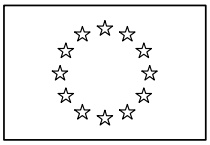

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REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

ON THE IMPLEMENTATION OF THE GNSS PROGRAMMES AND ON FUTURE CHALLENGES

pursuant to Article 22 of Regulation (EC) No 683/2008

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1. INTRODUCTION

In accordance with Article 22 of Regulation (EC) No 683/2008 on the further implementation of the European satellite radio navigation programmes (EGNOS and Galileo) (hereinafter the 'GNSS Regulation')[1] and with reference to the GNSS work programme adopted in 2008, the Commission hereby presents the first annual report on the implementation of the programmes and on the main challenges ahead.

The GNSS Regulation re-profiles the European GNSS programmes by establishing a legal and financial framework for the 2008-2013 period. It was adopted by the European Parliament and Council on a proposal that the European Commission presented in September 2007, following the decision to end the negotiations for the conclusion of a concession contract with the private sector in accordance with Council Regulation (EC) No 876/2002[2], and in line with the Council's Conclusions of November 2007 on the need to restructure the European Global Navigation Satellite System Programmes.

2. Implementation of the Programmes

2.1. Main milestones

In its new role as programme manager, the Commission has launched important initiatives to reach the milestones needed for the further achievement of the objectives of the programmes and it has successfully achieved these milestones. By doing so the Commission has ensured that the necessary framework is in place in order to move on with the next steps in the implementation of the programmes.

For **EGNOS** this means that the Commission has ensured a smooth continuation of operations after the hand-over of the system by the European Space Agency (hereinafter ESA) to the Commission on 1 April 2009 by:

– taking over the ownership, on behalf of the Community, of the EGNOS system, from ESA (by arrangements with ESA and the EOIG, the EGNOS Operators and Infrastructure Group)[3]

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1 OJ L196 of 24 July 2008, p.1.

2 OJ L138 of 28 May 2002, p.1.

3 EOIG is composed of a number of European air navigation service providers who have invested in the EGNOS programme: Aena, CNES, DFS, DSNA, ENAV, NATS, NAV Portugal, NMA, Skyguide

– an operations contract with ESSP SaS (EGNOS Satellite Services Provider) that will guarantee operations until October 2009, after which a long-term contract covering the period until 2013 will be put in place

– agreeing with ESA that it will take on tasks for the design and procurement of EGNOS equipment and software renewals (within the framework of a delegation agreement, based on Article 54 (2) of the Financial Regulation[4], signed on 31 March 2009)

– establishing the main management interfaces in the management and execution of the EGNOS programme activities subject to the Delegation Agreement, in a Programme Management Plan developed with ESA

– contracting out the supply of a special satellite navigation transponder on a new geostationary satellite.

For **GALILEO** it means that the Commission has taken all steps necessary for the procurement of the Galileo system, and has:

– delegated to ESA the task of procuring the Galileo infrastructure, in accordance with the GNSS regulation and the EU procurement rules (Delegation Agreement signed on 19 December 2008)

– established the main management interfaces in the management and execution of the Galileo programme activities subject to the Delegation Agreement, in a Programme Management Plan developed with ESA

– launched the competitive tendering procedure for the procurement of the Galileo infrastructure, divided into six work packages, in July 2008.

– provided to ESA, by means of a grant agreement, the funds necessary to cover the cost overruns incurred by ESA during the In-Orbit Validation phase (IOV).

2.2. Legal framework

The GNSS Regulation provides the legal and financial framework for the deployment of the Programmes and defines a governance structure with new roles for the various organisations involved, based on two main principles:

– A strict division of responsibilities between the European Commission, the European Space Agency and the GNSS Supervisory Authority, set up by Council Regulation (EC) No 1321/2004 of 12 July 2004 on the establishment of structures for the management of the European satellite radio-navigation programmes[5] (hereinafter the GSA Regulation) with the Commission having the overall

[4] Council regulation (EC, Euratom) No 1605/2002 of 25 June 2002 on the Financial Regulation applicable to the general budget of the European Communities, OJ L 248 of 16 September 2002, p.1, as last amended by Council Regulation (EC) No 1525/2007 of 17 December 2007, OJ L 343 of 27 December 2007, p. 9.

[5] OJ L 246 of 20 July 2004, p.1. Regulation as amended by Council Regulation (EC) No 1942/2006 of 12 December 2006, OJ L 367 of 22 December 2006, p.18.

responsibility for the management of the programme, including the security-related aspects;

– The complete financing of the Galileo deployment phase (Full Operational Capability - FOC) from 2008 to 2013 by the Community budget.

