type One inspections at ICBM bases and submarine bases, the period of inspection activities for the inspection of reentry vehicles emplaced on deployed ICBMs or deployed SLBMs shall not exceed the period of time necessary to achieve

the purpose of the inspection and shall terminate upon completion of the inspection procedures. The period of inspection activities for the inspection of non-deployed ICBMs, non-deployed SLBMs, and non-deployed launchers of ICBMs at such bases shall not exceed 24 hours after the completion of the inspection of reentry vehicles emplaced on deployed ICBMs or deployed SLBMs.

(b) For Type One inspections at air bases, the period of inspection activities shall not exceed 30 hours.

(c) For Type Two inspections, except for inspections provided for in subparagraph (d) of this paragraph, the period of inspection activities shall not exceed 24 hours.

(d) For Type Two inspections in order to confirm that solid-fueled ICBMs, solid-fueled SLBMs, silo launchers of ICBMs, or mobile launchers of ICBMs have been eliminated, or to confirm that SLBM launchers or heavy bombers have been converted, the period of inspection activities shall not exceed 12 hours.

(e) For exhibitions, the period of inspection activities shall not exceed the period of time necessary to achieve the purpose of the exhibition.

For inspections, except for Type Two inspections in order to confirm that solid-fueled ICBMs, solid-fueled SLBMs, or mobile launchers of ICBMs have been eliminated, the period of inspection activities may be extended, by agreement with the in-country escort, by no more than eight hours.

17. Post-inspection procedures, which include completing the inspection activity report, shall begin when the period of inspection activities expires and shall be completed as agreed by the Parties.

18. The inspection team shall have the right to conduct sequential inspections. The inspection team that conducted an inspection at a facility shall not have the right to designate

the same facility for conducting a sequential inspection. The procedures for conducting sequential inspections are set forth in the Annex on Inspection Activities to this Protocol.

19. The inspection team shall depart from the territory of the inspected Party no later than 24 hours after its return to the point of entry, unless otherwise agreed.

Section VI. Inspections of ICBMs and SLBMs Including the Warheads on Them, Deployed Heavy Bombers Including the Nuclear Armaments Located on Them, and Deployed and Non-deployed Launchers of ICBMs and Launchers of SLBMs, Conducted in Accordance with Paragraph 2 of Article XI of the Treaty (Type One Inspections)

1. Each Party shall have the right to conduct Type One inspections at the facilities, and for the purposes, listed in this paragraph:

(a) At ICBM bases, submarine bases, and air bases, in order to confirm the accuracy of the declared data, specified for such bases, on the number and types of deployed ICBMs, deployed SLBMs, or deployed heavy bombers, deployed and non-deployed launchers of ICBMs or launchers of SLBMs, non-deployed ICBMs or non-deployed SLBMs, on the number of warheads on deployed ICBMs or deployed SLBMs, or on the number of nuclear armaments located on deployed heavy bombers.

(b) At submarine bases, in order to confirm, as provided for in Part Nine of this Protocol, that converted launchers of SLBMs have not been reconverted and remain incapable of launching SLBMs.

(c) At air bases, in order to confirm, as provided for in Part Nine of this Protocol, that the heavy bombers converted for non-nuclear armaments have not been reconverted and remain incapable of employing nuclear armaments.

2. Each Party shall have the right to conduct a total of no more than ten Type One inspections each year, with no more than two facilities being inspected twice each year. Neither Party shall have the right to conduct a Type One inspection simultaneously with other kinds of inspection activities at the same facility.

3. No later than one hour after the time for the designation of the inspection site specified in the notification provided earlier with respect to such an inspection in accordance with Part Four of this Protocol, the inspected Party shall implement the pre-inspection restrictions specified in the Annex on Inspection Activities to this Protocol at the ICBM base or submarine base, including the waters identified on the coastlines and waters diagram, or at the air base.

4. Inspections at ICBM bases, submarine bases, and air bases shall be conducted in order to confirm:

(a) The accuracy of the declared data on the number and types of deployed and non-deployed launchers of ICBMs located at the ICBM base, or on the number and types of deployed and non-deployed launchers of SLBMs located at the submarine base, at the time pre-inspection restrictions were implemented.

(b) The accuracy of the declared data on the number and types of deployed and non-deployed ICBMs located at the ICBM base, or on the number and types of deployed and non-deployed SLBMs located at the submarine base, or on the number and types of deployed heavy bombers located at the air base, at the time pre-inspection restrictions were implemented.

(c) The actual number of reentry vehicles emplaced on a designated deployed ICBM or emplaced on a designated deployed SLBM, or the number of nuclear armaments located on designated deployed heavy bombers.

5. Upon arrival of the inspection team at the inspection site, a member of the in-country escort shall provide to the inspection team leader, in writing, information on:

(a) For ICBM bases:

(i) The aggregate number of warheads on deployed ICBMs based at the ICBM base;

(ii) The number of deployed ICBMs of each type, based at the ICBM base;

(iii) The number of deployed launchers of ICBMs of each type located at the ICBM base at the time pre-inspection restrictions were implemented;

(iv) The number of reentry vehicles emplaced on each deployed ICBM;

(v) The number of non-deployed launchers of ICBMs of each type located at the ICBM base at the time pre-inspection restrictions were implemented; and

(vi) The number of non-deployed ICBMs of each type, first stages of ICBMs of each type, and fixed structures for mobile launchers of ICBMs located at the ICBM base at the time pre-inspection restrictions were implemented.

In addition, a member of the in-country escort shall provide the inspection team leader with one copy of the simplified site diagram of the ICBM base, one copy of the inspection site diagram of the maintenance facility and, if applicable, one copy of the inspection site diagram of each basing area. The location of each of the declared items located at the ICBM base at the time pre-inspection restrictions were implemented shall be depicted on the site diagrams of facilities. For an ICBM base for mobile launchers of ICBMs, such information shall be provided only for those items located in basing areas and at the maintenance facility.

(b) For submarine bases:

(i) The aggregate number of warheads on deployed SLBMs contained in SLBM launchers installed on ballistic missile submarines based at the submarine base;

(ii) The number of ballistic missile submarines of each type based at the submarine base and the number of deployed SLBMs of each type;

(iii) The number of ballistic missile submarines of each type that contain deployed launchers of SLBMs and the number of deployed launchers of SLBMs of each type located at the submarine base at the time pre-inspection restrictions were implemented;

(iv) The number of reentry vehicles emplaced on each deployed SLBM;

(v) The number of ballistic missile submarines of each type based at the submarine base that contain non-deployed launchers of SLBMs and the number of non-deployed launchers of SLBMs of each type;

(vi) The number of ballistic missile submarines of each type that contain non-deployed launchers of SLBMs and the number of non-deployed launchers of SLBMs of each type located at the submarine base at the time pre-inspection restrictions were implemented; and

(vii) The number of non-deployed SLBMs of each type and first stages of SLBMs of each type located at the submarine base at the time pre-inspection restrictions were implemented.

In addition, a member of the in-country escort shall provide the inspection team leader with one copy of the coastlines and waters diagram of the submarine base, one copy of the simplified site diagram of the submarine base, and one copy of the inspection site diagram of the location at which

non-deployed SLBMs are stored. The location of each of the declared items located at the submarine base at the time pre-inspection restrictions were implemented shall be depicted on the coastlines and waters diagram of the submarine base and the inspection site diagram of the location at which non-deployed SLBMs are stored.

(c) For air bases:

(i) The aggregate number of nuclear warheads counted for deployed heavy bombers based at the air base;

(ii) The number of deployed heavy bombers of each type based at the air base;

(iii) The specific location inside the national territory of the inspected Party of each deployed heavy bomber based at the air base that was absent from that base at the time pre-inspection restrictions were implemented;

(iv) The specific geographic region outside the national territory of the inspected Party where each deployed heavy bomber based at the air base that was absent from that base at the time pre-inspection restrictions were implemented is located;

(v) The number and types of deployed heavy bombers, test heavy bombers, and heavy bombers equipped for non-nuclear armaments located at the air base at the time pre-inspection restrictions were implemented; and

(vi) The number of nuclear armaments located on each deployed heavy bomber located at the air base at the time pre-inspection restrictions were implemented.

In addition, a member of the in-country escort shall provide the inspection team leader with one copy of the inspection site diagram of the air base. The location of each of the declared heavy bombers located at the air base at the

time pre-inspection restrictions were implemented shall be depicted on the inspection site diagram of the air base.

(d) The number and types of items specified for an ICBM base, submarine base, or air base that were absent from the inspection site at the time of the arrival of the inspection team and the reason for the absence of each such item.

(e) In addition, for submarine bases and air bases a member of the in-country escort shall provide to the inspection team leader, in writing, the information as provided for in Part Nine of this Protocol.

6. Upon completion of pre-inspection procedures, the inspection team leader shall designate for inspection, in writing, to a member of the in-country escort, using the geographic coordinates or pre-arranged designators or the site diagrams of facilities or coastlines and waters diagrams provided during pre-inspection procedures:

(a) For ICBM bases, one deployed launcher of ICBMs containing the deployed ICBM intended for inspection. The designated ICBM may be declared as containing reentry vehicles or as not containing reentry vehicles and thereafter shall be subject to inspection in order to confirm the declared number of reentry vehicles emplaced on it.

