NEW DEFENCE AGENDA
A Neutral Platform for discussing NATO and EU Defence and Security Policies
President: Eduardo Serra Rexach *Patrons: Chris Patten and Javier Solana*

SPACE AND SECURITY IN EUROPE

Moderated by **Giles Merritt**, Director, New Defence Agenda
and
Nick Mitsis, Editor, Via Satellite

Rapporteur: John Chapman

Monthly Roundtable
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NEW DEFENCE AGENDA

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SPACE – THE FINAL FRONTIER

"These are the voyages of the Starship Enterprise,
its five year mission to explore strange new worlds,
to seek out new life, and new civilizations,
to boldly go where no man has gone before..."

Kirk, Captain James Tiberius

Star Trek's Captain Kirk gave the Starship Enterprise a five-year mission. He had probably not encountered the myriad of problems that faced the panellists at the latest New Defence Agenda roundtable. Europe's space exploration and exploitation could take considerably longer …

Asked to plot a route for "space and security in Europe", the panel immediately hit the requirements wall, i.e. what were the requirements, who was responsible for their definition and who would have the final say. The ESA's **Gerhard Brauer** said the "space" requirements of the whole European community had to be strengthened and ESYS's **Mike Dillon** wanted "real requirements" on the table, a view that was strongly supported by the NATO German Delegation's **Klaus Olshausen**. However, the necessity to develop a user requirements definition was just the first in a series of obstacles. Others that were encountered along the way, included:

- How could the gap between the space and security communities be closed?
- Who had to be consulted within the European community?
- Was a bottom-up approach to be recommended or would this cause too much duplication of effort and resources?
- Who would have the final control of any space programme?
- How much would "it" cost and who would pay for it?
- Was the gap between US and European expenditure a barrier or a source of motivation?
- Should Europe be concerned about potential jamming by the US?
- Are NATO and the EU in sync in this domain and do they need to be?

The German Strategic Reconnaissance Command's **Brig-Gen. Friedrich W. Kriesel** was a vociferous supporter of the bottom-up approach. He saw no consolidated EU procurement policy so there was no point in discussing a generic EU approach. For the European Commission's **Jack Metthey**, funding was the key and the IAI's **Stefano Silvestri** wanted applications to be defined that would be seen as part of all-encompassing EU foreign policy. The WEU's **Paulo Brito** was dismissive;

he saw too many programmes and was concerned about interoperability.

Moving to the future of EU and US co-operation in space, the second round of panellists painted a varied landscape, complemented by pertinent comments from the floor. SAIC's **Robert Bell** said the bad old times were over but warned of problems to come, especially if the EU insisted in using Galileo's Publicly Regulated Service (PRS) signal as a way of attracting funding from third countries. The European Commission's **Lars-Erik Lundin** believed that the situation had improved post-Iraq, as the US was far more likely to be seeking Europe's co-operation. Eurospace's **Gilles Maquet** insisted that Europe develop a unified position so it could become a single partner for the US. He suggested co-operating initially on services, while Lundin said progress was only like to arrive if the European institutions were enabled to act.

The NDA's Giles Merritt summed up a complex debate that had shown there were many facets to *space* and its potential use in the realms of defence, security, peace-keeping and trans-Atlantic co-operation. In conclusion, he asked the panel four questions and, as the table in the body of the report (page 11) shows, there were more questions than answers.

Session 1: What will be the Defence Applications of Europe's Space Effort?

Introducing the debate, the NDA's **Giles Merritt** indicated that Europe's approach to space was badly in need of review. He was sceptical about the military space programme, and argued we prepare to fight old battles. "We have a military space programme which would be very good if we were still in the era of the Strategic Defence Initiative – Star Wars and all that". Handing over to Via Satellite's **Nick Mitsis**, Merritt stressed the importance of the topic, as shown by the excellent turnout and the sold-out signs on the venerable doors of the Bibliothèque Solvay.

Gerhard Brauer, Head of the Security Office, European Space Agency (ESA)

Gerhard Brauer put **space** on a level with land, sea and air, as it truly influenced our daily lives. Referring to today's heightened security requirements, Brauer said that space services were "indispensable". Referring to space's multiple uses and security threats, he argued that the EU had to be a global actor. With reference to the 2010 Headline Goals, Brauer added that the EU had to be able to act (joint disarmament operations, the fight against terrorism, support for third countries, etc.) before problems occurred – and space was an obvious resource to be used to meet such goals (by gathering data, providing communications systems, etc.).