Community funding will furthermore cover activities relating to the completion of the Galileo IOV phase as well as the cost for operating EGNOS and preparatory activities in relation to the exploitation of the programmes.

The total amount earmarked for these activities is EUR 3405 million, including EUR 400 million made available from the Seventh Framework Programme for Research and Technological Development, the EU's main instrument for funding research in Europe for the period 2007-2013.

The Regulation sets rules on the governance of security matters and application of security regulations. It also presents basic principles governing the procurement in the deployment phase of Galileo, aiming at open access and fair competition to create a level-playing field for potential bidders. The procurement has been split into six main work packages, with a bidding entity being allowed to bid for the role of prime contractor for a maximum of two of these work packages, while at least 40% of the aggregate value of activities must be contracted out by competitive tendering amongst entities not forming part of the entity that is the prime contractor.

The GNSS Regulation specifies that the European Community becomes the owner of the GNSS systems and programme assets, subject to the conclusion of legal arrangements for the transfer of ownership. It also requires that the deployment of the full Galileo constellation will be procured in accordance with the EU rules on public procurement and the Financial Regulation.

If appropriate, the Commission will, in accordance with the Regulation, prepare and present, in 2010, a proposal covering the public funds and commitments needed for the financing programming period starting in 2014, and will present scenarios for the exploitation of the Galileo system.

The activities outlined below were important steps in facilitating the achievement of the objectives of the GNSS Regulation and the implementation of the structures required to ensure that the GNSS Programmes deliver in the coming years.

2.3. Implementation of the new governance structure

One of the priorities of the Commission in its new role as manager of the GNSS Programmes has been to implement decision-making structures in accordance with the governance structure established by the GNSS Regulation. This led to:

– establishment of the European GNSS Programmes Committee, foreseen at Article 19 of the GNSS Regulation, whose purpose is to assist the Commission in the management of the Programmes and to reassure Member States that the Programmes are managed appropriately. In its first meeting, that took place on 10 September 2008, the Committee delivered a favourable opinion on the GNSS Work Programme 2008 and the GNSS Strategic Framework, two key documents for the planning, implementation and operation of Galileo and EGNOS. Following

the European Parliament's right of scrutiny (on the Strategic Framework) the Commission adopted both documents which allowed the engagement of the 2008 activities and corresponding credits;

– creation of the Galileo Inter-institutional Panel (GIP), in accordance with the Joint Declaration of the European Parliament, the Council and the Commission, annexed to the GNSS Regulation. The GIP held its first meeting in mid-February 2009;

– creation of the GNSS Security Board (Commission Decision 2009/334/EC of 20 April 2009 establishing an expert group on the security of the European GNSS systems[6]). The existing Galileo Security Board, which was established by Article 7 of Council regulation No 876/2002 of 21 May 2002 setting up the Galileo Joint Undertaking,[7] will be phased out once its activities have been duly completed or transferred. On that subject, Article 23 of the GNSS Regulation provides that the above mentioned Article 7 of Regulation 876/2002 shall be repealed with effect from 25 July 2009;

– clarification of the roles and the responsibilities of the European Space Agency (ESA), in particular through the above mentioned multi-annual delegation agreement (based on Article 54(2) of the Financial Regulation) covering the delegated tasks and budget implementation relating to the implementation of the Galileo programme, in particular the deployment phase. This allowed ESA to quickly launch the procurement of the FOC infrastructure, split into six work packages, in the name and on behalf of the European Community and in full respect of the EU public procurement rules and procedures. A separate delegation agreement was signed with ESA covering the latter's role as design agent during the operations of EGNOS until 2013. The activities will include implementation and qualification of agreed design changes and a set of obsolescence management activities;

– adoption of a proposal to revise the mandate of the European GNSS Supervisory Authority (GSA) by bringing the GSA Regulation into line with the GNSS Regulation, which specifies two core activities for the GSA, firstly in security domain accreditation and exploitation of the Galileo Security Centre and secondly in contributing to the preparations for commercial use of the systems, including the necessary market analysis;

– reinforcement of the Commission's own project and programme management capabilities, notably by reinforcing the Galileo team with staff from the European GNSS Supervisory Authority (GSA) and through internal redeployment of resources;

– contracting of an independent project management expert team to review the implementation of the programmes and make appropriate recommendations on a regular basis. These independent external advisors started their work in March 2009.

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6 OJ L 101 of 21 April 2009, p. 22.

7 OJ L 138 of 21 May 2002, p.1 Regulation as amended by Council Regulation (EC) No 1943/2006 of 12 December 2006, OJ L 367 of 22 December 2006, p.21.