In addition, the inspection team leader shall have the right to designate for inspection one non-deployed launcher of ICBMs.

For an ICBM base for mobile launchers of ICBMs, the inspection team leader shall have the right to designate for inspection one fixed structure for mobile launchers of ICBMs, located in one of the basing areas that has been declared not to contain a deployed mobile launcher of ICBMs, if such fixed structures for mobile launchers of ICBMs not containing mobile launchers of ICBMs are located at that base.

Mobile launchers of ICBMs located at a maintenance facility may not be designated for inspection to confirm the declared number of reentry vehicles emplaced on deployed ICBMs contained on such mobile launchers of ICBMs.

(b) For submarine bases, one deployed launcher of SLBMs containing the deployed SLBM intended for inspection. The designated SLBM may be declared as containing reentry vehicles or as not containing reentry vehicles and thereafter shall be subject to inspection in order to confirm the declared number of reentry vehicles emplaced on it.

In addition, the inspection team leader shall have the right to designate for inspection one non-deployed launcher of SLBMs.

SLBM launchers installed on a submarine located in dry dock may not be designated for inspection and shall not be subject to inspection.

(c) For air bases, no more than three deployed heavy bombers.

Test heavy bombers may not be designated for inspection and shall not be subject to inspection.

(d) In addition, for submarine bases and air bases, the inspection team leader shall have the right to designate for inspection other items as provided for in Part Nine of this Protocol.

7. The inspected Party shall transport the inspection team to an ICBM launcher, SLBM launcher, fixed structure for mobile launchers of ICBMs, or deployed heavy bombers designated for inspection or to other items designated for inspection in accordance with Part Nine of this Protocol, without undue delay and within the following periods of time:

(a) To a silo launcher of ICBMs, no later than 12 hours after completion of pre-inspection procedures;

(b) To an SLBM launcher or converted launcher of SLBMs, no later than three hours after completion of pre-inspection procedures;

(c) To a mobile launcher of ICBMs or a fixed structure for mobile launchers of ICBMs, no later than five hours after completion of pre-inspection procedures; and

(d) To deployed heavy bombers or heavy bombers converted to heavy bombers equipped for non-nuclear armaments, no later than three hours after completion of pre-inspection procedures.

8. Inspectors shall have the right to read the unique identifiers on all designated deployed ICBMs or designated deployed SLBMs, non-deployed ICBMs, non-deployed SLBMs, and designated heavy bombers that are located at the inspection site, in accordance with the procedures provided for in the Annex on Inspection Activities to this Protocol.

9. The inspection team shall have the right to confirm that ICBMs or SLBMs declared to be training models of missiles are training models of missiles based on differences as provided for in Part Two of this Protocol, unless such items are contained in silo training launchers.

10. For ICBM bases, the inspection team shall have the right to inspect:

(a) The designated deployed launcher of ICBMs in order to confirm the number of reentry vehicles emplaced on the deployed ICBM contained on or in the launcher, as provided for in the Annex on Inspection Activities to this Protocol.

(b) If applicable, the designated non-deployed launcher of ICBMs or designated fixed structure for mobile launchers of ICBMs declared not to contain a mobile launcher of ICBMs, as provided for in the Annex on Inspection Activities to this Protocol.

(c) The maintenance facility in order to confirm the accuracy of the declared data on the number and types of items specified during pre-inspection procedures, as provided for in the Annex on Inspection Activities to this Protocol.

11. For submarine bases, the inspection team shall have the right to inspect:

(a) The designated deployed launcher of SLBMs in order to confirm the number of reentry vehicles emplaced on the deployed SLBM contained in the launcher, as provided for in the Annex on Inspection Activities to this Protocol.

(b) If applicable, the designated non-deployed launcher of SLBMs, as provided for in the Annex on Inspection Activities to this Protocol.

(c) The designated converted launchers of SLBMs, as provided for in Part Nine of the Protocol and in the Annex on Inspection Activities to this Protocol.

(d) The inspection site within the boundaries depicted on the inspection site diagram in order to confirm the accuracy of the declared data on the number and types of items specified during pre-inspection procedures, as provided for in the Annex on Inspection Activities to this Protocol.

12. For air bases, the inspection team shall have the right to inspect:

(a) The designated deployed heavy bombers in order to confirm the number of nuclear armaments located on them, as provided for in the Annex on Inspection Activities to this Protocol.

(b) The designated heavy bombers equipped for non-nuclear armaments, as provided for in Part Nine of this Protocol and in the Annex on Inspection Activities to this Protocol.

(c) Structures within the boundaries depicted on the inspection site diagram of the air base declared not to contain a heavy bomber in order to confirm that such structures do not contain a heavy bomber.

13. If an inspection team conducting an inspection of a designated launcher of ICBMs or launcher of SLBMs declared not to contain a deployed ICBM or deployed SLBM, or a fixed structure for mobile launchers of ICBMs declared not to contain a deployed mobile launcher of ICBMs, discovers that such a launcher or such a fixed structure for mobile launchers of ICBMs contains a deployed ICBM or a deployed SLBM, the inspection team shall have the right to inspect the discovered ICBM or SLBM in order to determine the number of reentry vehicles emplaced on such a deployed ICBM or deployed SLBM in addition to any other designated launchers, and to record the results of such an inspection in the inspection activity report.

If an inspection team conducting an inspection of a designated deployed heavy bomber declared not to contain nuclear armaments discovers that such a heavy bomber contains nuclear armaments, the inspection team shall have the right to inspect such a deployed heavy bomber in order to determine the number of nuclear armaments located on such a heavy bomber, as provided for in the Annex on Inspection Activities to this Protocol, and to record the results of such an inspection in the inspection activity report.

14. For a deployed ICBM or deployed SLBM that was designated for the inspection of reentry vehicles, before the front section is viewed, the inspected Party may cover reentry vehicles and other equipment, including the mounting platform, with individual covers, in such a manner that the covers shall not hamper inspectors in ascertaining that the front section contains the number of reentry vehicles equal to the number of reentry vehicles declared for the deployed ICBM or deployed SLBM. Inspectors shall have the right to view such covers prior to their placement on the reentry vehicles. The inspection team shall conduct an inspection of reentry

vehicles emplaced on a deployed ICBM or deployed SLBM as provided for in the Annex on Inspection Activities to this Protocol.

15. The time of completion of the procedures for the inspection of reentry vehicles for all designated launchers of ICBMs or launchers of SLBMs shall be agreed upon by the inspection team leader and a member of the in-country escort and shall be recorded in the inspection activity report.

16. Upon completion of the procedures provided for in this Section, the inspected Party shall transport the inspection team to the location designated by the inspected Party to conduct post-inspection procedures.

Section VII. Inspections of Non-deployed Strategic Offensive Arms, Converted or Eliminated Strategic Offensive Arms, Deployed Heavy Bombers at Storage Facilities for Heavy Bombers, and Formerly Declared Facilities, Conducted in Accordance with Paragraph 3 of Article XI of the Treaty (Type Two Inspections)

1. Each Party shall have the right to conduct Type Two inspections at the facilities, and for the purposes, listed in this paragraph:

(a) At ICBM loading facilities; SLBM loading facilities; storage facilities for ICBMs, SLBMs, and mobile launchers of ICBMs; repair facilities for ICBMs, SLBMs, and mobile launchers of ICBMs; test ranges; and training facilities, in order to confirm the accuracy of declared technical characteristics and declared data, specified for such facilities, on the number and types of non-deployed ICBMs and non-deployed SLBMs, first stages of ICBMs and SLBMs, and non-deployed launchers of ICBMs.

(b) At formerly declared facilities, which are provided for in Part Two of this Protocol and were subject to

inspection prior to their elimination, in order to confirm that such facilities are not being used for purposes inconsistent with the Treaty. If heavy bombers converted for non-nuclear armaments are based at formerly declared facilities, inspections shall be conducted in accordance with Part Nine of this Protocol in order to confirm that such heavy bombers remain incapable of employing nuclear armaments.

(c) At ICBM bases for silo launchers of ICBMs, in order to confirm that silo launchers of ICBMs have been eliminated in accordance with Part Three of this Protocol. During such inspections, no other items and no other portions of such ICBM bases shall be subject to inspection.

(d) At submarine bases, in order to confirm that SLBM launchers installed on ballistic missile submarines have been converted in accordance with Part Three of this Protocol. During such inspections, no other items and no other portions of such submarine bases shall be subject to inspection.

(e) At conversion or elimination facilities for ICBMs, SLBMs, or mobile launchers of ICBMs, in order to confirm that solid-fueled ICBMs, solid-fueled SLBMs, or mobile launchers of ICBMs have been eliminated in accordance with Part Three of this Protocol.

(f) At conversion or elimination facilities for heavy bombers, in order to confirm that heavy bombers equipped for nuclear armaments have been converted in accordance with Part Three of this Protocol.

(g) At storage facilities for heavy bombers, in order to confirm the accuracy of declared data, specified for such facilities, on the number and types of deployed and non-deployed heavy bombers and on the number of nuclear armaments located on such heavy bombers, in accordance with Part Nine of this Protocol.