Brauer added that with the arrival of the Galileo system, Europe would cover the full spectrum of major space applications. On the subject of space's dual usage, Brauer saw that as the result of a technological push rather than as a consequence of meeting requirements (a pull factor). In this context, he reminded the audience that, in ESA terminology, "peaceful" co-operation meant non-aggressive rather than non-military.

But he wanted to focus on the users and turned back to the requirements (of the research and development programme), which Brauer wanted to be strengthened. For him, the right technologies had to be developed and a demand-driven approach was essential.

> "The security of European citizens is a must and the information received from space is indispensable"
>
> Gerhard Brauer

After listing the various communities (European Commission, "Group of Personalities[1]", the EU/ESA Framework Agreement and the European Defence Agency) that agreed with this approach, Brauer listed the benefits that would accrue from performing a systematic analysis of security-related capacity requirements, across member states. This should harmonise individual requirements, complemented by the EU's common needs, in order to improve cost effectiveness and assist in the development of a coherent space programme (civil and military) in support of a common foreign and security policy. Brauer also hoped that such an analysis would show the capabilities of space in comparison with other options.

Mike Dillon, CEO, ESYS plc

Opening his remarks, Mike Dillon saw a fundamental gulf between the space and security communities. He was not surprised, as, in Europe, this was a topic in its infancy. Noting the need to learn the basics, Dillon warned against falling into the trap of seeing and using "space for its own sake".

[1] The 'Group of Personalities in the field of Security Research', whose Report 'Research for a Secure Europe', argues for the establishment of a major European Security Research Programme (ESRP) beginning in 2007, includes members representing a number of important space interests. Among them is ESA Director Jean-Jacques Dordain.

Backing the previous speaker, Dillon insisted on the need to define "the real requirements of today". As an example, he suggested that the right questions be asked, such as: "Can space applications (satellite services) help the effective use of the EU-25's forces?".
Taking a military stance, Dillon defined the three areas that might link the space and security (including network-centric-warfare) communities in the future. Calling for a strategic review, Dillon defined these as:

> "There is nobody collecting and aggregating requirements so the space community can demonstrate the value of its services"
>
> Mike Dillom

- *Resources:* the correct level of funding could only be generated by plans (short, medium and long-term) that were tied to real requirements
- *Responsibilities:* responsibilities must be aggregated, as this did not happen today
- *Recommendations*: they should be clear; starting with strategic reviews in 2005, focussing on what the battle groups currently need

BRIG-GEN. FRIEDRICH W. KRIESEL, Commander Strategic Reconnaissance Command, Germany

Explaining that Germany's current focus was on reconnaissance, following the problems that surfaced during the Kosovo campaign, Brig-Gen. Friedrich W. Kriesel was definite in his preferred approach – that of pragmatism. He saw many benefits in using satellites for worldwide reconnaissance and explained the current German system (SAR-Lupe)[2], where the first satellite would be launched in 2005. In this respect, he explained how Germany and France (with its Helios system) were collaborating on, initially, the exchange of images, followed by full information exchange – "an ambitious endeavour". Brig-Gen. Kriesel said that other countries could join (if they wished, under conditions to be discussed), but he acknowledged that even such a small collaboration had its difficulties. He therefore could see little future in trying to co-operate across 25 member states.
As for Europe, he could not see any EU space applications in the short-term, as there was no consolidated EU defence procurement policy.

Brig-Gen. Kriesel found it hard to discuss a generic EU approach in space and felt compelled to back a bottom-up strategy. He argued for two or three nations getting together and subsequently making their projects open to the rest of the EU, as in the SAR-Lupe / Helios programme.

JACK METTHEY, Director Space and Transport, DG Research, European Commission

Jack Metthey insisted that the European Commission was not dogmatic on the subject of space nor security. It was talking about "security" rather than "defence", as that was a more flexible term. He mentioned that in the view of the European Parliament, this ruled out the possible militarisation of space and the use of offensive weapons. Insisting that the key incentive factor to convince member states to work together at EU level was to improve security in Europe at the lowest possible cost, Metthey made reference to the various policy papers (white and green), various working groups and, in parallel, the preparatory action in security research that were ongoing. His key message was on resources – "would the EU future financial perspectives allow it to match its ambitions?".

