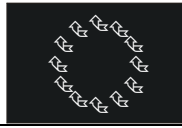


EUROPEAN PARLIAMENT

2004



2009

Committee on Foreign Affairs

2008/2030(INI)

14.3.2008

DRAFT REPORT

on the contribution of space assets to ESDP
(2008/2030(INI))

Committee on Foreign Affairs

Rapporteur: Karl von Wogau

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MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

on the contribution of space assets to ESDP (2008/2030(INI))

The European Parliament,

- having regard to the European Security Strategy entitled "A secure Europe in a better world", adopted by the European Council on 12 December 2003,
- having regard to the EU strategy against proliferation of Weapons of Mass Destruction, adopted by the European Council on 12 December 2003,
- having regard to the 1963 Partial Test Ban Treaty banning nuclear testing in outer space;
- having regard to the 1967 Outer Space Treaty prohibiting the stationing of weapons of mass destruction in space;
- having regard to the 1932 International Telecommunications Union Convention as amended in 1992 and 1994, protecting civilian satellites from interference;
- having regard to the Council document European Space Policy: "ESDP and Space", dated 16 November 2004;
- having regard to the Council document "Generic Space Systems Needs for Military Operations", dated 7 February 2006;
- having regard to the Council document "Outline of Generic Space Systems Needs for Civilian Crisis Management Operations", dated 27 June 2006;
- having regard to the Report of the Panel of Experts on Space and Security, dated March 2005;
- having regard to the Headline Goal 2010 endorsed by the European Council of 17 and 18 June 2004;
- having regard to the EU-Russia cooperation on space policy creating Tripartite Space Dialogue in 2006 between the European Commission, the European Space Agency and Roscosmos (the Russian Space Agency);
- having regard to the Joint Communication from the Commission and the European Space Agency to the Council and the European Parliament on the European Space Policy (COM (2007) 212 final) of 26 April 2007;
- having regard to the Council Resolution of 21 May 2007 on the European Space Policy;

- having regard to the Declaration by the Presidency on behalf of the European Union on a Chinese test of an anti-satellite weapon of 23 January 2007;
 - having regard to the "Berlin plus" arrangements between NATO and EU;
 - having regard to the U.S. National Space Policy of 31 August 2006;
 - having regard to the Treaty on the Functioning of the EU (TFEU) and the Treaty on European Union (TEU), as amended by the Treaty of Lisbon, and its relevant clauses on European Space Policy (art. 189 TFEU), permanent structured cooperation on security and defence matters (art. 42 (par. 6), 46 TEU and a related protocol) and enhanced cooperation in the civilian area (Part Six, Title III); as well as solidarity clause (art. 222 TEU) and mutual assistance provisions in case of armed aggression against Member State(-s) (art. 42 (par. 7) TEU),;
 - having regard to the Council Joint Action 2004/552/CFSP of 12 July 2004 on aspects of the operation of the European satellite radio-navigation system affecting the security of the European Union;
 - having regard to the European Parliament resolution on the action plan for implementing the European space policy (P5_TA(2004)0054);
 - having regard to the European Parliament resolution on the European Security Strategy (P6_TA(2005)0133);
 - having regard to the European Parliament resolution on non-proliferation of weapons of mass destruction: A role for the European Parliament (P6_TA(2005)0439);
 - having regard to the European Parliament resolution on the implementation of the European Security Strategy in the context of the ESDP (P6_TA(2006)0495);
 - having regard to the findings of its public hearings, workshop, meetings, visits and studies procured on the subject-matter;
 - having regard to the Rule 45 of its Rules of Procedure;
 - having regard to the report of the Committee on Foreign Affairs (A6-0000/2008);
- A. whereas the various political and security challenges the EU is increasingly facing make an autonomous European Space Policy a strategic necessity;
- B. whereas the lack of common approach to space policy between EU Member States results in overly costly programmes;
- C. whereas the ESDP operations suffer from lack of interoperability between space assets operated by EU Member States;