2.4. Launch of the procurement for the full Galileo constellation

Crucial for the restart of Galileo, the procurement for the deployment of the full Galileo constellation was launched in July 2008.

While the in-orbit validation phase (IOV) will result in the launch of the first 4 satellites and the development of a first part of the ground segment, the procurement for full operational capability (FOC) of Galileo will lead to the complete constellation of 30 satellites and the respective launchers, ground infrastructures and initial operations. In total, in the procurement six work packages were identified for which bidders were invited to apply (system support, ground mission system, ground control system, satellites, launchers and operations).

The pre-selection phase started with the release of the Tender Information Package (TIP) on 1 July 2008, followed by an information day in Brussels on 17 July. The TIP contained a description of the tender procedure and, for each Work Package, a set of high-level requirements, high-level statement of work, and contractual guidelines.

A Tender Evaluation Board (TEB) has been created to support the overall FOC procurement process by reviewing the tender documentation and evaluating industrial proposals. The TEB is co-chaired by the Commission and ESA, and consists of Commission, GSA and ESA staff. It is supported by experts and panels addressing the specific management, legal and contractual, technical and financial aspects of each work package.

After pre-selection of suitable candidates, and preparation of the data package, preliminary proposals were submitted by all candidates in November 2008. A series of competitive dialogue meetings with candidates have been held, and are continuing as required, in order to address and clarify elements of the proposals and to refine the requirements.

Detailed specifications have been established in accordance with a time schedule for each work package and are sent out to the candidates in detailed invitations to tender. The candidates are then expected to present their refined proposals.

This process of competitive dialogue will be finalised in the course of 2009, with the objective of having best and final offers presented and most contracts concluded before the end of the year.

2.5. EGNOS

On 1 April 2009 the Commission took over the ownership of the EGNOS assets from ESA and it has assumed responsibility for the operation of the system. An agreement for this purpose has also been concluded with the EOIG (EGNOS Operators and Infrastructure Group). EGNOS is, from this date, operated by ESSP SaS under a short-term operations contract with the Commission, that will be replaced by a long-term operations contract in October 2009.

By doing this the Commission has ensured a smooth continuation of EGNOS after the system was handed over by ESA.

Furthermore, the Commission has concluded a contract for the replacement of one GEO transponder by the end of 2011, while work regarding the replacement of the second is expected to be completed during the first semester of 2009.

The delegation agreement concluded by the Commission with ESA defines ESA's role as design and procurement agent in the next few years for equipment and software renewals.

2.6. Galileo Applications

Increasing efforts have been devoted to the expansion of the markets for EGNOS applications and end-to-end services. Such efforts aim at sustaining an ever expanding ecosystem of European companies capable of producing innovative EGNOS-based products and service solutions for an increasing number of market segments, acting as a steppingstone to fully exploiting the capabilities of Galileo when available. Two main streams of activity were pursued:

(i) the promotion of innovation through Research and Technological Development activities within the 7th Framework Programme. As a result of a first call for proposals launched in 2007, thirty projects covering a wealth of applications for both the commodity and the specialised markets have already been launched. These will be complemented by a second set of projects to be selected as a result of a second call for proposals launched in December 2008. Coordinated efforts are also being made to ensure the best possible exploitation of the project results from the 6th Framework Programme (the main common objective of these application projects - four on service prototypes and sixteen on user communities during the period 2004-2008 - was to demonstrate the added value of EGNOS and Galileo, to offer support in the Galileo mission definition and to identify main areas of interest for user communities where EGNOS/Galileo applications would have an impact).

(ii) the continuation of the preparatory works for a Commission Action Plan for fostering the development of new GNSS applications and services, especially those based on EGNOS and Galileo. The Action Plan should aim at creating a strategic framework of multi-faceted promotion and support measures, including a suite of regulatory and financial instruments, for accelerating the time-to-market and the rate of penetration of European GNSS-based products and services. The strategic aim will be to enhance the competitive position and the capability of response of the European industry, creating the conditions for heightening their market share on both the established and, more crucially, the high-value emerging GNSS-related markets.

As the development of GNSS applications gains importance for the exploitation of EGNOS and Galileo, the resources of the 7th Framework Programme must be used for continued support of such research activity. The mid-term review of the programme, to be carried out by the Commission in 2010 in accordance with Article 22 of the GNSS Regulation, may offer this opportunity.

2.7. International activities

As part of its review of the international dimension of the GNSS Programmes, the Commission has reformulated its international strategy to reflect the fact that Galileo and EGNOS require an international network for the participation and contribution of non-EU countries.