[2] SAR-Lupe is a five-satellite constellation scheduled to be operational in low Earth orbit starting in 2005 with the launch of the first 750-kilogram satellite.

STEFANO SILVESTRI, President, Instituto Affari Internazionali (IAI), Rome

Looking into space, Stefano Silvestri saw many possibilities and concluded that concrete proposals were a pre-requisite. He also wanted the use of space to be seen in the context of the EU's overall security objectives, which were wider than a focus on purely defence issues.

Silvestri recommended concentrating applications (observation, communications, etc.) that would support Javier Solana's *security strategy paper*. However, as that had elements of crisis management through diplomatic and political measures, as well as military means, the use of space had to be seen as part of the EU's wider foreign policy.

Although this could bring the space community into a conflict with national defence establishments, Silvestri warned against repeating the ESA's artificial gap between civil and military initiatives. His final suggestion was a programme that the national institutions work together to collect, interpret and share data as a basic starting point.

FIRST SESSION – Q&A

Budgetary matters

Opening the debate, **Giles Merritt** wanted to know some figures. Asking for details of the amount of money that might be needed in Europe, Merritt gave various estimates[3] of the gap between the US and EU expenditures and asked if this was important?

Eurospace's **Gilles Maquet** agreed with Merritt that there was an impressive gap between European and US expenditures. For security & defence, Maquet put the ratio at 1:20 (Europe: US). He also estimated that an annual spend of 2 billion euros was required to develop adequate space systems (for defence systems only) within Europe.

On the subject of budgets, **Mike Dillon** said that the 750 million euros (mentioned by Merritt) was tied to specific surveillance requirements, whereas the 2 billion euros was linked to security. His message was any amount had to be linked to a definition of "what the money is for". He also reminded the audience that there was a major difference between the funding required to a) develop capabilities and b) meet well-defined operational requirements. They were not the same animal.

The European Commission's **Jack Metthey** saw some possibilities in the upcoming seventh research framework programme and referred to the report by the "Group of Personalities" on security research which had put forward a recommendation for a budget of 2 billion euros (as mentioned above).

Accountability and responsibility

The Western European Union's **Paulo Brito** reviewed the players (the member states, the Council, the European Parliament, the European Commission, NATO, the military attaches, etc,) and asked – who decides, who pays and who controls the systems in space?
Dillon replied that whereas the US had one chain of command, the EU had 25 member states, which led to significant duplication and wastage. This meant that intelligence sharing first required a climate of confidence. Dillon was unsure who was accountable in Europe and where the responsibilities to deliver lay. He agreed that there needed to be a definition of what space was to be used for – requirements had to be aggregated, measured, and value demonstrated. But who would do this?

> "The evolution is towards weapons in space and Europe must be prepared"
>
> Paulo Brito

Metthey argued that the European Commission had been trying to inject a sense of urgency into such discussions, but there was a long way to go. He agreed that more resources were needed, but he noted that the EU and the US had different ambitions, with the latter possibly aiming for supremacy. Metthey insisted that the EU had been creative in developing schemes to support

[3] The ratio of expenditure in space for Europe: US is 1: 7, (5.5 billion euros vs. 40 billion dollars). Half of the US expenditure is on military applications with Europe spending approx. 500 million euros.

space initiatives, listing Galileo and public-private partnerships as examples of this.

Interoperability

The NATO German Delegation's **Klaus Olshausen** welcomed the arrival of space in the ESDP domain and called for real requirements (for battle groups and countries) to be defined.

Brito argued that Europe needed autonomy and that meant it required its own capability in space so it could receive information, take its own decisions, etc. Looking at the space landscape, he saw "too many programmes" on the European scene. Brito wanted interoperability (on the ground and in space) so that the EU could be self-sufficient.

In response, Dillon agreed there had to be interoperability within the EU, which would lead to an effective exchange ("The GSM mentality") between the various communities, i.e. battle groups, police, cross-border patrols, etc.
Stefano Silvestri added that Europe had to be self sufficient but that meant it had to have the means to survive in space. That implied the need for a sound and competitive industrial base "which may not relate directly to operational requirements". Noting a lack of success in the past, Silvestri looked at how the aforementioned 2 billion euros (or slightly less) might be spent; he saw early warning systems and missile defence systems as being unlikely items for expenditure, while he did see intelligence sharing via satellites as having a high priority.