2. Except as provided for in Part Nine of this Protocol, each Party shall have the right to conduct a total of no more than

eight Type Two inspections each year, with no more than two such inspections being conducted each year at the same facility.

3. No later than one hour after the time for the designation of the inspection site specified in the notification provided earlier with respect to such an inspection in accordance with Part Four of this Protocol, the inspected Party shall implement, at the designated inspection site, the pre-inspection restrictions specified in the Annex on Inspection Activities to this Protocol, which shall remain in effect until the pre-inspection procedures are completed.

4. Type Two inspections in order to confirm that solid-fueled ICBMs, solid-fueled SLBMs, or mobile launchers of ICBMs have been eliminated shall be conducted after receiving notification in accordance with Part Four of this Protocol from the Party carrying out the elimination of such items:

(a) During the period of time specified in the corresponding notification, when eliminated solid-fueled missiles or eliminated mobile launchers of ICBMs are accumulated at a conversion or elimination facility in a quantity defined in this paragraph; or

(b) At any other period of time, not coinciding with the accumulation specified in subparagraph (a) of this paragraph. In such a case, eliminated solid-fueled missiles or eliminated mobile launchers of ICBMs are not accumulated. Only those eliminated solid-fueled missiles or eliminated mobile launchers of ICBMs located at the conversion or elimination facility at that time shall be subject to inspection.

A Party carrying out an elimination of solid-fueled ICBMs, solid-fueled SLBMs, or mobile launchers of ICBMs shall conduct, within a calendar year, two accumulations of eliminated solid-fueled missiles and two accumulations of eliminated mobile launchers of ICBMs at the appropriate conversion or elimination facility. These accumulations shall be conducted in such a manner that no less than 50 percent of

the total number of missiles and no less than 50 percent of the total number of mobile launchers of ICBMs scheduled for elimination during a calendar year will be made available for inspection during the two inspections conducted during the period of time specified in subparagraph (a) of this paragraph at each appropriate facility. Each such accumulation shall contain approximately 25 percent of the total number of solid-fueled ICBMs or solid-fueled SLBMs, or approximately 25 percent of the total number of mobile launchers of ICBMs, scheduled for elimination during the corresponding calendar year.

The Party conducting the accumulation of eliminated solid-fueled ICBMs, solid-fueled SLBMs, or eliminated mobile launchers of ICBMs shall provide a notification, in accordance with Part Four of this Protocol, of the beginning of such an accumulation.

The Party conducting such an accumulation shall also inform the other Party, in a notification provided in accordance with Part Four of this Protocol, of the date of completion of the accumulation process, the number of eliminated solid-fueled ICBMs or solid-fueled SLBMs, or the number of eliminated mobile launchers of ICBMs, as well as the unique identifiers of the eliminated solid-fueled ICBMs or solid-fueled SLBMs.

5. Upon arrival of the inspection team at the inspection site, a member of the in-country escort shall provide the inspection team leader, in writing, information on the number, and, as applicable, on the type, category, variant, and version of:

(a) For facilities specified in subparagraphs 1(a) and 1(b) of this Section, non-deployed ICBMs, non-deployed SLBMs, first stages of ICBMs and SLBMs, test launchers, training launchers, and non-deployed launchers of ICBMs located at that inspection site at the time pre-inspection restrictions were implemented. At the same time, a member of the in-country escort shall provide the inspection team leader with one copy

of the simplified site diagram of the facility, if applicable, and one copy of the inspection site diagram. The inspection site diagram shall be annotated to depict, if applicable, the location, within the boundaries of the inspection site, of such items and the structures or vehicles in which they are located. If any of the items specified in accordance with Part Two of this Protocol for an inspection site are absent from the inspection site at the time of the arrival of the inspection team at the inspection site, a member of the in-country escort shall inform the inspection team leader of the type and, if applicable, variant, and the reason for the absence of each such item.

(b) For facilities specified in subparagraph 1(c) of this Section, eliminated silo launchers of ICBMs that are subject to inspection. At the same time, a member of the in-country escort shall provide the inspection team leader with one copy of the simplified site diagram of the ICBM base, annotated to depict the location of each such silo launcher of ICBMs.

(c) For facilities specified in subparagraph 1(d) of this Section, converted launchers of SLBMs that are subject to inspection. At the same time, a member of the in-country escort shall provide the inspection team leader with one copy of the coastlines and waters diagram, annotated to depict the location of the ballistic missile submarines on which such converted launchers of SLBMs are installed.

(d) For facilities specified in subparagraph 1(e) of this Section, eliminated solid-fueled ICBMs, solid-fueled SLBMs, or eliminated mobile launchers of ICBMs that are subject to inspection. At the same time, a member of the in-country escort shall provide the inspection team leader with one copy of the inspection site diagram, annotated to depict the location of such eliminated items and the structures or vehicles in which they are located.

(e) For facilities specified in subparagraph 1(f) of this Section, converted heavy bombers that are subject to inspection. At the same time, a member of the in-country

escort shall provide the inspection team leader with one copy of the inspection site diagram, annotated to depict the location of such converted heavy bombers and the structures in which they are located.

(f) For facilities specified in subparagraph 1(g) of this Section, heavy bombers located at the inspection site at the time pre-inspection restrictions were implemented.

6. The inspection team shall have the right to inspect, in accordance with procedures provided for in the Annex on Inspection Activities to this Protocol:

(a) For ICBM loading facilities, SLBM loading facilities, storage facilities for ICBMs, SLBMs, and mobile launchers of ICBMs; repair facilities for ICBMs, SLBMs, and mobile launchers of ICBMs; test ranges; training facilities; and formerly declared facilities other than formerly declared facilities at which heavy bombers converted for non-nuclear armaments are based, the inspection site within the boundaries of the inspection site, including structures large enough to contain an item of inspection. For test ranges the same procedures shall apply, with the following exceptions:

(i) In carrying out the procedures provided for in the Annex on Inspection Activities to this Protocol, the inspected Party shall not be required to remove non-deployed ICBMs or non-deployed SLBMs from test launchers or soft-site launchers. Such non-deployed ICBMs or non-deployed SLBMs shall not be subject to measurement.

(ii) For silo test launchers of ICBMs, regardless of where they are depicted on the simplified site diagram of the test range, the inspection team shall have the right to inspect, at its choice, no more than one silo test launcher of ICBMs that the inspected Party declares not to contain an ICBM or a training model of a missile. Inspection of such a silo launcher of ICBMs shall be conducted in accordance with the procedures provided for in the Annex on Inspection Activities

to this Protocol in order to confirm that it does not contain an ICBM.

(b) For formerly declared facilities at which heavy bombers converted for non-nuclear armaments are based, designated converted heavy bombers, in accordance with Part Nine of this Protocol.

(c) For ICBM bases for silo launchers of ICBMs, eliminated silo launchers of ICBMs, in order to confirm that such silo launchers of ICBMs have been eliminated in accordance with Part Three of this Protocol, and the number of such eliminated silo launchers of ICBMs declared during pre-inspection procedures.

(d) For submarine bases, converted launchers of SLBMs, in order to confirm that such SLBM launchers have been converted in accordance with Part Three of this Protocol, and the number of such converted launchers of SLBMs declared during pre-inspection procedures.

(e) For conversion or elimination facilities for ICBMs, SLBMs, or mobile launchers of ICBMs, eliminated solid-fueled ICBMs, eliminated solid-fueled SLBMs, or eliminated mobile launchers of ICBMs, in order to confirm that such items have been eliminated in accordance with Part Three of this Protocol, and the number of such eliminated items declared during pre-inspection procedures.

(f) For conversion or elimination facilities for heavy bombers, heavy bombers converted for non-nuclear armaments, in order to confirm that such heavy bombers have been converted in accordance with Part Three of this Protocol, and the number of such converted heavy bombers declared during pre-inspection procedures.

(g) For storage facilities for heavy bombers, all deployed heavy bombers, in accordance with Part Nine of this Protocol.

7. Inspectors shall have the right to read the unique identifiers on all non-deployed ICBMs, non-deployed SLBMs, eliminated solid-fueled ICBMs, eliminated solid-fueled SLBMs, as well as on all heavy bombers, located at the inspection site, except for ICBMs or SLBMs contained in test launchers and in soft-site launchers of ICBMs and SLBMs.

8. The inspection team shall have the right to confirm that all launch canisters located within the boundaries of the inspection site declared to be empty are, in fact, empty.

9. Notwithstanding other provisions of this Protocol, silo training launchers of ICBMs and test heavy bombers shall not be subject to inspection.

10. The inspection team shall have the right to confirm that ICBMs or SLBMs declared to be training models of missiles are training models of missiles based on differences as provided for in Part Two of this Protocol, unless such items are contained in test launchers or in silo training launchers.

Section VIII. Exhibitions

1. Exhibitions shall be conducted at the invitation of the Party conducting the exhibition, separately from inspections, at the locations and in the periods of time chosen by the Party conducting the exhibition, and in accordance with the Annex on Inspection Activities to this Protocol.

