

**Report on**

**e-Parliament Conference  
on Space Security**

**14 September 2005**

**2105 Rayburn House Office  
Building  
Washington, DC**

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# 1. The Background and Purpose of the Conference

Over the last few years there have been many indications that the United States wants to expand its missile defence from a primarily ground- and sea-based defence to a multi-layered defence that also includes deployment of military capabilities in outer space. The U.S. Air Force has developed a doctrine and strategy for fighting wars “from, in and through” space, and it is also considering the development of anti-satellite capabilities. Since outer space is a global commons shared by all nations and essential to the welfare of all humankind, deployment of new military capabilities in space could have important international ramifications, and the e-Parliament believes it is appropriate for legislators across borders to discuss these new military capabilities before they are developed and deployed.

The e-Parliament is a new global forum open to all national legislators from democratic countries. Its purpose is to enable members of parliament to deal more effectively with shared problems and global challenges through both electronic and face-to-face communication. e-Parliament networks on different issues will enable legislators across borders and across the political spectrum to share information and ideas and, where appropriate, to work together on joint initiatives. Space policy is one of the first issues that the e-Parliament has taken up.

The possible deployment of new military capabilities in space has been debated for some time in political and expert circles in North America, and the issue has become gradually more controversial and heated with regard to the nature and strategic impact of these capabilities as well as the very terminology with which these items should be discussed. The proponents argue that the aim of missile defense capabilities is to act as a defensive shield and that **space-based defense** is the most effective territorial defense. Proponents of space-based anti-satellite capabilities also argue that such systems are needed for the proper protection of satellites and other essential space assets on which both military security and modern communication depend and they are needed for the defense against satellites that threaten terrestrial security interests. The critics, on the other hand, argue that space-based missile defenses can also be used offensively; that anti-satellite and space-based weapons are provocative; and that deployment of **weapons in space**, therefore, is likely to trigger a new and very costly arms race, which will threaten rather than protect the civil and scientific uses of outer space.

The purpose of the e-Parliament meeting on space security on September 14, 2005 in Washington, DC was to help interested legislators to better understand the facts of the new capabilities in space and to initiate a

discussion between these legislators about their desirability. However, just as is the case with the terminology, both “the facts” and “the desirability” of these new capabilities in space are highly political issues and, therefore, it was crucial for the e-Parliament to ensure that both the experts and the legislators reflected a broad spectrum of views and positions on this issue.

We were fortunate to be able to assemble a bipartisan group of highly competent experts and highly influential legislators for a frank, informative, and inspiring debate, which explored a wide range of key issues in the debate about the possible deployment of new military capabilities in space. It was a debate that all participating legislators from both the US and the rest of the world felt was important to continue within an e-Parliament space policy network.

The present report contains three substantive sections. Section 3 briefly lists the main positions and concerns expressed during the meeting. Section 4 provides a summary of all statements, questions and answers made in the course of the expert hearing and the legislators’ dialogue. The final section 5 of the report contains some tentative ideas for how to continue the legislators’ debate on space security. These ideas emerged from the informal debate at the end of the legislators’ meeting and from consultations with different members of Congress the day after the meeting.

The expert hearing and the legislators’ dialogue was audio webcast live at [www.e-parl.net](http://www.e-parl.net) with an option to send in question via the internet. The questions that we did not manage to raise during the meeting due to time constraints are listed in Annex 1. The recording of the full webcast is still accessible on the website, and video highlights of the meeting will also be made available on the website together with an ideas bank of options for promoting space security through international cooperative measures.

The e-Parliament meeting on space security in Washington, DC was made possible by the financial support and great flexibility of the Secure World Foundation, and by the cooperation and help of countless individuals and organizations including High Frontier, the Center for Defense Information, and the Institute of Air and Space Law at McGill University. Last, but not least, the meeting would not have been possible without the support and practical assistance from the very beginning of the preparatory process by the office of Congressman Curt Weldon.

We look forward to continuing and expanding this cooperation as the e-Parliament debate on space security moves to the next stage.

Jesper Grolin,  
Executive Director of the e-Parliament.

## 2. List of participants and expert witnesses

### Expert Witnesses:

- Ambassador Henry F. Cooper, Chairman of High Frontier, former Director, Strategic Defense Initiative Organization, and former Chief U.S. Negotiator at the Geneva Defense and Space Talks with the Soviet Union
- Theresa Hitchens, Director of the World Security Institute's Center for Defense Information and Director of its Space Security Project
- Professor Everett Dolman, Air Force Advanced School of Strategy, School of Advanced Air and Space Studies
- Dr. Rebecca Johnson, Executive Director of the Acronym Institute for Disarmament Diplomacy in London

### Legislators:

- Congressman Terry Everett (R), Alabama, USA
- Congresswoman Loretta Sanchez (D), California, USA
- Congressman John Spratt (D), South Carolina, USA
- Congressman Mac Thornberry (R), Texas, USA
- Congressman Curt Weldon (R), Vice Chair, Armed Services Committee, Pennsylvania, USA
- Senator Lyn Allison, Australia, Leader of the Australian Democrats
- Dr. Kwame Ampofo, MP Parliament of Ghana
- Dep. Aroldo Cedraz (PFL), Chair, External Relations and National Defense Committee, House of Representatives, Brazil
- Air Marshal Lord Garden, (LD), UK, Defence Spokesman, Liberal Democratic Party, House of Lords
- Ana Marie Gomes, MEP, (Socialist), Portugal, Vice Chair, Subcommittee on Security and Defence, European Parliament
- Bjørn Hernæs, (Conservative), Norway, Vice Chair, Defence Committee, Parliament of Norway
- Senadora Silvia Hernandez, (PRI), Mexico, Chair, Senate Foreign Affairs Committee and Vice Chair, e-Parliament Council
- Jakob Axel Nielsen, (Conservative), Denmark, Defence Committee, Parliament of Denmark
- Mr. Hayashi Yoshimasa, (LDP), Chair, Security Committee, Parliament of Japan

### 3. Executive Summary

On September 14, 2005, the e-Parliament conducted a hearing on space security in the Rayburn House Office Building on Capitol Hill in Washington, DC.

Two expert witnesses presented in favor of deploying new military capabilities in space, as did two who were opposed. In addition, legislators offered their views.

The main points *in favor* of space-based defenses included:

- The most cost-effective, technologically feasible, non-nuclear defenses against weapons of mass destruction that traverse space on their way to their terrestrial targets are space-based.
- It is flawed reasoning to assume that offense always trumps defense as with the Mutual Assured Destruction doctrine. When defense can counteract offense, then it is prudent to deploy defensive systems.
- It has been neither technology nor cost that has precluded U.S. development and deployment of space-based defenses. Rather, it has been a lack of coherent policy between the legislative and executive branches of the United States government. Emotional, rather than informed, international political resistance has also impeded such development, testing and deployment.
- The American, NATO, and the Japanese publics are supportive of defensive weapons development and deployment.
- Global “boost phase defense” is most cost-effective from space and, as knowledgeable skeptics acknowledged in the late 1980s and early 1990s, cost-effective space-based defenses, based on late 1980s technology, were feasible. Also, concerns about space debris are much overstated.
- Effective defenses can avert, defend and deter conflict.
- For the United States and U.S. allies and friends, space-based defenses would provide the capacity to influence events anywhere in the world with the use of military force.
- Because of the inherent advantage of space-based defenses, it is important that democratic, rather than authoritarian, governments, first achieve cost-effective space-based defenses, preferably in collaborative alliances.

The main points *against* space-based missile defenses, anti-satellite weapons and weapons based in space designed to attack targets on Earth included:

- Space-based missile defenses are the first step to the weaponization of space; and would launch the proliferation of anti-satellite and other weapons systems to counter them.

- The technology for space-based missile defenses is still poorly developed and very costly to develop further; a better investment would be to increase efforts to halt or control missile and WMD developments and proliferation.
- Space is inherently offense oriented; i.e. the “high ground” lends itself more readily to attack modes and pre-emption, even if conducted with the intention of defending ground or space assets. This creates a very unstable situation, and could lead to a never-ending cycle of escalation as countries seek new anti-space systems (both terrestrially-based and space-based) to counter others’ capabilities.
- Terrestrially-based anti-satellite systems are the most easily and cheaply acquired, whereas their targets – satellites and any future space-based missile defenses – are expensive, so an anti-satellite arms race would leave space-faring nations such as the United States worse off than at present.
- Space-based weapons cannot shield satellites from ground-based attacks.
- Even greater quantities of dangerous space debris, already a serious threat to all the world’s satellites, would result if “kinetic kill” weapons were tested or used in space.
- There are international political costs to deploying space weapons; for example, European governments now cooperating with the US on theater defense will find it much harder to do so if space-based defenses are part of the mix. From the perspective of African and other developing nations, the real threats of today and tomorrow are poverty, illiteracy, HIV/AIDS, proliferation of small arms, and international terrorism – space weaponization would be viewed as a new threat rather than a response to one. Most nations of the world are on record favoring a space weapons ban.
- Other uses of space — e.g. for development, meteorology, environmental monitoring, disaster prevention, communications, education, entertainment, arms control surveillance and treaty ratification — would be compromised if weapons were deployed in space.
- Space is a unique place for global collaboration.