- D. whereas the EU is lacking a comprehensive European Space-based Architecture for security and defence purposes;
- E. whereas freedom from space-based threats and secure sustainable access to, and use of space must be the guiding principles of the European Space Policy;
- F. whereas the development of a new generation of launchers takes approximately 15 years and the lifespan of current ones will come to an end within 20 years' period;
- G. whereas development of space assets by the USA, Russia, Japan and other emerging space-faring states, most notably China, India, South Korea, Taiwan, Brazil, Israel, Iran, Malaysia, Pakistan, South Africa and Turkey, is rapidly advancing;
- H. whereas the French EU Presidency during the second semester of 2008 set out an advancement of the European Space policy as one of its priorities;

General considerations

1. Recognizes the importance of space dimension to the security of the European Union and the need for a common approach necessary for exerting European sovereignty in space;
2. Recognizes the necessity of space assets in order to provide the EU political and diplomatic activities with independent, reliable and complete information to support the EU crisis management operations and global security, esp. the monitoring of proliferation of weapons of mass destruction and verification of international treaties, the protection of critical infrastructure and borders of the EU, and civil protection in the event of natural and man-made disasters and crises;
3. Welcomes the adoption by the "Space Council" of the European Space Policy as proposed by a joint communication of the European Commission and the ESA, esp. the chapter on security and defence; recommends therefore that a White Paper implementing the European Security Strategy makes a reference to it;
4. Applauds the inclusion of a legal basis for the European Space Policy in the Treaty of Lisbon; welcomes as well the possibilities of permanent structured cooperation in security and defence matters and enhanced cooperation in the civilian area;
5. Encourages the EU Member states, ESA and various stakeholders to make a greater and better use of the existing national and multinational space systems and to foster their mutual complementarity; notes in this respect that common capabilities are needed for ESDP in 3 areas: telecommunications, observation and navigation; recommends the sharing and exchange of these data in line with the EU concept for Network Centric Operations Architecture;

Autonomous threat assessment

6. Calls on the EU Member States to pool and exchange geospatial intelligence necessary for autonomous EU threat assessment;

Earth Observation and reconnaissance

7. Urges the European Union Satellite Centre (EUSC) to be fully developed to make full use of its potential; moreover recommends the urgent conclusion of agreements between the EUSC and the EU Member States to provide imagery available to ESDP operation and force commanders while ensuring complementarity with GMES observation capacities and derived security-related information; in this regard, welcomes the Tactical Imagery Exploitation Station project, run jointly by the EDA and EUSC;
8. Urges the EU Member States having access to the various types of radar, optical and weather observation satellites and reconnaissance systems (Helios, SAR-Lupe, TerraSAR-X, Rapid Eye, Cosmo-Skymed, Pleiades) to make them compatible; welcomes the bi- and multi- lateral agreements between the leading EU countries (e.g. SPOT, ORFEO, Helios cooperative framework, Schwerin agreement, and future MUSIS); recommends the MUSIS system to be brought into a European framework;
9. Underscores the importance of GMES for EU's foreign as well as security and defence policies; urges the creation of an operational budget line to ensure the sustainability of GMES services in response to users' needs;

Navigation-Positioning-Timing

10. Underlines the necessity of Galileo for autonomous ESDP operations, CFSP, as well as Europe's own security; notes that esp. its public-regulated service will be vital in the field of navigation, positioning and timing, not least for the reduction of collateral damage; welcomes the agreement on the public financing of the project from the EU budget;

Telecommunications

11. Underlines the necessity of secure communication, provided by the existing satellite telecommunications systems, for ESDP operations (EU Military Staff, EU Headquarters, deployable headquarters) and EU Member States' deployments under UN, NATO and other organisations alike;
12. Requests the current and future satellite telecommunication systems at the disposal of the EU countries (e.g. Skynet, Syracuse, Sicral, SATCOM Bw, Spainsat) to be mutually interoperable in order to provide for cost reduction;
13. Supports the cooperative development of a Software-Defined Radio (SDR) by the European Commission and the European Defence Agency; notes that SDR will contribute to better interoperability of the ground segment of telecommunications systems;