2. Each Party shall conduct exhibitions, and shall have the right to take part in exhibitions conducted by the other Party, in order to demonstrate the distinguishing features and to confirm technical characteristics of each new type, variant, or version of an ICBM, SLBM, heavy bomber equipped for nuclear armaments, and, as provided for in Part Two of this Protocol, an ICBM launcher, in the periods of time specified in corresponding notifications. If a Party declares a type, variant, or version of a strategic offensive arm prior

to or at the time of entry into force of the Treaty for which no exhibition had been previously conducted in connection with fulfilling the requirements of the START Treaty, that Party shall conduct an exhibition. Such an exhibition shall be conducted no later than the date on which inspection activities begin, as provided for in Section I of this Part.

3. Each Party shall conduct exhibitions, and shall have the right to take part in exhibitions conducted by the other Party, in order to demonstrate the results of the conversion of the first item of a type of ICBM launcher, SLBM launcher, or heavy bomber equipped for nuclear armaments that was converted using conversion procedures in accordance with Part Three of this Protocol in the periods of time specified in corresponding notifications.

4. Each Party shall conduct exhibitions, and shall have the right to take part in exhibitions conducted by the other Party, as provided for in Part Nine of this Protocol.

Section IX. Cancellation of Inspection Activities

1. An inspection activity shall be cancelled if, due to circumstances brought about by *force majeure*, it cannot be conducted. If an inspection is cancelled due to circumstances brought about by *force majeure*, the number of inspections to which the inspecting Party is entitled shall not be reduced. For exhibitions cancelled due to circumstances brought about by *force majeure*, the Parties shall agree on the new periods of time for conducting such exhibitions.

2. In the case of a delay, including a delay due to circumstances brought about by *force majeure*, that prevents an inspection team from arriving at the inspection site during the time specified in paragraph 7 of Section V of this Part, the inspection team leader may cancel or conduct the inspection. If an inspection is canceled for that reason, the

number of inspections to which the inspecting Party is entitled shall not be reduced.

3. At the inspection site, if the time to transport an inspection team or subgroup exceeds the corresponding time specified in paragraph 7 of Section VI of this Part, the inspection team leader may cancel or conduct the inspection. If an inspection is canceled for that reason, the number of inspections to which the inspecting Party is entitled shall not be reduced.

4. If, due to circumstances brought about by *force majeure*, it is necessary to remove items subject to pre-inspection restrictions from the inspection site, the inspection team leader may cancel or conduct the inspection. If an inspection is canceled for that reason, the number of inspections to which the inspecting Party is entitled shall not be reduced.

5. If the inspected Party interrupts the inspection for reasons of personnel security or equipment safety, the inspection team leader may cancel or conduct the inspection. If an inspection is canceled for such reasons, the number of inspections to which the inspecting Party is entitled shall not be reduced.

Section X. Inspection Activity Reports

1. During post-inspection procedures, the inspection team leader shall provide the in-country escort with an inspection activity report in written form, in two originals, each in the English and Russian languages.

2. The report shall contain factual information. It shall indicate the kind of inspection activities conducted, the inspection activity site, the type and number of strategic offensive arms subject to the Treaty that were declared during the pre-inspection procedures and that were observed during

the period of inspection activities, and all measurements recorded during the period of inspection activities.

3. Site diagrams of facilities, coastlines and waters diagrams, and information provided, in writing, to the inspection team leader during pre-inspection procedures, as well as photographs taken during the period of inspection activities, shall be an integral part of the inspection activity report. The report shall be signed by the inspection team leader and by a member of the in-country escort. The inspecting Party shall have the right to include in the report ambiguities or comments. The inspected Party shall have the right to include clarifications in the report. Each Party shall retain one original of the report.

4. The Parties shall, when possible, clarify ambiguities regarding factual information contained in the inspection activity report. Relevant clarifications shall be recorded in the report.

PART SIX - BILATERAL CONSULTATIVE COMMISSION

Section I. Authority of the Bilateral Consultative Commission (BCC)

To promote the implementation of the provisions of the Treaty, the Parties within the framework of the BCC shall:

- (a) Resolve questions relating to compliance with the obligations assumed by the Parties.
- (b) Agree upon such additional measures as may be necessary to improve the viability and effectiveness of the Treaty.
- (c) Discuss the unique features of missiles and their launchers, other than ICBMs and ICBM launchers, or SLBMs and SLBM launchers, referred to in paragraph 3 of Article V of the Treaty, that distinguish such missiles and their launchers from ICBMs and ICBM launchers, or SLBMs and SLBM launchers.
- (d) Resolve questions related to the applicability of provisions of the Treaty to a new kind of strategic offensive arm.
- (e) Discuss other issues raised by either Party.

Section II. Composition

1. Each Party shall communicate to the other Party through diplomatic channels the names of its designated Commissioner and Deputy Commissioner to the BCC.
2. Each Party shall have the right to be represented at a session of the BCC by its Commissioner and Deputy Commissioner as well as by their alternates, members, advisors, and experts. A session of the BCC may be convened without the

participation of the Commissioner and Deputy Commissioner. In such a case, any other individual provided for in this paragraph may be the head representative of the Party to a session of the BCC.

3. The BCC shall have the right to constitute working groups consisting of any of the individuals provided for in paragraph 2 of this Section for the consideration of specific questions raised in the BCC.

Section III. Convening a Session

1. A session of the BCC shall be convened at the request of either Party. No later than 15 days after receiving such a request, the requested Party shall submit a response. Requests and responses shall include the following:

(a) The questions that the Party intends to raise.

(b) The name of the Commissioner, Deputy Commissioner, or the head representative of the Party.

(c) The proposed, accepted or alternate date and location for the convening of the session.

Each Party may also submit additional questions to the other Party prior to the convening of the session.

No fewer than two sessions of the BCC shall be convened each year, unless otherwise agreed.

2. A session of the BCC shall be convened not later than 45 days after the date proposed in the request provided for in paragraph 1 of this Section.

3. A session of the BCC shall be convened in Geneva, Switzerland, and shall remain in session for no more than 15 days, unless otherwise agreed.

4. The Commissioners of the Parties may communicate with each other during the intersessional period in order to clarify any unclear situations or to resolve questions.

Section IV. Agenda

1. The agenda for a session of the BCC shall consist of those questions that the Parties have specified in the communications provided to each other in accordance with paragraph 1 of Section III of this Part.

2. Each Party shall have the right to raise in the BCC questions that arise during a session of the BCC, provided, however, that consideration of such questions during the current session requires agreement of the Parties. In case of such agreement, the Parties shall allow sufficient time prior to consideration of such questions for preparation and for any changes in the composition of their delegations.

Section V. Work of the BCC

The work of the BCC shall be confidential, except as otherwise agreed by the BCC. The BCC may record agreements reached or the results of its work in an appropriate document, which shall be done in two originals, each in the English and Russian languages, both texts being equally authentic. Such documents shall not be confidential, except as otherwise agreed by the BCC.

Section VI. Costs

Each Party shall bear the cost of its participation in the work of the BCC.

Section VII. Communications

Communications in accordance with this Part shall be provided through diplomatic channels or through the Nuclear Risk Reduction Centers of the Parties.

Section VIII. Additional Procedures

The Parties shall have the right to agree upon additional procedures governing the operation of the BCC.

PART SEVEN - TELEMETRIC INFORMATION

1. The Parties shall exchange telemetric information on an equal number of launches of ICBMs and SLBMs, but on no more than five launches of ICBMs and SLBMs each calendar year.
2. On an annual basis, within 65 days of the beginning of the calendar year, within the framework of the BCC, the Parties shall discuss the issue of the exchange of telemetric information on launches of ICBMs and SLBMs, focusing on launches conducted in the previous calendar year, on which an exchange of telemetric information will be carried out. Following discussion within the framework of the BCC, the Parties shall take an agreed decision on the number of such launches. The specific launches of ICBMs and SLBMs, on which telemetric information is provided, shall be determined by the conducting Party.
3. The conditions of and the procedures for the exchange, and the amount of telemetric information provided shall be determined in accordance with the Annex on Telemetric Information to this Protocol.

PART EIGHT - PROVISIONAL APPLICATION

Section I. General Provisions

Until entry into force of the Treaty, the provisions of the Treaty and this Protocol, listed in this Part, shall apply provisionally from the date of signature of the Treaty.

Section II. The Treaty

1. Paragraph 2 of Article I.
2. Paragraph 8 of Article III.
3. Paragraph 2 of Article V.
4. Paragraph 1 of Article VI.
5. Paragraph 1 of Article VII.
6. Paragraph 2 of Article VII, only to the extent required to provide the notifications provided for in this Part.
7. Paragraph 3 of Article VII.
8. Paragraph 4 of Article VII.
9. Paragraph 5 of Article VII.
10. Paragraph 6 of Article VII.
11. Article VIII.
12. Article X.
13. Article XII.

Section III. The Protocol

1. Part One.
2. Paragraphs 1, 2, 4, 6, and 7 of Section I of Part Two.
3. Paragraph 3 of Section IX of Part Two.
4. Part Three, only to the extent required for the implementation of this Part, but not to provide notifications on conversion or elimination or to make eliminated items visible to national technical means of verification.
5. Paragraphs 1 and 2 of Section I of Part Four.
6. Paragraphs 5 and 6 of Section III of Part Four.
7. Paragraph 1 of Section IV of Part Four.
8. Section VII of Part Four.
9. Part Six.
10. Section I of Part Eight.