The main points made **by legislators** were:

- It is important to control the proliferation of offensive technology.
- There needs to be a public debate about space that hopefully will lead to comprehensive policies, both in the United States and in other nations.
- Challenges relating to the use of space include the economic costs, political implications, partnership issues, public-private partnerships, international cooperation and export control; weaponization could exacerbate those challenges.

- There is a need for determining the definitions of terms, such as what we mean by “space” as compared to the “atmosphere”, and what constitutes a weapon.
- There is an important distinction between ground-based and space-based missile defense.
- There are many space issues that need to be addressed in addition to weaponization. These include launch pad space, crowding of certain orbits and placement of satellites, debris, and bandwidth/frequencies. There must be an international system developed to deal with these various issues.
- The issue of missile defense in Japan is salient due to the North Korean threat.
- The threat of ballistic missiles being used against Australia is negligible and many citizens wonder why the Defense Minister signed a 25 year agreement to partner with the United States on missile defense.
- Norway believes that the military use of space should focus on providing better and timelier intelligence to control and counter adversaries rather than bringing war and weapons into space.
- In Denmark, there is a question of why there is a need for weapons in space and why terrestrially-based missile defense is not enough.
- There needs to be a more concerted effort to universalise the Outer Space Treaty, while also reviewing how the space-security regime can be strengthened.
- Many countries that are concerned about developments towards weaponising space are wary of engaging the United States in this debate out of fear of losing favor with the United States.

## 4. Report of the Hearing

### 4. 1. Morning Session

#### Space Security: Facts and Expert Perspectives by:

- **Ambassador Henry F. Cooper**, Chairman of High Frontier, former Director, Strategic Defense Initiative Organization, and former Chief U.S. Negotiator at the Geneva Defense and Space Talks with the Soviet Union
- **Theresa Hitchens**, Director of the World Security Institute's Center for Defense Information and Director of its Space Security Project
- **Dr. Rebecca Johnson**, Executive Director of the Acronym Institute for Disarmament Diplomacy in London,
- **Professor Everett Dolman**, Air Force Advanced School of Strategy, School of Advanced Air and Space Studies.

**Testimony of Ambassador Henry F. Cooper, Chairman of High Frontier:** Amb. Cooper was Director of the Strategic Defense Initiative Organization 1990-1993 and before that was Chief U.S. Negotiator at the Defense and Space Talks with the Soviet Union.

Amb. Cooper explained that his professional background is in national security matters and that he became a skeptic of arms control over 30 years ago with SALT I and the forming of the ABM treaty. For over 20 years, he was responsible for programs to help ensure the survivability of U.S. strategic 2<sup>nd</sup> strike retaliatory forces.

He saw the arms control process frustrate and then preclude the ability of the US to build the best survivable systems and to defend its assets as well as to conduct sensible experiments to build the most cost-effective defenses. In his view, lawyers and legislators controlled a process which should have been left to engineers.

By 1992, engineers were convinced they had technologies to proceed with effective missile defenses and the US Congress had approved a program to begin deployment as soon as technologically possible. But the new administration took those programs off the table, ended on-going high level negotiations with Russia to build a Joint Global Defense as proposed by Boris Yeltsin, and declared a "strengthened" ABM Treaty was the centerpiece of strategic stability for the U.S.

Through the 1990's, there were disputes between the U.S. Congress and the Executive Branch over what should be done with missile defense, until 1996 when Hawaii and Alaska were not considered in a CIA analysis of the threat, which led to grass roots objections to that analysis and an independent threat analysis. Congress then overwhelmingly passed a 1998 law making it US policy to build an effective defense as soon as technology made it feasible. Then in 2002, President George W. Bush withdrew from the ABM Treaty freeing engineers after 30 years to use the best technology to build effective defense systems.

By design, the ABM Treaty left the United States totally defenseless against ballistic missiles. And after the Clinton administration's redirection of the program to consider only ABM Treaty compliant defenses and the Bush-'43 continuation of those programs, only the least effective defense concepts have been developed. Only now are there rumors of reviving the space-based defense concepts, the most cost-effective efforts produced by the Reagan-Bush-'41 SDI era.

The history of US ASAT programs also demonstrates how political discontinuities affect the development of viable systems from a technical perspective. The Ford, Carter and Reagan administrations developed for testing the F15 ASAT system in a continuing tug of war with Congress. In 1983, Congress demanded that the US negotiate on a comprehensive ASAT ban before the system could be tested. Then, after the Reagan administration persuasively demonstrated in 1984 that such a ban could not be verified and was contrary to US security interests, Congress permitted successful testing in 1985. Then for the next 2-3 years, Congress refused to continue to fund subsequent development and the F-15 ASAT program was finally dropped. Subsequently, a new ground-based ASAT program was initiated – and it remains in-place and controversial to this date.

In these cases, it has not been technology or cost that killed or curtailed the program – but lack of a consistent and coherent policy between the Legislative and Executive branches of the US government.

Given such history, Amb. Cooper argued that (like with the medical profession) our legislative friends should first seek to do no harm in pushing the notion of arms control and various diplomatic initiatives.

### **Questions and Responses:**

**Question No. 1 from Duncan Dean of Australia (read by Senator Silvia Hernandez of Mexico):**

Do you worry about reactions of other nations, namely China, to what they may perceive as an attempt by the US to unilaterally dominate space? Could this not potentially lead to an arms race in space?

**Question No. 2 (read by Senator Silvia Hernandez of Mexico)**

You mentioned that there are neither technological nor budget limits for the starting of this program at this time. Your suggestion was that it is a political decision. Would you agree that [inaudible] decision might have come from pressure if there is a recognized [inaudible] from other nations?

**Question No. 3 from Senator Lyn Allison of Australia:**

You talked about the incoherence between the military/executive policy and that of legislators. Do you not agree that is the role in a democracy of the legislators to make the decision and not take an exclusively narrow view provided by one sector of the establishment?

**Ambassador Cooper's Responses:**

To answer the last question (No. 3), at least in the US there is a balance of power between the Executive and Legislative Branches, which is the intention, deliberately imposed by the Founders, in our Constitution. Congress is not very good at designing programs and managing them. That is the job of the Executive. Congress provides the money and has a very blunt stick to use programmatically. As I described to you in the case of ASATs, Congress first insisted on negotiating a comprehensive ASAT ban with the Soviet Union while the Soviet Union was testing their existing ASAT; and there was a chorus in the international world pushing a comprehensive ban. What turned the tide eventually was when the Executive put the facts before our Congress in open and closed sessions and Congress changed its view on demanding that we negotiate a comprehensive ban. But then after the first test in space, Congress refused to go forward with subsequent testing and the Executive cancelled the program. Congress chose not to fund it; so Congress has the ultimate authority in the sense that they control the money in our system.

Other governments have both legislative and executive authorities imposed on a party basis and have perhaps a better basis for control. Right now in our system, one party controls both the Legislative and Executive Branches. There are additional checks and balances within our system that don't allow the Executive to run free, and international politics also influences our politics.

With respect to how I view China (Question No. 1), I believe China has a space program, and they have written about their strategic objectives (read the reviews by Michael Pillsbury of our National Defense University for

example). They will proceed at a pace they perceive to be in their interests. They think in longer terms than we in the US have generally done. We tend to think on a yearly, budget-to-budget, basis and the Chinese have thought longer term than that, as did the Soviets. (One of our arms negotiators used to say, "The Soviets play chess and we play checkers.") I don't know if I'd call it a "race" – they will seek to protect their own security interests as they see them and I believe we should protect ours as well.

**Ambassador Cooper's Response to Question No. 2:**

That's the nature of democracy. That's why we have forums such as this to discuss the issues. So, yes, international politics bring pressure to bear and we depend on our leaders to sort through these pressures and ultimately on the people of the US. I would remind you that throughout the period of the ABM Treaty, when we were not permitted to move ahead with cost-effective defenses as a matter of policy, poll after poll of the American people indicated that, given the choice, they would build a defense. I saw a recent poll from Europe that the publics of some of our NATO allies have a similar view. Certainly, our Japanese friends have that view. The people ultimately have their say and I believe that what turned the tide on the (ABM) Treaty was the state legislature of Alaska when it discovered that the Federal intelligence community did not include the states of Alaska and Hawaii in their assessment of threats to the US. So there were political errors made in reports given to Congress and ultimately the people demanded that Congress establish what is now the policy of the US – to build an effective defense as quickly as possible. All of these things play together in a very complicated dynamic. I am pleased we are free of the ABM treaty and hope that we don't fall into similar entanglements in the future.

**Question from Member of Parliament Hayashi Yoshimasa of Japan:**

You referred to effective defenses and also about best technologies. I want to know which defenses you think are effective and what are the criteria you are using to classify such technology as the best in comparison with other technology options.