Space surveillance

14. Supports the creation of a European space surveillance system leading to space situational awareness (including e.g. GRAVES, TIRA) to monitor the space infrastructure, space debris and possibly other threats;

Satellite-based early warning against ballistic missiles

15. Deplores the fact that EU Member States do not have access to instant data on ballistic missiles launches around the world; therefore expresses support to projects leading towards satellite-based early warning against ballistic missiles launches (such as French "Spirale"); furthermore calls for information acquired through these future systems to be exchanged with all EU Member States in order to protect their population and to support possible countermeasures;

Signal intelligence

16. Supports development and exchange of signal intelligence (electronic intelligence /such as Essaim/ and communications intelligence) at European level;

Autonomous access to space and international environment

17. Supports a secure, independent and sustainable access to space by EU as one of the preconditions of autonomous EU action;
18. Recommends that the European non-commercial satellites are carried to orbit by European launchers from EU territory, bearing in mind the aspects of security of supply and protection of the European Defence Technological and Industrial Base;
19. Recommends initiating strategic long-term investment into new European launchers as soon as possible, in order to keep up with the rising global competition;

Governance

20. Supports an integrated European space-based architecture;
21. Recommends a strong inter-pillar cooperation framework for space and security (involving the European Commission, Council, EDA, EUSC), in order to manage directly the security policy and data security linked with ESDP;
22. Strongly recommends that the smaller EU countries with reduced possibilities to finance their own space assets are provided access to operational data under a reinforced ESDP framework;

Financing

23. Calls on the EU to set up an operational budget for services provided by space assets in support of ESDP and European security interests;
24. Is alarmed by the fact that the lack of coordination among the EU countries results in scarcity of resources due to unnecessary duplication of activities; therefore supports the

idea of common programmes launched by the EU Member States, establishing longer-term costs savings;

25. Furthermore notes that the cost of absence of a common European approach to procurement, maintenance and functioning of space assets is estimated at hundreds of million EUR;
26. Notes that the estimates of available expertise suggest that the necessary level of investment addressing the European security and defence needs into satellite telecommunications should increase from the current budget of 500 million EUR per year to 900 million EUR per year in the period between 2008 and 2022; and the appropriate expenditure of the EU on Earth observation and intelligence gathering, including signal intelligence, should increase from the present 650 million EUR per year until 2012 to 750 million EUR in the period 2012-2017 and further increase to 850 million per year in the period 2017-2027;
27. Takes the view that the EU, ESA, EDA and their Member States should provide for a reliable and adequate funding for the envisaged space activities and the research thereof, attaches great importance to the financing from the budget of the EU, such as on the Galileo project;

Protection of space infrastructure

28. Underscores the vulnerability of strategic space assets as well as the infrastructure enabling access to space, e.g. launchers and space ports; therefore underlines the need for their adequate protection by ground-based theatre missile defence, military planes and space surveillance systems; furthermore supports the sharing of data with international partners in case of having satellites rendered inoperable by enemy action;
29. Calls for reduction of the vulnerability of future European satellite systems through anti-jamming, shielding and multi-orbital constellation architectures;
29. Emphasises that the protective measures must be fully compliant with international standards regarding peaceful uses of outer space and commonly agreed transparency and confidence building measures (TCBMs);

International legal regime for uses of space

30. Reiterates the importance of the principle of use of space for peaceful purposes expressed in the 1967 Outer Space Treaty; is therefore concerned by the possible future weaponisation of space;
31. Calls for strengthening of the international legal regime to regulate and protect non-aggressive space uses and to strengthen TCBMs, in the framework of the UN Committee on the Peaceful Uses of Outer Space (COPUOS) drafting space debris mitigation guidelines consistent with those of the Inter-Agency Debris Coordination Committee as well as the UN Conference on Disarmament (CD) developing a multilateral agreement on the Prevention of an Arms Race in Outer Space (PAROS); furthermore asks the EU Presidency to represent the EU proactively in COPUOS;