PART NINE - AGREED STATEMENTS

First Agreed Statement

Converted B-1B Heavy Bombers

The Parties agree that, with respect to all B-1B heavy bombers equipped for nuclear armaments converted to heavy bombers equipped for non-nuclear armaments, and the facilities at which they are based, the following provisions shall apply.

1. No later than one year after entry into force of the Treaty, the United States of America shall conduct a one-time exhibition of a B-1B heavy bomber equipped for non-nuclear armaments to demonstrate that the B-1B heavy bomber is incapable of employing nuclear armaments:

(a) Such an exhibition shall be conducted, as applicable, in accordance with the procedures of an exhibition specified in the Annex on Inspection Activities to this Protocol, as provided for in Section VIII of Part Five of this Protocol, to demonstrate the features that distinguish a heavy bomber equipped for nuclear armaments from a heavy bomber equipped for non-nuclear armaments converted in accordance with the procedures provided for in Part Three of this Protocol.

(b) On the basis of the results of the exhibition of the differences between a heavy bomber equipped for nuclear armaments and a heavy bomber equipped for non-nuclear armaments, the distinguishing features shall be recorded in the inspection activity report and shall be applied thereafter for identification of B-1B heavy bombers equipped for non-nuclear armaments.

(c) All B-1B heavy bombers that have been converted prior to the completion of such an exhibition and that have the recorded distinguishing features shall be included in the category of heavy bombers equipped for non-nuclear armaments.

2. Upon completion of the conversion of the last B-1B heavy bomber to a heavy bomber equipped for non-nuclear armaments, with respect to all such converted B-1B heavy bombers and the eliminated facilities at which they are based, the following procedures shall apply:

(a) The United States of America shall notify the Russian Federation that Ellsworth Air Force Base, South Dakota, United States of America, and Dyess Air Force Base, Texas, United States of America, have been eliminated when all B-1B heavy bombers based there have been converted to heavy bombers equipped for non-nuclear armaments.

(b) Eliminated facilities where converted B-1B heavy bombers are based may be inspected as formerly declared facilities. Such inspections shall fall within the annual quota for Type Two inspections established in Section VII of Part Five of this Protocol. No more than one such inspection may be conducted each year at either Ellsworth Air Force Base or Dyess Air Force Base.

(c) During the inspection, in order to confirm the distinguishing features of the designated B-1B heavy bombers that indicate that the designated B-1B heavy bomber remains incapable of employing nuclear armaments, the Russian Federation shall use inspection procedures in accordance with the Annex on Inspection Activities to this Protocol as provided for in Section VII of Part Five of this Protocol, with the following changes:

(i) At the point of entry, which for such an inspection is Travis Air Force Base, California, United States of America, the inspection team that has designated either Ellsworth Air Force Base or Dyess Air Force Base for a formerly declared facility inspection shall be provided information on the number of B-1B heavy bombers located at the base at that time. If less than 50 percent of such heavy bombers based at that base are present, the inspection team leader shall have the right to:

(A) Inform a member of the in-country escort that the inspection of the designated base shall take place; or

(B) Designate another inspection site associated with the same point of entry; or

(C) Decline to conduct the inspection and leave the territory of the inspected Party. In this event the number of such inspections to which the inspecting Party is entitled shall not be reduced.

(ii) Upon the arrival of the inspection team at the formerly declared facility, a member of the in-country escort shall provide the inspection team leader with an inspection site diagram of the formerly declared facility annotated to depict the location of each of the B-1B heavy bombers located at the base;

(iii) Upon completion of the pre-inspection procedures, the inspection team leader shall designate for inspection no more than three B-1B heavy bombers equipped for non-nuclear armaments;

(iv) The inspection team shall have the right to inspect each of the three designated B-1B heavy bombers to confirm that these heavy bombers remain incapable of employing nuclear armaments; and

(v) The results of such an inspection shall be recorded in the inspection activity report.

3. Upon completion of the conversion of all B-1B heavy bombers equipped for nuclear armaments to heavy bombers equipped for non-nuclear armaments, such converted heavy bombers shall not be subject to a Type One inspection when those heavy bombers are present at an air base at the time pre-inspection restrictions were implemented at the base.

4. If either Party decides to convert all heavy bombers of another type that are equipped for nuclear armaments to heavy

bombers equipped for non-nuclear armaments, such heavy bombers converted in accordance with Part Three of this Protocol shall also be subject to the aforementioned verification measures.

Second Agreed Statement

U.S. Submarines Equipped with Launchers of Cruise Missiles Converted from Ballistic Missile Submarines

The Parties agree that the following provisions shall apply to the U.S. submarines equipped with launchers of cruise missiles converted from ballistic missile submarines, known to the United States of America as "SSGNs" and to the Russian Federation as "PLARK":

1. In order to provide assurances that all four U.S. SSGNs are incapable of launching SLBMs, the following provisions shall apply with respect to such submarines:

(a) No later than three years after entry into force of the Treaty, the United States of America shall conduct an initial one-time exhibition of each of these four SSGNs. The purpose of such exhibitions shall be to confirm that the launchers on such submarines are incapable of launching SLBMs. Such an exhibition shall be conducted in order to confirm that that an SLBM launcher has been converted, as provided for in Section VIII of Part Five of this Protocol, and, as applicable, in accordance with the procedures for an exhibition specified in the Annex on Inspection Activities to this Protocol.

(b) After completion of the initial exhibitions, the United States of America shall periodically provide an opportunity for the Russian Federation to confirm that none of the launchers on the four SSGNs has been reconverted and each of them remains incapable of launching an SLBM. In order to provide assurances that the launchers on such a submarine have not been reconverted and remain incapable of launching SLBMs,

the Russian Federation shall have the right, while conducting a Type One inspection at a submarine base, to inspect the designated launchers on an SSGN if such a submarine is located at the submarine base. Throughout the duration of the Treaty, the number of such inspections shall not exceed a total of six inspections for all four SSGNs existing at the time of entry into force of the Treaty, and the number of such inspections shall not exceed two inspections for each SSGN.

The coastlines and waters diagram of the inspected submarine base, provided during the pre-inspection procedures, shall depict the locations of all ballistic missile submarines and SSGNs located at that time at the submarine base.

(c) An inspection of a launcher on an SSGN shall be conducted in accordance with Part Five of this Protocol and in accordance with procedures provided for in the Annex on Inspection Activities to this Protocol for conducting an inspection of an SLBM launcher that does not contain a deployed SLBM, with the following changes:

(i) The SSGNs at the designated submarine base shall be subject to pre-inspection restrictions specified in paragraph 3 of Section VI of Part Five of this Protocol and shall be subject to inspection. After pre-inspection restrictions were implemented, no temporary shelters shall be installed over the launchers on the SSGN. If temporary shelters were installed before pre-inspection restrictions were implemented, the launchers on an SSGN under these shelters shall not be subject to inspection. The total number of such launchers on a single SSGN that are not subject to inspection because they are under such shelters shall not exceed eight launchers;

(ii) Upon arrival of the inspection team at the submarine base, a member of the in-country escort shall provide to the inspection team leader, in writing, in addition to the information provided for in subparagraph 5(b) of Section VI of Part Five of this Protocol, information on the

number of SSGNs subject to inspection pursuant to this Agreed Statement and on the number of launchers on those submarines;

(iii) The inspection team leader shall have the right to designate for inspection two launchers on an SSGN, if an SSGN is located at that base, instead of one non-deployed launcher of SLBMs;

(iv) The inspection team shall have the right to inspect the designated launchers on the SSGN in order to confirm that the designated launchers remain incapable of launching SLBMs; and

(v) The results of such an inspection shall be recorded in the inspection activity report.

2. If either Party converts a ballistic missile submarine to a submarine equipped with launchers of cruise missiles, such a submarine shall be subject to the measures specified in this Agreed Statement, and an additional number of inspections shall be agreed within the framework of the BCC.

Third Agreed Statement

Joint Basing of Heavy Bombers Equipped for Nuclear Armaments and Heavy Bombers Equipped for Non-nuclear Armaments

The Parties agree that, notwithstanding paragraph 9 of Article IV of the Treaty, each Party shall have the right, at an air base, to carry out joint basing of heavy bombers of a type equipped for nuclear armaments and heavy bombers of the same type that have been converted to heavy bombers equipped for non-nuclear armaments in accordance with Part Three of this Protocol, until the last heavy bomber of such a type has been converted to a heavy bomber equipped for non-nuclear armaments.

1. All heavy bombers of a type located at an air base at which joint basing of heavy bombers is carried out shall be subject to inspection until the last heavy bomber of that type equipped for nuclear armaments has been converted to a heavy bomber of the same type equipped for non-nuclear armaments. In this connection, an inspection of heavy bombers declared during pre-inspection procedures to be equipped for nuclear armaments shall fall within the annual inspection quota for Type One inspections established in Section VI of Part Five of this Protocol. During the same inspection, heavy bombers of the same type declared to be converted heavy bombers may be inspected in order to confirm that they have not been reconverted and remain incapable of employing nuclear armaments.