**Ambassador Cooper's response:**

In my written paper, I tried to go over classes of defenses in a very clear way. The easiest place to destroy a missile is in its "boost phase", that is, right after it is launched and the rockets are burning. This is referred to as "boost phase defense". I believe the most effective boost-phase defense by far is from space. It is not just long-range missiles that threaten the US. It could be short-range missiles.

A layered defense is the proper engineering way to approach the problem. So, you'd shoot an attacking missile in the boost phase - or failing that when

it is in the sub-orbital midcourse phase above the earth's atmosphere - or failing that when it re-enters the earth's atmosphere. The most difficult phase is the mid-course phase, above the earth's atmosphere, because decoys can be used there, making the defense job very difficult. To date, we have focused most on such midcourse defenses instead of trying to work on the boost phase problem.

Understand that it is not just long-range missiles that threaten the US. It could be short-range missiles launched from ships off our coasts. In this case, my preference is to use light weight kill vehicles to enable a sea-based defense of the sort the US is now cooperating with Japan to build as the initial step toward a global defense because two-thirds of the earth's surface is water. The needed light weight technology was demonstrated as part of the space defense programs during the Reagan-Bush '41 era, and could be easily revived today.

We have friends in Europe who are interested in sea-based defenses that exploit our AEGIS system. Sea-based defenses are far less controversial than space-based ones, but they were also precluded by the ABM Treaty. For many years we could not have a sea-based defense – the radar on our ships were not even permitted look up and see ballistic missiles because if they could see them, they might shoot them down. This is how absurd the limits became under the kinds of treaties we had.

But I ultimately want to go to space and I understand that is controversial. I welcome the debate because I believe that ultimately the most effective defense we can build is in space.

**Question from Member of the European Parliament Ana Gomes of Portugal:**

You mentioned European polls. I can assure you that Europeans are very much in favor of multilateral institutions as the checks and balances system at the world scale. We can see this as a safer world for all, not prevalence of one nation over others. I was struck by your argument about the way the ABM Treaty precluded technological development. So, do you feel that because we "can do" something, this is acceptable?

**Ambassador Cooper's response:**

The technology to defend against ballistic missiles (such as the Brilliant Pebbles program) was mature by 1990 and then scrubbed by senior officials and critics in the government and in the private sector. Technically I have no doubt we can build this defense – the only issue is a political one. So, the job of the technical people is to figure out how to bridge the chasm and persuade the political/policy community with the facts of what can be done

to provide a truly effective defense, and not permit a debate only on theology which I fear is how its terms are being cast.

**Question from Senator Lyn Allison of Australia:**

How do you come to the conclusion that the ABM Treaty left the US defenseless when the US spends more than the next seven nations combined on defense? I believe the figure is around \$450 billion a year. How does that leave the US defenseless and how do you feel about disarmament treaties in general, such as the NPT?

**Ambassador Cooper's response:**

We assumed a principle during the Cold War of Mutual Assured Destruction (MAD) – that we would be most safe if we were vulnerable to the long-range missiles of the Soviet Union and vice versa. The US was able to defend against cruise missiles and aircraft attack but not, due to the ABM Treaty, against long-range missiles. This was a deliberate political policy choice and was not due to technology limitations. With respect to arms control, I am not opposed per se but I am skeptical. And I think skepticism is the right approach to diplomacy because I have seen what ambiguous constraints can do to our ability to accomplish serious programs and I've seen the ambiguities of treaties destroy viable programs.

**Question from Member of Parliament Hayashi Yoshimasa of Japan:**

Regarding the launch phase defense and bio/chemical weapons – even if we disrupt the missile by kinetics – the remains fall down over the friendly areas. So is there a technical difference between the 3 phases of destroying missiles? Secondly, regarding the boost phase, are we thinking of using laser beams in the future to disrupt missiles or still using kinetic systems to attack on the boost phase?

**Ambassador Cooper's response:**

The boost phase is preferable for many reasons including that the material in the missile, whatever it is, may fall back on the heads of whoever launched the missile and that would be a deterrent. I believe defenses also work in favor of non-proliferation because the US has the means to build defenses that many other countries wouldn't attempt to build offensive missiles to attack. Active defense systems should have both laser and kinetic energy systems. I believe lasers are a decade away but we could be operating kinetic energy space-based defenses within five years if we could get over the political obstacles.

**Testimony by Theresa Hitchens, Director of the Center for Defense Information and Director of its Space Security Project:**

With all due respect to Ambassador Cooper, there are plenty of others in this room who would dispute his version of what actually happened – the politics of it and there are many of us who believe the missile defense debate was exactly theology driven and not technology. There are physicists who would dispute his version of the technological maturity and this is a debate that is happening at all levels – technology, costs, etc. However, I have not been asked to speak about missile defense. I have been asked to talk about weapons in space. Some slides will be presented which are not necessarily directly related to my talk but will provide some background taken from Pentagon documents and official statements by the Air Force and others that has led to this public debate.

The Bush administration is at some point expected to sign a new national space policy which is the highest level government policy governing both civil and military activities. The Department of Defense (DOD) and the military have already laid out the new military space strategy and policy in various documents which seek to codify US policy on space warfare both for defensive and offensive purposes and to establish space control. Two basic missions are envisioned by the Air Force for space weapons. I define *space weapons* as systems that are either based on the ground or in space designed to hit satellites or systems based in space designed to hit targets on the ground.

*Counterspace operations* includes offensive counterspace operations designed to attack adversaries or third party satellites – be they government or commercial – being used by adversaries in times of crisis or war. This doctrine also advocates the military has the right to attack satellites that “might be” used by an adversary – such as communication, weather or imagery satellites. The U.S. Air Force maintains that this means jamming or hacking but the Pentagon does not rule out using destructive means that could create dangerous space debris.

*Global strike* is attacking terrestrial targets through space (the “Rods of God” for example). This mission is more controversial and difficult to achieve. The military strategy has already been laid down and efforts to implement that strategy are starting. Some of these systems are already in the Pentagon’s budget by name.

There is a lot of spending on technologies that have dual uses (weapons related and not weapons related – such as for surveillance) and could enable space weapons but that are not necessarily named in the budget. It is impossible to say how much money is being spent on weapons-related research and development (R & D) because much of the technological development is in big “pots” (such as Multidisciplinary Space Technology)

and one-half of DOD spending on space is classified. We do know that total DOD spending in space—both classified and unclassified—is about \$22.5 billion in FY '06, and this figure is expected to increase by at least \$1 billion a year over the next six years.

The space weapons issue has not been decided despite the fact that you see all this activity. The technology for a lot of these systems is in its infancy. And the cost is a factor. Also, politics is a factor – which is important here. It is a domestic political decision, and economic decision and an international policy decision.

### **Questions and responses:**

#### **Question from House of Lords Member Air Marshal Lord Garden of the United Kingdom:**

I have two questions. First, it looks as though the military has freedom to develop systems without any political arrangements to discuss it and that dramatic changes are being implemented without policy being first decided. Is that correct? And, secondly, are ground based systems which destroy satellites effectively space weapons themselves because they produce debris that can effect other satellites? Is that right?

#### **Ms. Hitchen's response:**

Technology development drives a lot of things – the sense is “if you can do it, you should pursue it.” These are doctrinal papers and some are policy papers coming from the Pentagon and Joint Chiefs of Staff. It is unclear whether they will be implemented because it is questionable whether Congress will fund them. Second, I don't know what the National Space Policy will say. I suspect it will be very similar to the language of the Clinton policy which was very vague and yet quite forward reaching. It talks about space control and offensive space operations, but this policy was never implemented. The policy making process here is quite complicated and difficult and has been tainted in recent years by partisanship in US politics. There are ground based systems that are and should be considered space weapons that are designed to take out satellites, which would cause space debris and that is a serious issue that the international community should be paying attention to.

#### **Question from Member of Parliament Jakob Alex Nielsen of Denmark:**

Regarding the issue of international law and the idea that the US could attack satellites that “might” pose a threat, what is the criterion for what constitutes a threat?

**Ms. Hitchens' response:**

I don't have an answer and the documents I've referred to don't either. There aren't criteria in those documents, but it is an important discussion that the international community should have and you should be asking your colleagues to explain this.

**Question submitted via the Internet from Colleen Driscoll (read by Senator Sylvia Hernandez of Mexico):**

Given the past example of nuclear weapons which were also promoted as the [inaudible] technology but soon became a symbol of national power, surely it would be prudent to learn from history and be cautious. With your knowledge of the US defense establishment, do you think this lesson has been learned and will it be applied?

**Ms. Hitchens' response:**

I find it hard to answer that question. I think sometimes we learn the wrong lessons --- we may have learned the wrong lesson from 9/11—that we had to do everything ourselves. Do not be fooled by the red herring that space control/dominance and space weapons are necessary to protect US satellites. We do need to protect our satellites from perceived future and current vulnerabilities and some defense is good defense.

**Question from Senator Lyn Allison of Australia:**

I'm interested in the question of space debris and that there may be many weapons that are powered by nuclear energy. Does this concern you?