32. Calls on all international actors to restrain from using offensive equipment in space, such as the Chinese anti-satellite test in January 2007; recommends therefore international legally-binding and voluntary instruments focusing at banning the use of weapons against space assets and stationing weapons in space;
33. Calls on all space users to register their satellites, including military, serving as a space security confidence-building measure promoting transparency; supports Council's pursuit of a comprehensive EU Code of Conduct on Space Objects;
34. Urges the UN and EU to engage in active diminution of and protecting from space debris harmful to satellites;

Transatlantic cooperation on space policy and missile defence

35. Urges EU and NATO to launch a strategic dialogue on space policy and missile defence; especially on complementarity and interoperability of systems for satellite communications, space surveillance, and early warning of ballistic missiles, as well as protection of European forces by a theatre missile defence system;
36. Calls on the EU and US to engage in a strategic dialogue on the use of space assets;

Other international cooperation

37. Welcomes the strengthened cooperation between the EU and Russia in the framework of the Tripartite Space Dialogue set up in 2006 between the European Commission, the European Space Agency and Roscosmos (the Russian Space Agency), including space applications (satellite navigation, Earth observation and satellite communications) as well as access to space (launchers and future space transportation systems);
38. Instructs its President to forward this resolution to the Council, the Commission, the European Space Agency, the Parliaments of the Member States and the Secretaries-General of the United Nations, NATO, and the OSCE.

EXPLANATORY STATEMENT

1. Introduction

The **European Security Strategy of 2003 uses a wide notion of security**. The tasks deriving from the strategy include peace-keeping operations, protection of critical infrastructure and of our common outside borders, counter-proliferation and treaty verification.

The capability to meet these challenges depends and will increasingly do so on the **availability of satellite-based systems**. In order to close the existing capability gaps in this field, the rapporteur proposes a closer cooperation in the development of common European systems in the area of space technology.

2. European Space Policy

The report welcomes the adoption by the EU Council of the **European Space Policy (ESP)** as proposed by a joint communication of the European Commission and ESA, esp. the chapter on security and defence.

The Council is invited to make a reference to the ESP in a **White Book implementing the European Security Strategy**.

Moreover, the **Lisbon Treaty** establishes a legal basis for the European Space Policy as well as the possibilities of permanent structured cooperation on security and defence matters and enhanced cooperation in the civilian area.

3. Satellite-based systems

The satellite-based systems in the field of **Earth observation and reconnaissance, telecommunications, navigation, positioning and timing**, are the "eyes and ears" of those who possess them. These can have military or civilian character.

Therefore **it is crucial for the EU countries to have access to data acquired by such systems**, in order to provide the decision-makers in the ESDP and CFSP framework with proper information. As it is widely recognized that space assets are a necessity for the EU crisis management operations and can give the EU a crucial edge on the monitoring of proliferation and verification of international treaties, the EU Member States, ESA and various stakeholders should therefore be encouraged to make the best use of the existing national and multinational space systems and to foster their mutual complementarity.

These capabilities can, however, become the "**Achilles heel**" if aimed at by hostile state or non-state actors or simply collided with space debris. Therefore, it is recommended to construct a space surveillance system that could provide for a better protection of European satellites.

The **Earth observation** can provide for a permanent and long-range surveillance for a constantly refreshed situation monitoring and terrain mapping. The **telecommunications** satellites (Satcom) often constitute the only accessible means to set up a fully functional

“information chain”. They can be used to transmit remotely collected data to distant headquarters as well as to disseminate information on the field to the different units.

Further normalisation and standardisation at European level in the field of research, technical development and production could be considerable in both Earth observation and Satcom areas. As a result, **loss-making duplications would be avoided, and economies of scale and savings could be generated.**

Moreover, ESDP operations could benefit from a **higher level of interoperability** between the space assets operated by EU Member States.

The EU Member States have developed several space systems to fulfil their security needs on a national basis. However, the budgetary constraints and need for interoperability argues for a **more integrated European approach**. France is a leader in this evolution, developing bilateral or multilateral framework agreements with other EU Member States (Germany, Italy, the UK and Spain).