Silvestri saw an unharmonised European marketplace and saw co-ordination as being a task for European defence staff, the industrial community and the European Commission. As for budgets, that was a question of security and how it was defined.

NATO's role in space

NATO Deputy Secretary General **Alessandro Minuto Rizzo** commented that the Alliance would only invest in space if the activities were seen to contribute to meeting its objectives. He added that: a) NATO was focused on defence and not on the broader term - security, and b) there needed to be more coherence between NATO and the European family as the budgets and forces were generally coming from the same source.

Weapons in space?

On the subject of militarisation of space, Brito had concerns about the potential jamming of European satellites by the US. Arguing that Europe had to prepare for "weapons in space", Brito wanted more information about the link between the European Commission and the Satellite Centre (Torrejón de Ardoz).
Dillon insisted that Europe had to "play its own game" – the key was the protection of existing European satellite services.

The future / top-down vs. bottom-up

Brig-Gen. **Friedrich W. Kriesel** referred to the EU Council's paper (issued 16/11/04) – "European Space Policy: ESDP and Space[4]" – "for the co-ordination of all actions in the field of the use of space assets for ESDP purposes." However he saw no immediate need to co-ordinate as there were no operational programmes. He acknowledged that the Satellite Centre was doing good work, but this was outside the current discussion.

In response to **Nick Mitsis**' question as to whether the Council's recommendations went far enough, Brig-Gen. Kriesel said it was a pragmatic approach and was similar to Germany's own bottom-up stance.

Gerhard Brauer was in two minds. He could agree with the benefits of a bottom-up approach in space – "as strong national interests also drive collaboration" – but that did not resolve the problem of duplicated resources. He wanted to achieve common goals such as space surveillance that needed a common infrastructure. This could only be achieved by a fundamental analysis of requirements, possibly conducted in parallel with bottom-up activities.

[4] Reference 11616/3/04.

SESSION 2: WHAT FUTURE FOR EU-US SPACE CO-OPERATION

Giles Merritt opened the second session by setting the scene and reminding the audience that it was not only the EU and the US who were in the space game. He reminded the roundtable attendees of the interests of countries such as China, India and Russia.

ROBERT BELL, Vice President European Business, SAIC

SAIC's Robert Bell had five points to make in relation to EU-US relationships in this arena.

1. *The good times are here:* Looking at the GPS-Galileo discussions, Bell said the bad old days were over. Resolution had been hastened by the Iraq conflict – as that had caused the White House, especially, to seek agreement.
2. *"The agreement's for real":* On both sides there had been serious and constructive work to achieve GPS-Galileo operability.
3. *"A lot more work is needed":* On the Galileo side, there was a need to measure the effort required to finish the job, whereas on the GPS side, there were outstanding budget questions concerning modernisation. In addition, the EU still needed to clarify the underlying economics, especially in regard to fee-paying services.
4. *Galileo's Publicly Regulated Service (PRS) – a problem?:* Bell could see the potential for renewed tension here; was the (encrypted) PRS meant for eventual military purposes and who would pay for it – the EU member states or third countries? He explained that the Galileo Consortium was looking for a 20% payback even though it accounted for only 5% of costs. The problem was that the possible inclusion of countries such as China, India and Russia, etc. would cause great concern in the US.
5. *Transportation Council Meeting:* This would be the next important decision point in regard to the PRS signal.

LARS-ERIK LUNDIN, Head of Unit Security Policy, DG External Relations, European Commission

Looking back to the 1980s, Lars-Erik Lundin declared that capabilities linked to the use of space technologies had increased dramatically. The fact that they could now be used for civil security requirements was "a fantastic development". As an example, Lundin said that if there were large refugee movements, this reconnaissance capability would be useful for all communities – armed forces, police, aid workers, etc.

> "The fact that space technologies can be used for civil security requirements is a fantastic development" Lars-Erik Lundin

Agreeing with Robert Bell Lundin saw the US looking for European assistance[5] in a post-Iraq world, as that conflict had shown that overwhelming military power was not enough, as illustrated by recent urban warfare situations. However Lundin saw the need to explain to Europe's citizens why actions (in the space arena) were required, so that funding problems could be overcome.

GILLES MAQUET, Representative, Eurospace

Taking a positive stance, Gilles Maquet, quoting the George Washington University, said that Europe was very close to the US in terms of its technological level in C4ISR as well as for telecommunications, satellites and launchers. Maquet added that the European space industry was often collaborating with

[5] As Europe has substantial civilian expertise in post-conflict situations.

the US in topics such as the international space station, backup agreement for satellite launchers, Galileo & GPS, image exchange, etc.