**Ms. Hitchens' response:**

This is a common misperception. The idea of nuclear propulsion is largely for civil exploration in the outer solar system. It really has not been looked at for low earth orbit operations even by the military. I don't have a lot of issues with things like Cassini that are going to use very, very small amounts of radioactive material. Most systems I'm talking about that have been proposed by the military for space weapons have nothing to do with nukes and even the most extreme proponents of space weapons believe you should not put nuclear weapons in space. No one in the military establishment is even considering this. This has been a common misperception especially in Europe and I want to be sure this is taken off the table.

**Testimony by Dr. Rebecca Johnson, Executive Director of the Acronym Institute for Disarmament Diplomacy in London:**

I will focus on the challenges for Europe but want to stress that these dilemmas are ones that are relevant to many other countries and regions, as already demonstrated by the debate in Canada. First, we must remind ourselves of the major uses of space and what we'd risk losing if we got this wrong. The whole world now relies on space for such security and development purposes as meteorology, environmental monitoring, disaster prevention, communications, education, entertainment, arms control surveillance and treaty verification. Though space has not yet been weaponized, it has been heavily militarized already with a range of supporting technologies associated with the revolution in military affairs. Space security approaches are further complicated because communication systems may also have strategic, safety and arms control value and because commercial systems may have been combined with military uses. So these complications must be taken into consideration.

My presentation focuses on NATO and the European Union (EU). In past decades, Europeans have been deeply skeptical of, for example, the Reagan Administration's Strategic Defence Initiative (Star Wars), and its subsequent national missile defense reincarnation in the 1990s. As a result of Prime Minister Thatcher's concerns, a joint US/UK communiqué promulgated four principles, which might be updated as follows: 1) missile defense should enhance and not undercut deterrence and international security; 2) there should be negotiations with Moscow (and now, with other countries); 3) the goal should be balance and not superiority; and 4) arms control and disarmament negotiations should be continued. Despite considerable skepticism about the needs, risks and technical feasibility, the US has managed since 2001 to put missile defense on the agenda for European states, most notably the 24 European members of NATO.

In March 2005, the NATO council agreed to cooperate on an active, layered, theater ballistic missile defense (ALTBMD) capability portrayed as protecting troops on battlefields from shorter-range ballistic missiles. The target date for deployment is 2012. NATO underlines that ALTBMD is intended to be separate from other initiatives developed defensively against longer-range missiles and that it will integrate different theater missile defense systems. Although NATO may have modest intentions, the Bush administration does not, and although NATO is trying to set some limits, it may find that more difficult if the US is determined to deploy weapons in space.

Because of this, NATO's commitment to BMD is likely to come into conflict with the European Space Agency (ESA) and the European Union's (EU) space policy. The objectives of the ESA are: new European frontier; independent access to space; competitive, strong space industry; new applications; strong space science programs; and strong international partnerships.

In 2003, the EU issued a White Paper entitled: "Space: A New Frontier for an Expanding Union." This White Paper described itself as an action plan for implementing European space policy. The reasons and objectives for expanding Europe's space policy included: faster economic growth; job creation and industrial competitiveness; enlargement and cohesion; sustainable development; and security and defense. As part of its evidence-gathering process, the EU received numerous reports relating to missile defense and the weaponization of space as well as considerable information about US plans for further militarizing space. That makes it all the more significant that the White Paper did not once mention missile defense or the word "weapons".

Europeans are concerned about three broad aspects of the US obsession with multilayered BMD: 1) that it is driven by ideology rather than sober threat assessments; 2) that it fails to address and, in fact, diverts attention from more real and immediate security policy issues related to terrorism and weapons of mass destruction (WMD); and 3) that the unintended consequences of employing such defenses would be likely to create far greater security risks than currently posed by the missiles themselves, both physically and politically.

In conclusion: as with NATO, the EU appears to be in denial about the need to improve space security. In fact, European space policy and NATO's missile defense objectives may well be on a collision course – yet both are trying to ignore the other. Anxious not to offend the US government, Europeans are trying to avoid a confrontation although they believe in a serious commitment to arms control and the elimination of WMD and their delivery systems. Missile defense systems are likely to exacerbate insecurity and provoke greater threats for the future. This passivity in Europe could be dangerous. Europeans cannot sit back and wait for all the decisions to be taken before they react to protect their interests in space.

Here are several recommendations for cooperative approaches to strengthen space security:

1. Universalize and revitalize the Outer Space Treaty which would reinforce the basic space security regime and also help to educate and involve all nations in protecting space as a shared resource for peaceful development and global security.
2. The legal obligation not to interfere with the peacefully-deployed space assets of other countries, currently contained in the 30-member Treaty on Conventional Armed Forces in Europe (CFE), should be multilateralised. (I owe this particular recommendation to Ambassador Tom Graham, who is here in the audience.)

3. Russia still deploys and has updated its nuclear tipped ABM system around Moscow. Russia should retire this system, and all states with nuclear weapons should pledge not to develop, test or deploy nuclear tipped interceptors or weapons and technologies for use in or from space.
4. Russia has given a public undertaking not to be the first to deploy weapons in space. All countries, whether or not they have the capability at this point, should be encouraged to make such unilateral declarations pending negotiations and conclusions of a multilateral space security treaty (or equivalent instrument).
5. Establish a group of verification experts to examine ways and means of verifying space security agreements.
6. A collaborative study undertaken by NATO, the EU and the ESA into the future of space uses and space security that needs to be able to openly and honestly address the conflicts and the challenges for military, commercial and development uses of space.

### **Questions and responses:**

#### **Question from Member of Parliament Hayashi Yoshimasa of Japan:**

What do you think about the applicability of your recommendations to East Asia (keeping in mind the six party talks with North Korea) and do you have other ideas about Asian security?

#### **Dr. Johnson's response:**

I recognise the impact of North Korea's 1998 Taepo-dong missile test across Japan on heightening Japanese concerns about security and in virtually silencing mainstream Japanese objections to collaboration with US missile defence. My argument is that we need to do a lot more about missile control and the elimination of the remaining WMD, nuclear weapons. I think there are ways through enhanced security initiatives and political, diplomatic mechanisms that can enable North Korea to turn back from proliferation. Regarding missiles and the delivery of missiles, we need to take a look at the various proposals that are on the table (the Hague Code of Conduct, the UN study) and also to look back at the Russian proposal for an international control system on missiles, all of which have good ideas we could harvest for building a more coherent approach to missile control. We also need to move towards the kinds of prohibition regime for nuclear weapons that we now have for chemical/biological weapons, while at the same time addressing missile proliferation.

#### **Question from Member of Parliament Bjorn Hernaes of Norway:**

If we develop a civilian program, is it possible that it could be used for military purposes?

**Dr. Johnson's response:**

We have to understand that all of these technologies are dual use. The same technologies are used for civilian satellite launches as for military; moreover, when you hear that the US wants to share its missile defence technologies with various countries around the world, we need to recognise that these technologies are the same as those countries would need to launch aggressive missiles. So spreading missile defences could result in worse missile proliferation.

**Question Member of the House of Lords Air Marshal Tim Garden of the United Kingdom:** Regarding your analysis of the conflict you see coming between NATO and the EU, I wonder if we might not be overstating it.

**Dr. Johnson's response:**

The collision course is not between the terrestrially based ALTBMD per se. Where I think we are on a collision course is about the 4<sup>th</sup> tier, where missile defence extends into space weaponization. At the moment, NATO is limiting its commitment to missile defense to theater systems. My concern is that since for the US the relationship between the four tiers – land, sea, air and space – are meant to be seamless, engaging at one level with the US missile defense plans could lead inexorably to NATO becoming involved in the weaponization of space.

**Testimony from Professor Everett Dolman, Air Force Advanced School of Strategy, School of Advanced Air and Space Studies:**

It is easy to start a war and quite another thing to finish one in ways that are advantageous. I will argue today that the military force that we are talking about in weaponizing space is to *avert* conflict, to defend and to deter. No nation relies on space more heavily than the US and this reliance grows daily for both its civilian welfare and military security. A widespread loss of space capability could prove disastrous. It is the charge of the US military, particularly the Air Force, to protect space capabilities from harm and to ensure reliable space operations in the foreseeable future. The Air Force naturally looks for military means to achieve these assigned ends. It is absurd to wonder why the Air Force is using weapons to dominate space – you may wish to question the decision to give this task to the Air Force (or other branches of the military) but that is another matter altogether. So, it is appropriate for the Air Force to use the martial means at its disposal – the Air Force is not a diplomatic arm.

A fear of space dominance is understandable, but the US has had dominance over the world's oceans for some 60 years, yet, at no time in history has commerce been more secure, or freer for the rights of passage. Likewise, we have had dominance in the air globally for over a decade and air commerce is safer than ever. Space dominance by the US military should follow a pattern much like this.

Talking about the defensive use of space is a canard. Of course, there must be the offensive space capabilities as well. These are tremendously costly systems which will be capable to engage targets globally from (or in) space, in the air, on the land, from the sea in a highly precise, nearly instantaneous manner and give the US the capability to influence events anywhere in the world with the use of military force.