2. The inspection of an air base at which heavy bombers equipped for nuclear armaments and heavy bombers of the same type converted to heavy bombers equipped for non-nuclear armaments are jointly based shall be conducted in accordance with Part Five of this Protocol, using the following modified Type One inspection procedures:

(a) If the inspection team has designated for inspection such an air base, a member of the in-country escort shall provide to the inspection team leader, in addition to the information specified in paragraph 6 of Section IV of Part Five of this Protocol that pertains to deployed heavy bombers of a type, information on the number of heavy bombers of the same type converted to heavy bombers equipped for non-nuclear armaments located at that time at that air base;

(b) The heavy bombers equipped for nuclear armaments and the heavy bombers of the same type converted to heavy bombers equipped for non-nuclear armaments located at that air base shall be subject to the pre-inspection restrictions specified in paragraph 3 of Section VI of Part Five of this Protocol;

(c) Upon the arrival of the inspection team at the air base, a member of the in-country escort shall provide to the inspection team leader, in writing, in addition to the

information provided for in subparagraph 5(c) of Section VI of Part Five of this Protocol, information on the number and type of heavy bombers converted into heavy bombers equipped for non-nuclear armaments located at the air base at the time pre-inspection restrictions were implemented. In addition, an inspection site diagram of the air base, depicting the location of all such heavy bombers converted to heavy bombers equipped for non-nuclear armaments, shall be provided;

(d) Upon completion of the pre-inspection procedures, the inspection team leader shall designate for inspection no more than three deployed heavy bombers depicted on the inspection site diagram of the air base. The inspection team shall have the right to inspect the designated deployed heavy bombers in order to confirm the number of nuclear armaments located on them;

(e) In addition, the inspection team shall have the right to inspect, if so designated, no more than two heavy bombers of the same type converted to heavy bombers equipped for non-nuclear armaments in order to confirm that such heavy bombers remain incapable of employing nuclear armaments; and

(f) The results of such an inspection shall be recorded in the inspection activity report.

Fourth Agreed Statement

Deployed Heavy Bombers Located at Davis-Monthan Air Force Base

The Parties agree that U.S. heavy bombers equipped for nuclear armaments awaiting conversion or elimination may be located at the storage facility for heavy bombers at Davis-Monthan Air Force Base, Arizona, United States of America. Each such heavy bomber shall remain based at a declared air base and shall be considered to be a deployed heavy bomber until it is converted or eliminated in accordance with Part Three of this Protocol.

1. In order to provide assurances that deployed heavy bombers located at the storage facility for heavy bombers at Davis-Monthan Air Force Base do not have nuclear armaments located on them, the following provisions shall apply.

2. For the purposes of this Agreed Statement, the term "environmentally-sealed heavy bomber" means a heavy bomber that has undergone the process of comprehensive sealing of an aircraft in a manner that protects it from the effects of dust, humidity, sunlight, and extreme temperatures, which may include the sealing of access panels, doors, plates, and other small openings.

3. In order to confirm that the environmentally-sealed heavy bomber has no nuclear armaments on board, no later than 120 days after entry into force of the Treaty, the United States of America shall conduct a one-time exhibition of one environmentally-sealed deployed heavy bomber of each type located at the storage facility at Davis-Monthan Air Force Base. Such an exhibition shall be conducted in accordance with Part Five of this Protocol and the procedures set forth in this paragraph after receipt of the appropriate notifications:

(a) Upon the arrival of the inspection team at the storage facility, a member of the in-country escort shall provide to the inspection team leader, in writing, information on the number and types of environmentally-sealed deployed heavy bombers located at the storage facility. In addition, an inspection site diagram of the storage facility for heavy bombers, annotated to depict the location of all such heavy bombers, shall be provided.

(b) Upon completion of the pre-inspection procedures, the inspection team leader shall designate for exhibition no more than one environmentally-sealed deployed heavy bomber of each type depicted on the inspection site diagram of the storage facility for heavy bombers.

(c) Upon the arrival of the inspection team at a designated heavy bomber, the in-country escort shall prepare the heavy bomber for viewing. The inspection team shall have the right to maintain uninterrupted visual contact with each designated heavy bomber while that heavy bomber is being prepared for viewing.

(d) During the exhibition:

(i) The inspection team shall have the right to inspect a designated environmentally-sealed deployed heavy bomber of each type by viewing the interior of the weapons bays of such a heavy bomber from a location designated by the in-country escort, in order to confirm that such a heavy bomber does not have nuclear armaments located on it.

(ii) For all remaining environmentally-sealed deployed heavy bombers declared during pre-inspection procedures, the inspection team shall have the right to view the exterior of each such heavy bomber in order to confirm the comprehensive sealing of the airplane and to read the unique identifier on it.

(iii) Except for heavy bombers designated for further inspection in accordance with subparagraph (i) of this subparagraph, the inspection team shall not have the right to view the interior portions of any other environmentally-sealed heavy bomber.

(e) After the exhibition, the inspection team shall apply, in a manner agreed by the Parties, unique tamper-proof seals to all weapons bays of each environmentally-sealed heavy bomber that has been inspected.

(f) The results of such an exhibition, including unique identifiers of heavy bombers and the locations of unique tamper-proof seals, shall be recorded in the inspection activity report.

4. After the exhibition provided for in paragraph 3 of this Agreed Statement has been conducted, deployed heavy bombers located at the storage facility shall be subject to Type Two inspections in accordance with Section VII of Part Five of this Protocol. Such inspections shall fall within the annual inspection quota for Type Two inspections. During such inspections the following procedures shall apply:

(a) Upon the arrival of the inspection team at the storage facility, a member of the in-country escort shall provide to the inspection team leader, in writing, information on the number and types of all deployed heavy bombers located at the storage facility, as well as the condition of each such heavy bomber. In addition, an inspection site diagram of the storage facility for heavy bombers, annotated to depict the location of all such heavy bombers, shall be provided.

(b) Upon completion of the pre-inspection procedures, the inspection team leader shall designate for inspection no more than three deployed heavy bombers that are not environmentally-sealed and that are depicted on the inspection site diagram of the storage facility for heavy bombers.

(c) The inspection team shall have the right to inspect all deployed heavy bombers located at the storage facility at the time pre-inspection restrictions were implemented in order to confirm the data on the number and types of these heavy bombers.

(d) Environmentally-sealed heavy bombers may be inspected only by viewing the exterior of such heavy bombers in order to confirm the number and type of such heavy bombers, to read the unique identifiers on them, and to verify that the unique tamper-proof seals have not been damaged. In the event that the unique tamper-proof seals on a heavy bomber have been damaged, the inspected Party shall provide an explanation of the reason for such damage. In the event that the explanation is judged to be unsatisfactory, such a heavy bomber may be inspected by viewing the interior of the weapons bay, and the

unique tamper-proof seals may be re-applied to the weapons bay.

(e) Upon the arrival of the inspection team at designated heavy bombers, the in-country escort shall prepare the heavy bombers for viewing. The inspection team shall have the right to maintain uninterrupted visual contact with each designated heavy bomber while the heavy bomber is being prepared for viewing.

(f) For deployed heavy bombers designated for inspection in accordance with subparagraph (b) of this paragraph, the inspection team shall have the right to inspect such heavy bombers by viewing the interior of the weapons bays of such heavy bombers from a location designated by the in-country escort, in order to confirm that such heavy bombers do not have nuclear armaments located on them.

(g) Deployed heavy bombers may be inspected only to the extent that the condition of such heavy bombers allows such procedures to be carried out.

5. If an environmentally-sealed deployed heavy bomber of a type subject to the Treaty and not exhibited during the exhibition conducted in accordance with paragraph 3 of this Agreed Statement is located at the storage facility at Davis-Monthan Air Force Base after such an exhibition, the United States of America shall conduct a similar exhibition of one environmentally-sealed deployed heavy bomber of that type. Such an exhibition shall be conducted in accordance with paragraph 3 of this Agreed Statement.

Fifth Agreed Statement

Rapid Reload of ICBM and SLBM Launchers

The Parties agree that the production, testing, or deployment of systems designed for the rapid reload of ICBM

launchers and SLBM launchers is unwarranted and should not be pursued by either Party.

Sixth Agreed Statement

Use of Telemetric Information

The Parties agree that the exchange of telemetric information within the framework of the Treaty is designed to help forge a new strategic relationship of the Parties, not for undermining the potential of the strategic offensive arms of the Parties.

Seventh Agreed Statement

Converted Silo Launchers of ICBMs at Vandenberg Air Force Base

The Parties agree that, with respect to the five converted silo launchers of ICBMs located at Vandenberg Air Force Base, California, United States of America, that were converted prior to signature of the Treaty, the following provisions shall apply.

1. In order to provide assurances that all five converted silo launchers of ICBMs remain incapable of launching ICBMs, no later than three years after entry into force of the Treaty, the United States of America shall conduct a one-time exhibition of the five converted silo launchers of ICBMs. The purpose of such an exhibition shall be to demonstrate that these launchers are no longer capable of launching ICBMs as well as to determine the features that distinguish a converted silo launcher of ICBMs from a silo launcher of ICBMs that has not been converted. On the basis of the results of such an exhibition, the distinguishing features shall be recorded in the inspection activity report. Such an exhibition shall be conducted, as applicable, in accordance with the procedures

for an exhibition specified in the Annex on Inspection Activities to this Protocol, as provided for in Section VIII of Part Five of this Protocol.