But Maquet saw negative factors as well:

- The funding gap of 1:20 should not be allowed to continue if Europe was to be a real potential partner for the US industry
- The current fragmented approach within Europe had to be co-ordinated (as industry had to work on both European and national projects) and resolved
- The current export restrictions had to be adapted as that hindered real co-operation between the US and European industries.

Looking forward, Maquet argued that:
a) a unified European position was essential to improve the relationship with the US, and,
b) there should be pragmatic approach that looked at current programmes relating to GPS-Galileo, launchers, missile defence and early warning systems. However, he did note that progress was dependent on the willingness of both Europe and the US to work together.

UWE MÖLLER, Director Brussels' Office, German Aerospace Center (DLR)

Looking at the landscape from a civil viewpoint, Uwe Möller emphasised the long history (over 40 years) of co-operation between Europe and the US, which had led to many benefits. After reviewing the DLR's current activities, Möller recommended that Europe back the US in its wish to make further progress in space exploration (robotic missions, use of the International Space Station). In conclusion, he looked towards a European space programme, with consolidated resources, by the end of 2005.

SECOND SESSION – Q&A

Nick Mitsis kicked off the second round of Q&As by looking at the US situation. He described a tremendous willingness for cooperation on the civil space side of the agenda. As for the military side, export controls were still causing problems and the US certainly wanted to lead (rather than co-operate on) any actions in the defence arena.

To jam or not to jam

Ernst Guelcher (GREEN, ESDP specialist) wanted to know more about the possible jamming of European satellites by the US. How serious was the risk? Could the US hinder European capabilities (in the context of GPS-Galileo)?

According to Bell, that specific question had been at the heart of the dispute surrounding GPS-Galileo developments. In regard to the US (and NATO), Bell said it would get involved in "navigational warfare" (i.e. jamming) if any satellite was compromised (i.e. control had been lost) in a war-fighting situation. He added that the EU had assured the US that they could guarantee security by encrypting satellite systems, to which Washington had responded "show us the

money". As the EU had said this would take some time, a compromise was necessary; it had been agreed that the US could jam the PRS signal, while in return the US would make the two systems fully interoperable. Bell added that Galileo's promised 24/7 availability made co-operation a tremendous incentive for the US. On the EU side, there was a desire for full encryption to be implemented to remove any US concerns.

> "The PRS is attractive to countries such as China, but the more you advertise its use for military purposes, the stronger you make the argument to keep third countries out"
>
> Robert Bell

However, as the EU was turning to countries such as Russia and China to develop a business case for the PRS signal, it was becoming more likely that integrity of the system could be compromised (i.e. the fear of losing control to a third country).

In response to a question from VEGA's **John Lewis**, concerning the differences (in speed) between US and EU approaches, , Bell outlined the conflict further: Galileo might not arrive until 2010 but it would certainly happen. He then returned to the fundamental question of whether the EU's PRS was an "embryonic military enabler" or a funding generator that would attract third parties. On the GPS side, Bell added that its development was hitting budgetary problems in the US, due to the need for a modernisation programme and funding restraints.

Towards EU-US co-operation in space

The WEU's **Paulo Brito** was surprised that the talk was focussed on EU-US co-operation, as it never seemed to go beyond discussion. He argued that the US's desire not to share technology meant that countries tended to do their own thing. Brito wanted a mature European space industry (that could build comprehensive systems) and he asked which areas (launchers, conception and design of satellites vis-à-vis network-centric-warfare, information sharing between allies, data management, etc.) would be open to real co-operation.

In response, Mitsis asked Maquet if there could ever be genuine co-operation between the US and the EU in the satellite arena.

Maquet suggested that the place to start was on services. He said that many EU member states had their own telecommunication satellites and it was unrealistic for these natural assets to be shared. However, Maquet argued that services based on the national assets could be pooled, e.g. in the areas of mutual backup and storage capacity. Expanding on those ideas, he argued that images and capacity could be exchanged between national satellites. Maquet could also see scope for co-operation on early warning systems to assess threats (between the US and Europe).

Lundin argued that a lot had been achieved by the EU despite the absence of a level-playing field, due to the limitations of "competences". He wanted the European institutions to be given more power in order to create a more balanced picture between the US and the EU. As for the Council's ESDP Paper, he thought that was useful.