Laws and treaties are vital in international relations for shaping expectations of future behavior and attitudes – but the law does not prevent or defend against actions. The possibility of even one nuclear tipped missile getting through to anywhere in the world, be it Hong Kong, New Orleans, or elsewhere, is disastrous. So, if our military space program can prevent the possibility of this happening, with very little collateral damage, with high precision, this is the value of the transformation going on in the US military today. To prevent and protect against hostile action from sea-based or ground-based systems means we have to decide where (Israel? Pakistan? Brazil?) these systems are going to be. However, in space this decision doesn't have to be made.

There are two categories of canards that come up in opposition to space weapons: 1) they *can* not be deployed (they are infeasible); and 2) they *should* not be deployed (they would be internationally destabilizing). History shows that the first can fairly easily be dismissed. Most scientists today would say that space weapons can be deployed.

This is why I advocate the US, unilaterally if necessary, go ahead and weaponize space and to get there as soon as possible so any other nation even contemplating an arms race with the US will recognize the futility of that. An entrenched US in space could prevent any other nation from going there. So the question becomes not *should* the US be the first to weaponize space, but can the US afford to be second? My analysis says we cannot afford to be second. The rational response of any other nation would be to oppose the US in this because it is a great new power we are talking about implementing. The US will be enhancing its world power by putting weapons in space. The US must ensure that space is available for all economically, for any peaceful use, and should ensure that debris is taken care of. And it

can do so for the good of the world (just as the seas and air are safer today). To do nothing now *would* create a space race.

### **Questions and responses:**

#### **Question from Member of the European Parliament Ana Gomes of Portugal:**

My question is about the tremendous costs involved. How will the US military establishment sell this to the American people?

#### **Professor Dolman's response:**

This is a conundrum of course. When there is a law and it is not followed, there must be a police and court system to make corrections and we don't have this in the international system. If space can be seized and controlled permanently then the damage of one state violating the law can be corrected. The law that is working today was established by wary super-powers and the geo-political dictum was "if I cannot control or occupy the most advantageous territory, then I must ensure my opponent cannot either." This space regime has left us in a position economically where we are not exploiting space, where the military cannot assist in getting peaceful and commercial exploitation of space. Therefore, I also advocate that the Outer Space Treaty should be scrapped and replaced by one that advocates liberal values and free enterprise.

#### **Question from Member of Parliament Bjorn Hernaes of Norway:**

Would a US space program have helped against the terrorist attacks of 9/11?

#### **Professor Dolman's response:**

I don't know. It depends on the types of weapon systems that were there. Could we have shot down that aircraft? I don't know because it has never happened before. If a similar attack were to happen again, and we had a 15-minute warning, we would shoot it down. Now, could we reach it with the systems we have now? I don't know. The real question in space though is if we're going to spend the hundreds of billions of dollars, where does that money come from? It doesn't come from the education budget, or the housing and urban renewal budget or from the Federal Emergency Management Agency (FEMA) – it will come from other military budgets. In order to afford space weapons, we will have to draw down on the money for other military programs. I believe a space-heavy infrastructure for the US would be less threatening to the international environment because it does not directly challenge sovereignty. I believe the US would look very seriously at how to do this in a cooperative way (with other nations).

**Question from Member of the House of Lords Air Marshal Tim Garden of the United Kingdom:**

If this system were to have been in place, would the US have used it to prevent Galileo?

**Professor Dolman's response:**

Absolutely not. The reason the US was opposed to Galileo was that there were some frequency overlap issues. The US is now very much in favor of Galileo. This is a perfect example of a military system, GPS, designed for military use that is now a global asset paid for and maintained by the US Air Force and it is one which we cannot or will not take down. Also, because of the great expense of these weapons, they will only be used in a very limited fashion for very high value circumstances.

**Question from Senator Silvia Hernandez of Mexico:**

My question is about the wrong lessons being learned from history and the lesson that might appear from the social and economic collapse of the Soviet Union due to the arms race. Now that the US has become this unique power, do you think other nations would still [inaudible] with the US dominance in space. I think we are aware that this very costly program will have some victims – who are going to be the next victims?

**Question from Member of Parliament Kwame Ampofo of Ghana:**

Don't you think that space would be a very unique place for the world to meet and collaborate so the hopes and the aspirations of the US in securing itself, its allies, and other friendly nations could be better and more effectively one in a collaborative effort -- of course, led by the US?

**Professor Dolman's response:**

Yes. It is a place for collaboration. As we move into space and, from that perspective, see ourselves as one humanity, we will understand that it was a cooperative effort. But I am concerned about a non-liberal, non-democratic state seizing space and using it for its own initiatives.

Will other states find other ways to compete? Of course, but they won't compete in space – they will find another means to compete. If we can stop a ruinous competition in space then that is good. All "hegemons" are declining, including the US, and I hope that at some point the US declines into a cooperative community of space. It *can* do this as it moves to control space *if* it clearly articulates what the rules of engagement are, and that it is not arbitrary in choosing who, what and when it will use the weapons against.



## 4. 2. AFTERNOON SESSION

### Space Security: Political Perspectives by:

- Congressman Curt Weldon (R), Vice Chair, Armed Services Committee, Pennsylvania, USA
- Congressman Terry Everett (R), Alabama, USA
- Congressman Mac Thornberry (R), Texas, USA
- Congresswoman Loretta Sanchez (D), California, USA
- Congressman John Spratt (D), South Carolina, USA
- Senator Lyn Allison, Australia, Leader of the Australian Democrats
- Dr. Kwame Ampofo, MP, Parliament of Ghana
- Dep. Aroldo Cedraz (PFL), Chair, External Relations and National Defense Committee, House of Representatives, Brazil
- Air Marshal Lord Garden, (LD), UK, Defence Spokesman, Liberal Democratic Party, House of Lords
- Ana Marie Gomes, MEP, (Socialist), Portugal, Vice Chair Subcommittee on Security and Defence, European Parliament
- Bjorn Hernaes, (Conservative), Norway, Vice Chair, the Defence Committee, Parliament of Norway
- Senator Silvia Hernandez, (PRI), Mexico, Chair, Senate Foreign Affairs Committee and Vice Chair, e-Parliament Council
- Jakob Axel Nielsen, (Conservative), Denmark, Defence Committee, Parliament of Denmark
- Mr. Hayashi Yoshimasa, (LDP), Chair, Security Committee, Parliament of Japan

**Senator Silvia Hernandez of Mexico** (Chairperson) opened the afternoon session with welcoming comments.

### **Congressman Curt Weldon (R), Vice Chair, Armed Services Committee, Pennsylvania, USA:**

This is a breakthrough in real time discussions between parliamentarians around the world on cutting issues of security and I hope a second event will be considered focused on individual needs we have as nations in defending our homeland.

Americans are deeply concerned about offensive missile systems that have been used in the past against other nations. One of the first things we need to do as a family of nations that want to control the outrageous proliferation of offensive technology is to discuss and then decide upon what exactly we mean by the weaponization of space. None of us in the end want to see

war. We have had many successful international diplomatic efforts to minimize or eliminate weapons of mass destruction (WMD).

**Congressman Terry Everett (R), Alabama, USA:**

Space holds a special place in the history of the mankind. Space now provides unlimited potential for the welfare of humans and the loss of space capabilities would be devastating to the US and the rest of the world. We must ensure that all nations have freedom of continued and unrestricted operation in space. Some of the rhetoric you hear today is meant to cause fear. The US Air Force (USAF) is not building a "death star." It is not the policy of the US to unilaterally dominate space at the cost of other nations. There will be public debate about space that will lead to the development of a comprehensive policy about this very complex issue.

**Congressman Mac Thornberry (R), Texas, USA:**

I am not an expert on space. What I am most interested in are the long-term national security interests of my country. My interest in space comes from the conclusion that it is important now and in the future to the farmers in my rural district to do a better job; to the availability of means of communication in remote areas. We have a number of important challenges in space including: costs; political decisions; lack of awareness; bureaucratic challenges; competing demands for financial resources; cultural, organizational and personnel issues; partnership issues regarding the role of government and the private sector; and the role of countries working together on, for example, export issues. The bottom line is that space is important, that it will become more important, and will require defense mechanisms.

**Ana Marie Gomes, MEP, (Socialist), Portugal, Vice Chair, Subcommittee on Security and Defence, European Parliament:**

Europe is slowly developing its own defense identity which is centered around crisis management. Europe does not see space domination as a goal for itself and doesn't want to see it as a goal for anybody else. European governments collectively spend a little over \$5 billion per year on space (includes both civil and military). Europe is already heavily involved in space and European nations are collaborating on research, intelligence and security initiatives. The Galileo satellite-based navigation system together with the UK's military communications systems has the potential to become the cornerstone of European strategic autonomy. The EU needs above all to make sure that security concerns on both sides of the Atlantic are taken into account when

negotiating agreements with third parties. Last year, the European Parliament established a subcommittee on security and defense under the Foreign Affairs Committee. This forum is a step towards awareness of the uses of space and I have decided to order a study on space use. European ambitions in space reflect limited resources and different strategic interests from the US. It has a different vision of security – a vision of collective responsibility to protect with the rule of law as the cornerstone of civilization. This month the European Parliament will vote on a report on WMD strategy which will say instead of weaponizing space, the US with its allies should move beyond existing international commitments and explore the possibility of negotiating an additional outer space agreement in order to ensure peaceful use of space and to prevent any arms race in outer space.