2. After the initial exhibition of all five converted silo launchers of ICBMs, the United States of America shall conduct one additional exhibition of the five converted silo launchers of ICBMs to demonstrate that the previously recorded distinguishing features remain unchanged, that the launchers have not been reconverted, and that the launchers remain incapable of launching ICBMs. Such an exhibition shall be conducted at an agreed time, but no later than 30 days after the receipt of a request thereof from the Russian Federation.

Eighth Agreed Statement

Non-nuclear Objects Located on the Front Section of an ICBM or SLBM

1. The Parties agree that, considering military utility, only nuclear-armed reentry vehicles and non-nuclear objects other than reentry vehicles may be simultaneously located on a front section of an ICBM or SLBM.

2. Such non-nuclear objects located on the front section of an ICBM or SLBM that has been declared to be equipped with no less than one nuclear-armed reentry vehicle shall not be counted against the aggregate limit provided for in subparagraph 1(b) of Article II of the Treaty.

3. The Parties shall have the right to confirm that such non-nuclear objects are not nuclear-armed reentry vehicles, using procedures contained in the Annex on Inspection Activities to this Protocol.

Ninth Agreed Statement

Conversion of Individual Launchers of SLBMs

1. The Parties agree that launchers converted in accordance with Part Three of this Protocol that are incapable of launching SLBMs may simultaneously be located on a ballistic missile submarine.

2. Within the 30-day period after provision of notification of the completion of the conversion of the first launcher of SLBMs installed on a specific type of ballistic missile submarine, the Party that carried out such a conversion shall conduct a one-time exhibition of a converted launcher and an SLBM launcher that has not been converted.

(a) The purpose of such an exhibition shall be to demonstrate the distinguishing features of a converted launcher and an SLBM launcher that has not been converted.

(b) On the basis of the results of the exhibition, the distinguishing features shall be recorded in the inspection activity report and shall be used thereafter for conducting inspections.

3. Upon completion of the conversion procedures in accordance with paragraphs 6 and 7 of Section IV of Part Three of this Protocol, the specified converted launchers shall not be counted against the aggregate limit provided for in subparagraph 1(c) of Article II of the Treaty.

4. Throughout the duration of the Treaty, in order to provide assurances that converted launchers installed on ballistic missile submarines have not been reconverted and remain incapable of launching SLBMs, upon completion of the period of inspection of each launcher provided for in paragraph 7 of Section IV of Part Three of this Protocol, converted launchers shall remain subject to inspection during Type One inspections at submarine bases.

5. The inspection of a converted launcher installed on a ballistic missile submarine shall be conducted in accordance with Section VI of Part Five of this Protocol, with the following changes:

(a) Upon the arrival of the inspection team at the submarine base, a member of the in-country escort shall provide to the inspection team leader, in writing, in addition to the information provided for in subparagraph 5(b) of Section VI of Part Five of this Protocol, information on the number of converted launchers installed on ballistic missile submarines subject to pre-inspection restrictions, including the location of each converted launcher installed on each ballistic missile submarine.

(b) The inspection team leader shall have the right to designate for inspection one converted launcher installed on a ballistic missile submarine in addition to SLBM launchers, the inspection of which is provided for in subparagraph 6(b) of Section VI of Part Five of this Protocol.

(c) The designated converted launcher must be installed on the same ballistic missile submarine as the designated deployed launcher of SLBMs.

(d) A subgroup of no more than five inspectors shall have the right to inspect the designated converted launcher to confirm that the converted launcher remains incapable of launching an SLBM, using each of the recorded distinguishing features for such a launcher.

(e) The results of such an inspection and confirmation of each of the distinguishing features shall be recorded in the inspection activity report.

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Tenth Agreed Statement

Customs Duties and Taxes

The Parties agree that all equipment, recording media, and supporting documentation for such media, as well as tools required for installation, provided by a Party and imported into the territory of the other Party for the purposes of the Treaty, shall be exempt from any customs duties and related taxes and charges.

PART TEN - FINAL PROVISIONS

1. The Parties may agree to additional procedures for the implementation of this Protocol. Such procedures shall be contained in Annexes which shall be an integral part of this Protocol.
2. This Protocol shall enter into force on the date of entry into force of the Treaty and shall remain in force so long as the Treaty remains in force.

Done at Prague, this eighth day of April, 2010, in two originals, each in the English and Russian languages, both texts being equally authentic.

FOR THE
UNITED STATES OF AMERICA:

FOR THE
RUSSIAN FEDERATION:

A large, stylized handwritten signature in black ink, likely belonging to a high-ranking official of the United States.A handwritten signature in black ink, likely belonging to a high-ranking official of the Russian Federation.

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Fact Sheet on U.S.-India Space Cooperation

President Barack Obama and Prime Minister Manmohan Singh agreed to scale up joint U.S.-India space collaboration for the benefit of humanity. They recognized a natural partnership exists between India's dynamic human enterprise and the U.S. storied history of space exploration. In addition, they noted that their respective private sectors would be significant force multipliers in any effort to advance joint space exploration.

The leaders pledged to build closer ties in space exploration and earth observation through a Joint Civil Space Working Group meeting to be held in 2011. India and the United States will also focus on cooperation in the safety and security of outer space activities.

In addition to our rapidly expanding bilateral cooperation, the United States is encouraged by India's increasingly active participation in multilateral fora on space cooperation, including the Committee on Earth Observation Satellites (CEOS) and the intergovernmental Group on Earth Observations (GEO).

Space Exploration

- Noting the successful joint cooperation on Chandrayaan I, which detected the presence of water around the lunar pole, both sides committed to explore cooperation in planetary exploration and promote collaboration on future space missions.
- The National Aeronautics and Space Administration (NASA) welcomed the commitment of the Indian Space Research Organization (ISRO) to continue preliminary discussion on Human Space Flight cooperation.
- NASA and ISRO continue to be important participants in the International Space Exploration Coordination Group that has developed a Global Exploration Strategy and has begun developing a Global Exploration Roadmap.

Earth Observation

- The United States and India both play a lead role in GEO and other forums focused on exchanging and utilizing satellite-based scientific data about the Earth, its climate, weather, and geophysical features to promote sustainable development worldwide.
- Both countries look forward to the bilateral expansion of cooperative satellite-based Earth observation efforts to support regional and global goals in a number of areas that include:
 - A joint weather and climate forecasting project to predict the impacts of climate variability on agriculture;

- Validating and utilizing data from the ISRO Oceansat-2 mission, and similar activities for the upcoming Indian-French Megha-Tropiques mission, which will contribute to the international global precipitation monitoring constellation.
- Long-term cooperation between the U.S. Landsat and the Indian Resourcesat land imaging satellite programs. This will enable fostering improved land surface monitoring, land use management, ecosystems protection, and disaster mitigation and response.

Science Education

- The U.S. welcomed India's active participation in the NASA-led Global Learning and Observations to Benefit the Environment (GLOBE) education program, which promotes the teaching and learning of science and enhancement of environmental literacy and stewardship. Nearly 1,000 Indian schools have enrolled in the GLOBE program since India joined in 2000.

FACT SHEET: U.S.-INDIA PARTNERSHIP ON EXPORT CONTROLS AND NON-PROLIFERATION

Today, Prime Minister Manmohan Singh and President Barack Obama committed to work together to strengthen the global non-proliferation and export control framework and further transform our bilateral export control cooperation to realize the full potential of the strategic partnership between the two countries. The two leaders agreed to take mutual steps to implement a four-part export control reform program:

1. Membership in the Multilateral Export Control Regimes

- The United States intends to support India's full membership in the four multilateral export control regimes – the Nuclear Suppliers Group, the Missile Technology Control Regime, the Australia Group (for chemical and biological controls), and the Wassenaar Arrangement (for dual-use and conventional arms controls) – in a phased manner, and to consult with regime members to encourage the evolution of regime membership criteria, consistent with maintaining the core principles of these regimes.
- The Government of India will take steps towards the full adoption of the regimes' export control requirements to reflect its prospective membership, with both processes moving forward together.
- In the view of the United States, India should qualify for membership in the Australia Group and the Wassenaar Arrangement according to existing requirements once it imposes export controls over all items on these regimes' control lists.

2. Removal of India's Defense and Space-Related Entities from the U.S. "Entity List"

- Commensurate with India's nonproliferation record and commitment to abide by multilateral export control standards, the United States will remove all civil space and defense-related entities from the Department of Commerce "Entity List." Inclusion on this list generally triggers an export license requirement for items that otherwise do not require an export license.
- The entities to be removed are:
 - Bharat Dynamics Ltd. (BDL)
 - The four remaining subordinates of the Defense Research and Development Organization (DRDO):
 - Armament Research and Development Establishment (ARDE)
 - Defense Research and Development Lab (DRDL)
 - Missile Research and Development Complex

- Solid State Physics Laboratory; and
- The four remaining subordinates of the Indian Space Research Organization (ISRO):
 - Liquid Propulsion Systems Center,
 - Solid Propellant Space Booster Plant (SPROB),
 - Sriharikota Space Center (SHAR), and
 - Vikram Sarabhai Space Center (VSSC).
- The removal of these Indian entities from the Entity List is expected to facilitate trade and cooperation in civil space and defense and enable the two governments to focus on addressing other outstanding barriers that hinder expanded bilateral high technology trade.