Bell responded to Brito's remarks by highlighting the classified information exchange between the US and the European Commission, thanks to the Dublin agreement. Previously, only bilateral exchanges had been possible – this was a step forward and was "extremely significant".

Die Zeit's **Constanze Stelzenmuller** agreed with Brito that the US seemed to flip-flop between co-operation and dominance. She wanted to know where the dividing line was and if this would cause future problems. Bell

answered that he could only respond in the area of GPS-Galileo, where the PRS signal debate had touched a "raw nerve" in terms of the US's space dominance policy. So - despite the EU guaranteeing encrypted full security - the US would jam signals if it was seen to be necessary.

> "There are many miles to go in this saga." Robert

Space News' **Peter B. de Selding** could see no benefit for the US in using the Ariane's launching capability as that would mean US tax dollars heading east! Maquet said it would actually save the US having two launchers systems, by using European capacity for backup purposes, so US tax payer dollars would be saved.

IT'S A WRAP

Giles Merritt brought the debate to a close by asking the panel four relevant questions and, as the table below shows, there were more questions than answers.

	Robert Bell	Lars-Erik Lundin	Gilles Maquet	Uwe Möller
Is EU-US space co-operation on firm enough ground?	No, probably not	No	Yes	Yes for technological development, not for commercial issues
Is NATO a player in trans-Atlantic space co-operation?	Only if practical military steps are fundable?	N/a	Don't know	Don't know
Are Europe's, political & budgetary, problems trans-Atlantic show-stoppers?	No, as the US believes in the Galileo project and sees the benefits	Unsure, but nothing will happen overnight	Yes, the current gap is too large	No, previous experience (aeronautical industry) showed that progress was possible.
What should be the EU's policy steps be from 2005-2009, and who should take the initiative?	First, decide what the PRS is and who should pay for it.	Start with defining total user requirements, and - in parallel - clarify what is possible.	Use the potential "dream team" (ECAP and the European Defence Agency) to start a beneficial implementation.	The steps are dependent on above progress

Merritt had heard enough to underline his feeling that the "space & security" topic was worthy of further discussion. He added that there were so many elements involved in space policy that they needed chopping up into bite-sized chunks. Merritt looked forward to seeing how the NDA could take the subject forward.

Next NDA meetings

The next roundtable will be held on January 17 – ***Is the transatlantic defence marketplace becoming a reality?***

NDA Conference - Thursday, February 03, 2005 – Brussels: ***Towards an EU Strategy for Collective Security***

Programme of the Day

Session 1 - WHAT WILL BE THE DEFENCE APPLICATIONS OF EUROPE'S SPACE EFFORT?

At the EU and national level, Europe is embarking on an ambitious drive to develop new space technologies. What military capabilities could be derived from these R&D efforts, and how widely will their scientific findings be available? Is there yet a clear-cut plan for harnessing the space drive to Europe's security and defence needs, including crisis management and intelligence gathering?

Moderators: **Giles Merritt**, Director, New Defence Agenda & **Nick Mitsis,** Editor, Via Satellite

Introductory Speakers:

- **Gerhard Brauer**, Head of the Security Office, European Space Agency (ESA)
- **Mike Dillon**, CEO, ESYS plc
- **Friedrich W. Kriesel**, Commander Strategic Reconnaissance Command, Germany
- **Jack Metthey**, Director Space and Transport, DG Research, European Commission
- **Stefano Silvestri**, President, Istituto Affari Internazionali (IAI), Rome

Session 2 - WHAT FUTURE FOR EU-US SPACE COOPERATION

Europe's space research drive is a catch-up effort, given that US space capabilities are now far ahead technologically. What is the outlook for transatlantic co-operation on space research, and to what degree will it be driven by NATO efforts on interoperability and force transformation? Does the Galileo-GPS relationship auger well or badly for EU-US space research partnerships?

Moderators: **Giles Merritt**, Director, New Defence Agenda & **Nick Mitsis,** Editor, Via Satellite

Introductory Speakers:

- **Robert Bell,** Vice President European Business, SAIC
- **Lars-Erik Lundin**, Head of Unit Security Policy, DG External Relations, European Commission
- **Gilles Maquet**, Representative, Eurospace
- **Uwe Möller**, Director Brussels' Office, German Aerospace Center (DLR)

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