3.1. Earth Observation and reconnaissance

Several countries have developed or are developing their own **Earth observation (EO) systems**: France (since 1986 with SPOT 1 until Helios B and Pleiades), Italy (Cosmo-SkyMed), Germany (SAR-Lupe), Spain (SEOSAT, in the framework of the European GMES project), Sweden (SVEA project, still waiting for Armed Forces authorization), Great Britain (Topsat). Some of them were conceived to be dual-use and others to be used by more than one country. The EU Member States managing the various types of radar, optical and weather observation satellites and reconnaissance systems must provide for their compatibility.

The **bi- and multi- lateral agreements** between the leading EU countries must be therefore strongly supported as a means to save tax-payers money. France and Italy, that have signed the “Torino Agreement”, based on the combination of the two respective capabilities (optical and radar observation - ORFEO¹), to complement their reciprocal programmes. For the same reason, France and Germany also signed a bi-lateral capacities exchange agreement between SAR Lupe and Helios II in 2002 (Schwerin agreement). The European Parliament could give its **support to creation of a "Europeanised" reconnaissance system, such as the planned future MUSIS².**

With regard to European Union capabilities in EO field, the **EU Satellite Centre (EUSC)**, based in Torrejon (Spain), provides synthetic imagery analysis for security in support of ESDP operations, using open and Member States’ sources. Pending the conclusion of agreements between the EUSC and the EU Member States to provide available imagery to ESDP operations, EUSC is **not making full use of its potential.**

¹ ORFEO - Optical and Radar Federated Earth Observation, French -Italian agreement involving Cosmo-Skymed and Pleiades

² MUSIS- Multinational Space-Based Imaging System for Surveillance, reconnaissance and observation (based on BOC document- Besoin Opérationnel Commun)

Finally, **GMES** (Global Monitoring for Environment and Security) is a European initiative run by the European Commission and is intended to provide services for civil security in the environment and humanitarian dimension, but also in the contribution to the verification of some disarmament treaties. GMES will be based on observation data received from Earth Observation satellites and ground based information. Once the first services are ready in 2008 (mapping, support for emergency management and forecasting), it **should be available in support of ESDP operations** and an operational budget line should be established in the EU budget.

Furthermore, the EU Member States should pool and exchange geospatial intelligence not only for the ESDP operations but also for **autonomous EU threat assessment**.

3.2. Telecommunications

Military and security communities are increasingly relying on commercial systems to provide larger bandwidth for complex military systems. **Secure communication is a necessity for every ESDP operations** if it is to be successful. Current military Satcom architectures mainly consist of **two levels of services: unprotected communications**; and highly **protected military transmission**. In Europe, only **few countries have developed high security level capability** (due to technological and budget difficulties), and two of them (**France and the United Kingdom**) are nuclear countries. The United Kingdom uses its own Skynet system, with the last Skynet V version conceived as dual-use. The French armed forces, after using the civilian satellite platform (Telecom-2), have opted for a military-only programme (Syracuse III). **Italy and Spain** have developed their own military Satcom (SICRAL and Spainsat, respectively). Moreover, the French, Italian and British capabilities, pooled together, have been chosen by **NATO** to provide a first so-called **“Satcom Post-2000”** architecture for communications. Finally, from 2009, two new **German military satellites** will be launched in 2009 (called SatcomBw).

Your **rapporteur requests** that the **current and future satellite telecommunication systems at the disposal of the EU are mutually interoperable**. Ideally, future generations of Satcom should be launched and financed in a much more cooperative way than it is the case in the present.

Furthermore, the support should be given to the ongoing development of a **Software-Defined Radio** by the European Defence Agency in coordination with the European Commission, providing for a full interoperability of the ground segment of telecommunications systems.

3.3 Navigation-Positioning-Timing

Under the joint EC/ESA initiative, Europe will manage a new Global Navigation Satellite System (GNSS) called **Galileo** by 2013: a constellation of 30 satellites providing to users with the proper receiver the possibility to know with extreme accuracy their position. The rapporteur welcomes the compromise reached by the EU in November 2007 and underlines **the necessity of Galileo being fully available for autonomous ESDP operations** (esp. its public-regulated service).