**Dr. Kwame Ampofo, MP Parliament of Ghana:**

Regarding the US pursuit of global missile defense as articulated in Ambassador Cooper's comments, I have three points. First, the so-called "effective defenses" would not be necessary if global peace is rather pursued through persistent dialogue assisted by effective political and economic instruments. Second, in the future we must avoid strategically flawed arms control—which, it has been argued, was the case with the ABM Treaty and the Outer Space Treaty (OST)—that prevents using the best technology to provide needed defenses. And, third, we should be talking about working to free all oppressed people all over the world to achieve a world of free and friendly nations. Then, perhaps we could not need to spend such huge resources to defend one particular nation or group of nations.

From an African perspective, threats to global security means: poverty, illiteracy, HIV/AIDS, disaster management, proliferation of small arms, and international terrorism. Finally, the possibility of the weaponization of space is a threat to us all. Although these threats are particularly relevant to Africa, they are also relevant to all lower and middle income economies and to their security.

The process of globalization is weaving the economies and political circumstances of industrial nations into a web of closely interdependent nations. Thus, the most prudent, reliable and sustainable approach to ensuring global security will be that in which all nations on earth would be active participants, irrespective of a country's relative economy or military status. The solution to threats will come from harnessing the world's resources (human, material, financial). Undoubtedly, space is the new frontier for international cooperation, development and security.

Finally, I believe the ballistic missile defense (BMD) is an inappropriate and ineffective solution to combat the more realistic threat scenarios including national disasters, suicide bombers, genocide, etc. and that BMD risks starting a dangerous arms race in space which should be respected as an international weapons-free zone.

**Congressman John Spratt (D), South Carolina, USA:**

In 1969 when the OST was signed, the stated goals for US space policy included strengthening and maintaining the national security of the US – it did not include the deployment of space-based weapons. The President’s new National Space Policy could change the past forty years by supporting the Pentagon’s proposal to fight “in, from and through” space. I think we should tread warily, if at all, on this new ground.

If the US deploys weapons in space, other world powers would very likely follow suit. Our early warning satellites provide the military with essential capabilities they would otherwise not have. The US cannot afford another arms race. Our assets for supporting the military are not infinite and we need to spend them wisely. There are other alternatives to space weaponization (B2 bomber, sophisticated jamming technology, improved armor and maneuverability of our space assets). Terry Everett has pledged to have a series of hearings upon receipt of the President’s new National Space Policy. I hope these hearings will include the risk of an adverse international reaction the consequences of which must be carefully weighed.

**Congresswoman Loretta Sanchez (D), California, USA:**

The US space policy has global repercussions and a global dialogue is needed. Also, it is important for the American people to debate this issue. I believe this administration is pushing for the weaponization of space and I find the trend disturbing for several reasons: 1) the Congress has not had a real dialogue and the American people do not understand what is happening; 2) the weaponization of space actually makes us less safe. I would prefer we put our resources elsewhere and that other nations would also like to put their resources elsewhere – such as to eliminate poverty. If the US begins to put weapons in space I believe other nations will feel the need to close the gap and level the playing field. By attempting to create and maintain dominance in space, we are creating a new battlefield and money that the US is not in a position to spend (we have a \$7.5 trillion dollar national debt), *will* be spent. Testing new technology in space will increase the problem of space debris which, in the worse-case scenario, could render space un-useable and/or take out our own space assets jeopardizing our heavy dependence on satellites for a host of critical purposes. Breaking the

moratorium that has been in place for decades is foolish. No satellite has been the subject of a direct physical attack. We should place the emphasis on more immediate steps that will actually protect our space assets such as improving surveillance, hardening satellites, developing better anti-jamming capabilities and improving our situational awareness. I think we can protect the interests of America and its allies without opening up the “Pandora’s Box” of space weapons, nor do I believe that weaponizing space is inevitable.

**Senator Silvia Hernandez of Mexico (Chairperson):**

There will now be 20 – 30 minutes of eye-to eye dialogue.

**Member of the European Parliament Ana Gomes, Portugal:**

My question is how much control does the Armed Services Committee have?

**Congresswoman Loretta Sanchez (D), California, USA:**

The Democratic Party is in the minority in the House, the Senate and does not have the White House. Despite this, I believe the Committee has been able to slow down the process (particularly of the Air Force) towards weaponizing space and we have begun a dialogue about this issue. But this could be lost very quickly given the White House agenda.

**Congressman John Spratt (D), South Carolina, USA:**

We have an annual Authorization Bill in the House and Senate; the second step is to authorize spending. We adopt in the Armed Services Committee (ASC) an authorizing bill which theoretically authorizes what we see as the needs of the country. The Appropriations Committee then appropriates the funds they think we can afford. So, we have 1) what is desired, and 2) what is affordable. One way the Armed Services Committee can have an effect is to offer amendments or, at least, serve notice that we have problems with a policy and that we could limit funding of that policy. We can put up a fight even if we don’t win. Also, occasionally we can galvanize enough support across the aisle to stop programs like this – especially when they cross new and dangerous boundaries.

**House of Lords Member Tim Garden, United Kingdom:**

How can international parliamentarians assist you (the US minority party) with this policy change which would affect not just the US, but all of us? Space is a global commons which we all want to use and we don’t want to waste money if it is not going to enhance security.

**Congressman John Spratt (D), South Carolina, USA:**

I think that international parliamentarians need to remind the US continually that there is a broader context and that US unilateral policies can have consequences.

**Congresswoman Loretta Sanchez (D), California, USA:**

Members of both US political parties do listen to and consider what international parliaments say.

**Congressman John Spratt (D), South Carolina, USA:**

Terrorism is one of the gravest and most serious threats that face all of us everywhere in the world. The only way to come to grips with this threat and to counter and subdue it is through cooperation. This is the type of cooperation we need more than ever. It could be the cornerstone on which to build a new congeniality in the world about formulating other policies that relate to our common security. There needs to be a new division of labor in the world; we need to re-think the purpose of NATO and other alliances. The US is coming to realize that we can not afford to be taking all (or most) of the risks and “footing the bill” with only our human and monetary resources.

**Member of Parliament Jakob Axel Nielsen of Denmark:**

What would be different in this debate if John Kerry had won the election and Democrats had a majority in both chambers?

**Congresswoman Loretta Sanchez (D), California, USA:**

I believe if the Democrats were in control, we would not be looking at weaponizing space but, rather, at how to control space debris; having a better map of where assets are going to be deployed and working on a world-wide basis to make space more useful. We would be looking at how to protect our space assets without spending billions for R&D.

**Congressman John Spratt (D), South Carolina, USA:**

John Kerry would have supported the 1967 Outer Space Treaty and also recognize that it needs to be updated. He would be opposed to “look down – shoot down” and other predatory satellites.

**Senator Lyn Allison of Australia:**

I’m interested in how members of opposition parties can dialogue. It sounds like your committees are much more powerful and informed than ours about what the government’s intentions are. Can you expand on the process in your committees?

**Congresswoman Loretta Sanchez (D), California, USA:**

Congress has subpoena power, the power of hearing and the power of the purse -- money is the key to the power of the US Congress.

**Congressman John Spratt (D), South Carolina, USA:**

US Congress is different than any European Parliament. There are opportunities in our Congress for exercising real oversight; we can demand certain things be presented by the administration. We have a "traffic cop" in the House of Representatives called the Rules Committee that determines what amendments can be offered for legislation.

**Member of Parliament Bjorn Hernaes of Norway:**

My interest is in NATO and the need to re-conceptualize and reconsider what the meaning of this organization is for the future. Do you think that this discussion of space security, especially the military part, will be a decision finally determined in NATO which is a consensus organization?

**Member of the European Parliament Ana Gomes of Portugal:**

NATO should play a part in the rethinking of the nuclear non-proliferation strategy, but it isn't. Would this fit into the re-thinking of NATO?

**Congressman John Spratt (D), South Carolina, USA:**

Nuclear non-proliferation requires a huge cooperative effort amongst us all. We should have a NATO policy, but NATO doesn't have the purpose it was originally created to serve. This could be one of its principle focus points. I believe member nations of NATO should have had a critical role in reaching the decision about going to war in Iraq and Afghanistan because it affects the whole world – the Middle-East in particular. Also, the UN Security Council should have had a role. That said, the US would forego any consensus that was in opposition to what it considers in its own best national security interests.

**Member of Parliament Hayashi Yoshimasa of Japan:**

When you talk about militarization and weaponization of space, and the missile defense program (launch phase, boost phase, mid-course), where do you draw the line between space and the atmosphere?