3. Export Licensing Policy Realignment

- The United States will “realign” India in its dual-use export control regulations to reflect India’s status as a strategic partner, effectively treating India similarly to other close allies and partners. Although current dual-use export controls affect only a small fraction of U.S.-India trade (less than one percent), the perception of onerous U.S. export controls remains a barrier to high technology trade.
- This realignment will remove India from categories within the dual use regulations that connote India as a “country of concern.” In return, India will harmonize its national control list with the multilateral regimes and incorporate re-export controls on certain U.S.-origin items to address the potential transshipment of these items.

4. Export Control Cooperation

- The United States and India committed to a strengthened and expanded dialogue on export control issues, through fora such as the U.S.-India High Technology Cooperation Group, on aspects of capacity building, sharing of best practices, and outreach with industry.

These changes, together with the comprehensive reform of the U.S. export control system launched by President Obama last year, will bring fundamental change to the U.S. export relationship with India, consistent with U.S. national security objectives. The announcement on export controls reaffirms the two leaders’ joint commitment to expanding the U.S.-India strategic partnership, strengthening global nonproliferation efforts, and facilitating trade in the civil space, defense, and high technology sectors.

MCB Joint Statement Representing Common Views on the Future of the ISS
February 3, 2010

At a meeting on February 3, 2010, the representatives of the International Space Station (ISS) Multilateral Coordination Board (MCB) unanimously reaffirmed their strong interest in maximizing the benefits from utilization of the ISS. Consistent with previous direction from the ISS Heads of Agency regarding the future of the ISS, the MCB also confirmed that there are no identified technical constraints to continuing ISS operations beyond 2015 and the MCB representatives are prepared to begin implementation of such a decision when it is taken. The MCB recalled strong support to its continuation from the Augustine Committee. The MCB also noted that the U.S. Administration's 2011 NASA budget submission continues the ISS to at least 2020 and expands efforts to utilize this unique platform for scientific, technological, and educational purposes by increasing the ISS budget by \$2B over four years. The MCB representatives committed to continue to undertake the necessary procedures within their respective governments toward a final decision, in a timely manner, regarding the continuation of the ISS to the next decade.

The MCB representatives noted that ISS continuation could bring great benefit to all Partners and humankind by demonstrating significant and sustained return on the Partnership's investment in the ISS program primarily through the enhanced research and utilization opportunities. The partners also reaffirmed the necessity to investigate ways to improve ISS utilization productivity and operational efficiency by all possible means.

Having successfully achieved an increase in the ISS crew from 3 to 6 in May 2009 and with ISS assembly nearing completion, the MCB representatives were in agreement that the full exploitation of the Station's scientific, engineering, and education development potential is of the highest priority including the enhanced use of this microgravity research laboratory to drive advanced science and technology that will deliver benefits to humanity, while preparing the way for future collaboration on international space exploration missions.

The Multilateral Coordination Board (MCB) is the highest level management body established under the ISS Agreements [the Intergovernmental Agreement and four bilateral Memoranda of Understanding]. The MCB membership includes senior managers from NASA, Roscosmos, European Space Agency, Canadian Space Agency, and Japan's Ministry of Education, Culture, Sports, Science and Technology. The MCB's purpose is to ensure coordination of the activities of the partners related to the operation and utilization of the space station.

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RES COMMUNIS

A blog on the legal aspects of human activities using aerospace technologies

Selected bills and legislation

- **H.R. 6063: National Aeronautics and Space Administration Authorization Act of 2008**
- **S. 3001: Duncan Hunter National Defense Authorization Act for Fiscal Year 2009**
- **H.R. 6984: Federal Aviation Administration Extension Act of 2008**

Selected interviews

- **Mike Gold - Corporate Counsel, Bigelow Aerospace**
- **Tracey L. Knutson - Attorney, Knutson & Associates**
- **Glenn H. Reynolds - Professor of Law, University of Tennessee College of Law**

Selected primary sources

- **Hearing: China's Proliferation Practices, and the Development of its Cyber and Space Warfare Capabilities**
- **Conference on Disarmament Statements**
- **Statement of Intent Regarding the International Lunar Network**

Selected guest bloggers

- **Hiroshi Kiyohara - Chief Attorney, Musashi International Law Offices**
- **Col. M.V. "Coyote" Smith - United States Air Force**
- **Parviz Tarikhi - Department Head, Mahdasht Satellite Receiving Station**

Selected court cases

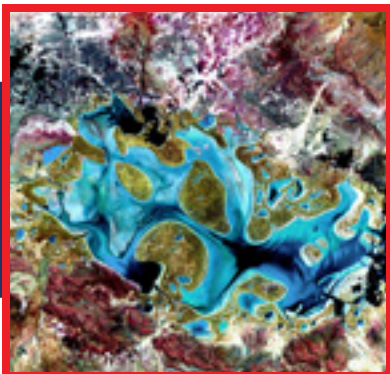
- **Enomoto v. Space Adventures**
- **Ladman Partners Inc. v. Globalstar Inc.**
- **Bowe v. Worldwide Flight Services**
- **Ary v. United States**
- **American Air Transport Association of America v. Cuomo**

For more information about the National Center for Remote Sensing, Air, and Space Law and its activities, please contact us:

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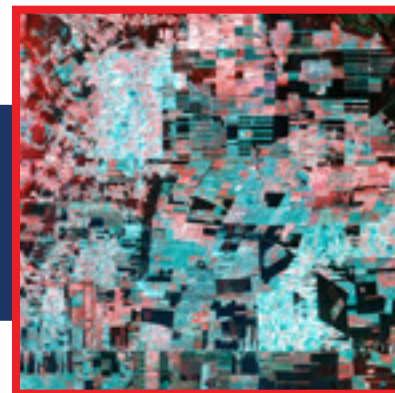
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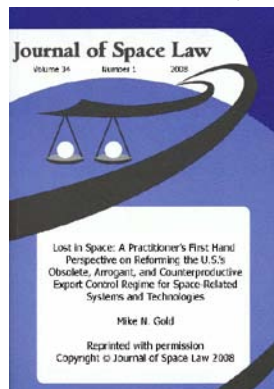
or <http://www.spacelaw.olemiss.edu>

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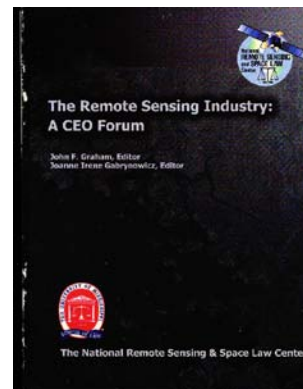
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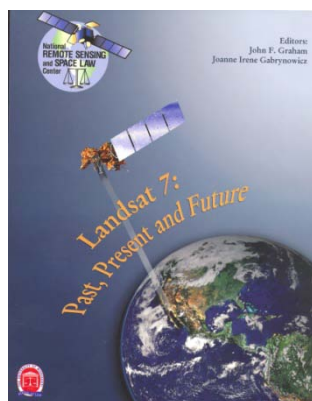
The National Center for Remote Sensing, Air, and Space Law has the following books available for purchase. For Book Descriptions and ordering information, please visit our website at: [Http://www.spacelaw.olemiss.edu/](http://www.spacelaw.olemiss.edu/).



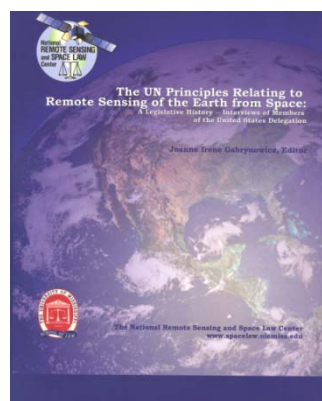
Remote Sensing, Air, and Space Law International Bibliography, 1930-2007: A Special Publication of the JOURNAL OF SPACE LAW – with CD-ROM - \$45.00



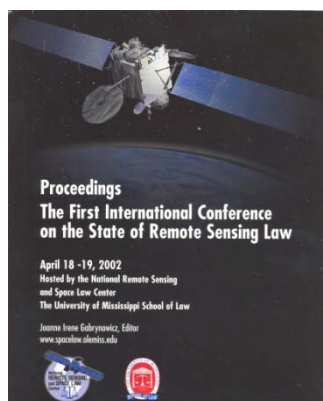
The Remote Sensing Industry: A CEO Forum - \$25.00



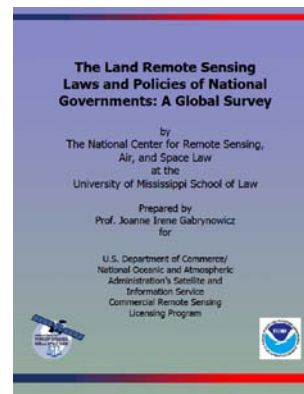
LandSat 7: Past, Present, and Future - \$25.00



The UN Principles related to Remote Sensing of the Earth from Space - \$25.00



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