3.4 Satellite-based early warning against ballistic missiles

Projects leading to early warning systems against ballistic missiles launches (such as the French Spirale) are to be **given support**. Information acquired by them, once ready, must be exchanged with all EU Member States in the future.

3.5. Signal intelligence

Development and exchange of **signal intelligence** (electronic intelligence /such as French Essaim/ and communications intelligence) is **recommended at European level**, providing **support to ESDP operations**.

4. Space surveillance and protection of space infrastructure

At present, Europe is largely dependent on **space surveillance** (i.e. systematic tracking of space objects) with radars and optical telescopes carried out by the US and Russia. However, ESA and the European Commission started a dialogue on a definition of a possible **creation of a European space surveillance system leading to space situation awareness**. German TIRA and French GRAVES radars could take part in the system.

This activity is vital if the EU wishes to provide for a better **protection of its satellites**. The vulnerable strategic space assets as well as the **infrastructure** enabling access to space must be adequately protected. Sharing of data with international partners in case of having satellites rendered inoperable by enemy action is being proposed.

5. Autonomous access to space and international environment

In the view of the rapporteur, a **secure, independent and sustainable access to space by the EU, is one of the preconditions of an autonomous EU action**. Therefore, while bearing in mind the aspects of security of supply and protection of the European Defence Technological and Industrial Base, it is recommended to carry the European non-commercial satellites onto orbit by European launchers from EU territory. A strategic long-term investment into new European launchers should be initiated as soon as possible.

6. Governance

An integrated **European space-based architecture must be created** in the future with a strong inter-pillar cooperation framework, involving the European Commission, Council, EDA, EUSC, and ESA. A reinforced ESDP framework must be established in order to **provide the smaller EU countries** with reduced possibilities to finance their own space assets with **access to operational data**.

7. Financing

Your rapporteur calls on the EU to **provide for a reliable and adequate funding for the envisaged space activities** and set up an operational budget for services provided by space assets in support of ESDP and European security interests.

The lack of coordination among the EU countries results in scarcity of resources, therefore **common programmes should be launched by the EU Member States, establishing**

longer-term costs savings. It is striking that the **cost of the absence of a common European approach** to procurement, maintenance and functioning of space assets is estimated **at hundreds of million EUR.**

8. International legal regime for uses of space

The report raises concern over the prospects **possible weaponisation of space** and reiterates the importance of the principle of **use of space for peaceful purposes** expressed in the 1967 Outer Space Treaty.

Furthermore, the international legal regime to regulate and protect non-aggressive space uses should be strengthened, esp. in the framework of the UN Committee on the Peaceful Uses of Outer Space (COPUOS) drafting space debris mitigation guidelines. These activities should be consistent with those of the Inter-Agency Debris Coordination Committee as well as the UN Conference on Disarmament (CD) currently developing a multilateral agreement on the Prevention of an Arms Race in Outer Space (PAROS). The EU Presidency should represent the EU proactively in the above-mentioned **UN bodies.**

All **international actors have to restrain from using offensive equipment in space**, such as the Chinese anti-satellite test in January 2007 producing an alarming amount of space debris. The UN and EU must be engaged in actively diminution of and protection from space debris harmful to satellites.

Despite the current practice and contrary to their **obligations, not all space users do register their satellites, military included.** The registration should be upheld serving as a space security confidence-building measure. Additionally, Council's pursuit of a comprehensive EU Code of Conduct on Space Objects can provide for a more secure orbit.

9. Transatlantic and other international cooperation on space policy

While the strengthened cooperation between the **EU and Russia** in the framework of the Tripartite Space Dialogue set up in 2006 between the European Commission, the European Space Agency and Roscosmos (the Russian Space Agency) is very welcome, the **cooperation with US and NATO is lagging behind.**

Your **rappporteur calls therefore on the EU and US to engage in a strategic dialogue on the use of space assets.**

EU and NATO are urged to launch a similar dialogue on space policy and missile defence, especially on complementarity and interoperability of systems for satellite communications, space surveillance, and early warning of ballistic missiles, as well as the protection of European forces by a theatre missile defence system.