**Congressman John Spratt (D), South Carolina, USA:**

Right now we are embarking on deployment of a ground-based intercept system in Alaska. One of the key elements is that it is a stabilizing (defensive) system because it allows us to make an informed judgment as to whether or not we are under imminent attack instead of making a hasty decision. Secondly, x-band radar gives us a precise reading and characterization of an entering object. So, if we are going to have a missile defense program, I am in favor of these ground-based systems. I have

been a long-time opponent of space-based interceptors. I am skeptical about the feasibility and about the vulnerability of such systems.

**Senator Silvia Hernandez of Mexico (Chairperson):**

We will now continue around with the presentations from our international representatives.

**Dep. Aroldo Cedraz (PFL), Chair, External Relations and National Defense Committee, House of Representatives, Brazil:**

Despite Brazil's economic and technical advances, such issues as space security and technology have to take a back seat to higher priorities of the needs of Brazil. Nonetheless, Brazil's space activities, including technological and scientific initiatives, have increased in recent years. Many countries, including Brazil, are now interested in the commercial opportunities space provides as well as the great economic and political significance of this issue.

The Brazilian Space Agency (AEB) coordinates its actions with Brazil's National Policy on Development of Space Activities. Its goals are: 1) access to the benefits of the peaceful use of space; 2) national development; 3) national security; and 4) the quality of life for Brazilian people. The Brazilian space industry is fully qualified to aspire to play a significant role in space on the world stage including participating in international partnerships such as the initiative to build and operate the International Space Station.

Brazil's uncompromising position is to insist on the peaceful uses of space pursuant to the 1967 Outer Space Treaty. Brazil does not have military ambitions in space. We are concerned about monitoring of Brazilian territory and territorial waters by devices installed in remote sensing satellites and the economic and trade disadvantages which may result. We are concerned that the privacy of government and private sector communications will be compromised as a result of satellite monitoring (industrial espionage). This results in a waste of resources, both human and financial, for Brazil because instead of these resources being applied to productive initiatives, they are being spent on safeguarding against the intrusiveness of others. We are concerned about space garbage (debris) and the threats this poses.

**Air Marshal Lord Garden, (LD), UK, Defence Spokesman, Liberal Democratic Party, House of Lords:**

There is a growing consensus about the importance of space to all nations. Already there is competition and problems with regard to activities in space, both civil and military, such as launch pad space, crowding of certain orbits and placement of satellites, space debris and bandwidth/frequencies. We already have a situation which needs some sort of international control even

before we talk about traditional military security issues. We must have an international system to delegate priorities if we are to continue development in space.

I am concerned that we have not heard from our American speakers what the driving force (to put weapons in space) is. We have heard this morning that: 1) because space is a valuable "asset" we need to protect it; and 2) space provides a new military advantage (a new "high ground"). These two arguments create different arguments about controls and systems. We haven't discussed what the weaponization of space actually means and how we define weapons in this context. This may not be as difficult as some previous speakers have suggested. The custom has become that you don't deploy things in orbit which can shoot down other things, project kinetic energy or project missiles. It should be possible to expand the OST to cover the things we mean by weaponization of space. Space operates as a stabilizing system in that the military could no longer operate without space. I would want to see this stabilizing military utility of space continue.

What we are really after as international legislators is a better world where we are promoting peace and stability. So, how can space help in doing that? We need to decide if our current situation in space is so vulnerable that it gives us cause for concern. If it does, we need to look at a series of alternative arrangements, assess their costs, and determine strategic implications of implementing particular systems. Referring to the McGill paper (in your packets) regarding legislative options, the US ought to be learning that going the unilateral route and appearing as an imperialistic power do not improve its security. I would be very reluctant to break the taboo against weapons in space without having thought through the consequences and the long-term downsides. I conclude that the non-American states have the onus to listen to the arguments of US proponents of space weapons, but also to our own cases because we are stakeholders in space just as much as the US.

**Mr. Hayashi Yoshimasa, (LDP), Chair, Security Committee,  
Parliament of Japan:**

The issue of missile defense is very real, especially for Japan because of the North Korean threat. So, the degree of threat is one of the deciding factors in a political sense. To what degree should we be realists? Referring to the OST, we all agree that space should only be used for peaceful purposes and we should not put WMD in space, but what if someone breaches this? How do we counter that? Most people in Japan don't agree with the only guarantee being a treaty without a means of enforcing that everyone abides by the treaty. So this is the difficulty we face. In Japan, we don't have any clarification about which part of missile defense is going into space and

which is not. Even if we all agree that weapons in space are not a good idea, at the same time, if you are us, we have to protect our satellites. So, today is a very good start to begin to qualify and define what is the weaponization of space and what is the militarization of space. These are important key issues and we need to continue the debate.

**Senator Lyn Allison, Australia, Leader of the Australian Democrats:**

I believe it is important for our American colleagues to understand the Australian perspective. I speak as a member of an Australian opposition party and as a member of the public. Australians support disarmament. A high proportion opposed Australia's involvement in Iraq. Australia is involved in U.S. space militarisation. Our Pine Gap facility was very important in Iraq. We spied on the whole of the Middle East. We rely on satellites and have a launch site. So, Australia is involved in this issue.

Our Defense Minister signed a 25 year agreement to partner with the US in missile defense, but there was no discussion, public or parliamentary, about our land- and sea-based involvement being extended into space. The threat of ballistic missiles being used against Australia is negligible now and well into the future so it is hard to see the need to be involved in missile defence. Despite the question of the huge cost of three new Air Warfare Destroyers, sensors to detect missiles and the Aegis anti-missile system and the technological challenges, Australians are warned that opposition to missile defense is anti-American.

Missile defence involvement is problematic for our relations in the region. Indonesia condemned Australian, claiming it would destabilize the region. I would argue that Australia's relations and responsibilities to our regional neighbors should have a higher priority than weapons in space. Many Australians are asking if our eagerness to join with the US in its every endeavor, however fanciful, however costly, is in our best interest and that of the region. It is my view that it is not a well reasoned, strategic global engagement and that we should put the wealth and the ingenuities of the U.S. and Australia to use to solve much more serious problems than pressing space into service to deal with real or imagined security threats.

**Bjorn Hernaes, (Conservative), Norway, Vice Chair, Defence Committee, Parliament of Norway:**

I want to stress how important space technology already is in civil society and give a few possible positions as to how Norway will be approaching the upcoming negotiations. Norway is already a relatively large user of space based capabilities in part due to our northerly location which provides unique opportunities. Due to Norway's very long coast, we have maritime responsibilities 10 times our land based area. This calls for extraordinary

means for monitoring and control, so satellites are widely used. Norway used GPS satellite navigation, but we have decided to participate in the Galileo project. Despite our huge use of satellite data, Norway has no official space policy. However, a project is underway by the Ministry of Defense to develop a military space policy.

A few points on what will likely be Norway's unanimous position on the militarization of space:

1) Norway advocates equal access and use of space for all nations; 2) space should not be the property of any single nation; the legislation of space is unresolved and we believe any activity that might determine legislation of space should involve a global discussion and responsibility; 3) we urge all those in favor of space-based weapons to consider a scenario where several major actors have acquired this capability; and, 4) it is in the global interest to avoid monopolization by a single nation to control and legislate the use and access to space.

An arms race in space would be devastating to global security and to the world economy. It would be virtually impossible to defend against or control. Norway believes the military use of space should focus on providing better and timelier intelligence and to control and counter adversaries rather than bring war and weapons into space. The use of space weapons could result in unwanted and unintended aggression against innocent nations.

**Jakob Axel Nielsen, (Conservative), Denmark, Defense Committee, Parliament of Denmark:**

We need to make a distinction between SDI and this more offensive project we see now. I need an explanation as to why we need an offensive program in space and why the SDI program is not good enough.

In Denmark there is almost no debate on this subject and where there is debate it is because of advances and progress in technology and science. As parliamentarians we have a great responsibility to make the public understand what this is and how to talk about it as a peaceful purpose and all the possibilities this can give us. The threat we are facing is terrorism. What is the relationship between space weapons and the fight against terrorism? There is a great lack of definitions in this discussion; for example, where does space begin and what is just atmosphere? Nobody knows – we have to discuss it. There is a lack of definitions according also to international law. We must take care that not just the experts and engineers, but the public, understand what this is and what we can use it for.

**Senator Silvia Hernandez of Mexico (Chairperson):**  
We will now have 15 minutes for exchange of ideas.

**House of Lords Member Tim Garden, United Kingdom:**

I am surprised to hear Mr. Nielsen say that there is not a good public debate in Denmark because my experience there was quite the contrary. There is a danger in engaging the public in this debate because it could be portrayed too simplistically and as very "attractive" for political purposes when in fact it is a terribly technical and complex set of issues. How do we engage the public in an informed way rather than this debate becoming partisan politics which there is a tendency to do? This is why we need more definition in the debate. We could say "stop the weaponization of space" or "protect our satellites from terrorist attack". We must be very careful not to have propaganda selling.

**Member of Parliament Hayashi Yoshimasa of Japan:**

Public debate is very important which is why this is being broadcast over the internet but also we need to have a much more thorough discussion and clarification about such things as "where does space start?" We need to be careful because if we say "stop the weaponization of space" that is very different than "protect our satellites from terrorist attack" which everybody will buy. So, we cannot use this debate as propaganda.

**Member of the European Parliament Ana Gomes of Portugal:**

I also see a danger of the negative repercussion that a public debate could have in EU/US relations. Of course, we need to make people aware of what is being discussed and have a public debate, but I see tremendous potential for this debate to be misused for political, anti-American, propaganda purposes. I believe the way to have this debate is through a multilateral review of the OST and moving towards a more comprehensive treaty about prohibiting the misuse of outer space and defining rules that will be implemented by all. We definitely need the United States, as the remaining super power, to be involved. Otherwise, what good are these treaties?

**Theresa Hitchens, Vice President, Center for Defense Information, USA:**

It is my experience that in both the US House and Senate there is less partisanship on this issue than more. In part due to the status of current space programs. We have concerns across the aisle about the expenses, for example. I believe any idea of pursuing any kind of treaty activity in the next three years is a waste of time because this administration has a very iconoclastic view of the value of treaties. But, there are plenty of people in the administration and even the military who see value in having a code of

conduct (“rules of the road”) for space. No one on the international stage wants to engage the US in this debate out of fear of being out of US favor.

**Amb. Henry Cooper, Chairman, High Frontier, USA:**

I agree that a behavioral context for operations in space is the way to go and I don’t rule out the possibility for cooperative measures for activities in space. Speaking for the United States as U.S. Chief Negotiator with the Soviet Union on these issues, I proposed cooperative measures, including working with the Soviets to build together effective defenses. If we could do this with the Soviet Union during the Cold War, we can surely do it with democratic allies and friends.

**Senator Silvia Hernandez of Mexico (Chairperson):**

There are two other questions coming from other parts of the world which we will have to hold for the next debate. We have put key questions on the table for this ongoing debate.

## 5. Discussion of Next Steps

The final session of the day addressed the question: how should the e-Parliament Space Network continue the dialogue?

Nicholas Dunlop, Secretary-General of the e-Parliament, introduced the session with a short presentation. The legislators and members of the audience proposed a number of ideas. The following day, individual conversations were held by some of the visiting legislators with: Congressman Ken Calvert (R), Chairman of the Space Subcommittee of the House Science Committee; Congressman Jim Leach (R), senior member of the House International Relations Committee; Congressman Tom Allen (D); and Congressman Jim McDermott (D). Since then, there have been informal consultations among some of the participants in the September 14 meeting. Here are some of the themes and ideas that have so far emerged from the discussions.

First, there is unanimous agreement that the process of dialogue among legislators on space weapons should continue. This was stressed by, among others, all five members of the US Congress (three Republicans and two Democrats) who attended the September 14 meeting. Given the potential for the space weapons issue to lead to conflict and misunderstanding, all agreed that it is important to seek as much clarity as possible and to explore all possible areas of common ground for international cooperation to ensure space security – “coming together around some common themes,” as Congressman Weldon put it.

A number of participants in the meeting stressed the importance of increasing public debate and understanding of space security issues. It was proposed that the results of the meeting should be circulated to other interested legislators. Ana Gomes indicated her intention to explore holding a hearing on space security in the European Parliament. Lyn Allison, on her return to Australia, immediately published an article on the subject in a national newspaper and is considering policy initiatives in the Australian parliament.

Several speakers stressed the importance, in the next stage, of identifying specific policy options that legislators could be invited to respond to and comment on. These may, as Senator Hernández said, include some policy options that reflect conflicting points of view. It is up to the legislators to choose which ones they would like to advance through their own national political process.

One theme that emerged strongly from conversations on September 14 and 15 was the central importance of the issue of transparency.

There is clearly considerable concern among US military thinkers and members of Congress about a possible "space Pearl Harbor" in which China or another country with advanced space capability could make a sudden move to control low earth orbit. It is not unlikely that Chinese military planners, following the discussions of space weapons in the US, are making their own worst-case calculations about the consequences for China of US military domination of space. If each side is sufficiently worried about the other, and if each side feels profoundly uninformed about the real activities of the other in space, there is every chance that the worst-case scenarios will become self-fulfilling prophecies.

If, on the other hand, there were greater transparency on all sides about spending relating to space security, discussions between military and civilian government experts from the major spacefaring nations, clear and explicit rules of the road for satellites, cooperative measures for space surveillance to track any unusual activity by satellites, and perhaps even international inspection of space launches, the level of uncertainty could be greatly reduced.

Transparency is a subject of interest to everyone. Whatever their position on the deployment of space weapons, all sides showed interest in having rules of the road -- as Hank Cooper said in the meeting, perhaps comparable to existing agreements on incidents at sea -- to avoid unintentional conflicts in space. For example, prior warning of movements of satellites is one aspect of transparency. There is understood to be significant interest in the US Defence Department in exploring cooperation with the Europeans and others on a comprehensive system for space surveillance. From the viewpoint of China, Russia, India, Brazil, Japan or other countries with strong space capabilities, there might be significant interest in steps which can be taken to increase the level of confidence in Washington that there will be no unpleasant surprises in space.

Yet, consultations about what level of transparency would be required to reassure those in the US Congress who are concerned about Chinese intentions in space, or what forms of transparency might be acceptable to China, Russia or the US, seem to be at a very early stage, if they are happening at all. This could be one very interesting area to explore.

This might suggest that at least three steps should be considered for the next stage.

**GATHER IDEAS:** The e-Parliament secretariat and participating legislators could gather ideas from experts and legislators on all sides of the debate, and from a number of countries, about what unilateral or cooperative measures they would be interested in exploring to increase transparency in space. Each idea would be summarised in the standard format for the e-Parliament's online Ideas Bank, and put online for everyone to consider. At the same time, each one-page summary could be added to a "briefing book" for interested legislators as a basis for consultation. Committee hearings in national parliaments would be another channel through which to gather policy options.

**CONSULT:** As these ideas are gathered, key legislators and government officials can be consulted in several ways. First, of course, by e-mail. Second, in individual meetings. Third, members of the e-Parliament Space Network around the world can be engaged in discussions with experts through a series of conference calls. The e-Parliament is in the process of setting up the infrastructure for cheap conference calls with groups of up to seven or eight legislators and two experts at a time. Thus for considerably less than the cost of a meeting much larger numbers of legislators can be involved in assessing innovative policy ideas presented by experts in the field of space security.

A number of participants in Washington stressed the importance of consulting with China as policy options are explored.

**SECOND HEARING:** Once these consultations have advanced, a second hearing in the US Congress could be organised. Having now held the first meeting, and having more lead time, it should be possible to combine the hearing with a series of valuable individual meetings with key committee chairs in the Congress.

The possibility has been mentioned several times that the process of exploring policy options regarding space transparency (or other areas of space security) could be combined with scenario-building to look at the likely consequences of different options. To the extent that legislators could be engaged in the scenario-building process, this could be a very useful tool for illuminating policy alternatives.

It was also suggested that the e-Parliament Space Network should, at an appropriate moment, form a steering committee of legislators to guide the activities of the network.

All these ideas will be summarised as a basis for consultation with the legislators who were present in Washington, before a programme of next steps is finalized.

Congressman Thornberry, while outlining his commitment to doing whatever it takes to defend US space assets, said that it should be done "in a thoughtful way and if possible a cooperative way." These two well-chosen words sum up the task of the e-Parliament Space Network: to help ensure that whatever spending and policy decisions are made in national parliaments are based on serious thought and as much information from all sides as possible, and to explore any possible areas for cooperation in meeting the goal which everyone shares. The goal: a secure space environment in which humanity can continue to benefit from the ever-growing number of valuable roles which space technology plays in our lives. As Congressman Calvert said, "Now is a good time to talk about all this."

## **Annex 1.**

### **Questions submitted via e-mail which were not covered at the hearing.**

Question from Alfred Webre, ICIS-Institute for Cooperation in Space,  
Vancouver, Canada

Over 4000 leaders and activists in the world peace movement have petitioned the President of the U.N. General Assembly for a Space Preservation Treaty Conference to ban all warfare and weapons in space. What specific steps will the panelists take to support a UN Space Preservation Treaty Conference to ban all space-based weapons?

Question from Martin Schwab, U.S. Citizen:

Would the panelists consider promoting a system whereby parliaments – in conjunction with foreign and defense ministries – decrease their annual military budget by a small but gradually increasing percentage, and divert these funds to the planning of international human missions to space, global defense against asteroids, and developing space solar-power satellites? Would these initiatives not be a more effective use of our resources than the construction of space weapons would be?

Question from Rufo Guerreschi, CEO, Italy [www.partecs.com](http://www.partecs.com):

Do you think that only highly-legitimate and fully-empowered global democratic institution can develop and enforce policies to ensure outer space security? Or do you think that current global institutions and multilateral treaties can accomplish the task?