Other key players, as GNSS system providers, are the United States, China and the Russian Federation.

In 2008 the Commission had several working group meetings with the USA as part of the bilateral agreement. A plenary meeting was hosted by the Department of State, which agreed to take on several actions aimed at coordinating EU and US positions towards third systems and initiating further working groups.

Also with China several high-level meetings were held, inter alia of the Steering Committee, as part of the bilateral cooperation agreement. Compatibility and interoperability between the Chinese system being built, Compass, and Galileo, was an important discussion topic, and will be further pursued in 2009.

With the Russian Federation some meetings have been held, leading to the creation of a specific working group on cooperation in the field of search and rescue capabilities of the respective systems (SAR).

3. MAIN CHALLENGES IN 2009

As highlighted in the 2009 revision of the GNSS Work Programme, the focus of activities in 2009 will be on concluding the FOC procurement, signing the service contract for EGNOS, launching preparatory studies for the post-2013 phase of Galileo and publishing the Galileo applications action plan. Further key activities in 2009 will be the revision of the GSA Regulation, the revision of the international cooperation strategy and a range of general measures, including risk management, technical consultancy and communications.

Many of these activities are crucial for both Galileo and EGNOS, and challenges in the following areas therefore need to be prepared for.

3.1. IOV cost overruns

When ESA presented the financial situation in the GalileoSat programme to its Member States in September 2008, it became clear that the costs of the in-orbit validation phase had increased substantially compared with the financial envelope. The subsequent discussions with ESA Member States did not lead to a solution for an estimated amount of 376 million Euros of the cost overruns.

Given the interdependencies between the IOV and FOC phase for which it was now responsible, the Commission therefore undertook to find a financing solution using the Community budget, in agreement with EU Member States. It therefore proposed to use the FOC management reserve to cover a part of the additional IOV costs, subject to an independent assessment of the eligibility of the additional costs incurred, which should be completed in early April 2009. While using the FOC

reserve to cover the additional costs of the IOV phase has solved an urgent problem that threatened the schedule and budget of the deployment of Galileo, it obviously creates constraints on the implementation of the deployment phase itself. There is now little budgetary margin in the implementation of Galileo for the public and private sector stakeholders. Efforts to stay within budget will need to be intensified. The Commission will continue to monitor the situation and report as appropriate if the contractors face unexpected technical or other implementation problems which threaten the schedule and budget.

3.2. FOC procurement

During the competitive dialogue phase intensive work will continue on the specifications, the refined bids, and further clarification meetings, which will result in best and final offers, evaluation and contract award. Meaningful competition will be pursued to the extent possible. The same is true for keeping the schedule of the procurement process and the different steps for the various work packages. To keep the cost of the work packages within budget will be a challenge, as will be industry's ability to implement the work on schedule. The Commission and ESA will seek assurances that industry will be able to address potential unforeseen technical problems and risks in the most suitable and cost-effective way and with minimum impact on the schedule.

The completion of the IOV phase, which will run in parallel with the deployment phase for considerable time, and the assimilation of IOV results in the FOC deployment activities, is a delicate exercise that would be affected if there were further delays in IOV. At the same time, the necessary technical improvements during IOV will improve the risk profile for FOC deployment and contribute to schedule discipline.

The budget situation for FOC, after coverage of the IOV cost overrun, does not allow much flexibility with regard to the overall cost of FOC. Therefore the Commission will monitor and manage the process carefully and report to the Council and Parliament if the cost of the FOC contracts goes beyond what has been foreseen. In such a case the Commission would present proposals to remedy the situation.

3.3 EGNOS

Important milestones have been and will be reached in 2009, in particular the start of operations under Community responsibility on 1 April 2009. While a short-term contract with an operator for the EGNOS service has been in place from that date, further work needs to be done to come to a more permanent solution by autumn 2009 and also to achieve certification of EGNOS for aviation. This should be concluded by the first quarter of 2010, taking into account the requirements of the Single European Sky regulation[8]. Equally, compliance with the performance requirements of the International Civil Aviation Organisation (ICAO) will need to be ensured.

As referred to in the Work Programme 2009, significant marketing activities will have to be deployed for EGNOS to facilitate its acceptance and use by the aviation

[8] Regulation (EC) No 550/2004 of the European Parliament and of the Council of 10 March 2004 on the provision of air navigation services in the single European sky – OJ L96 of 31 March 2004, p.10.

sector and other areas such as road, rail, maritime and agriculture. The same is true for the promotion of the Commercial Data Distribution Services (CDDS)[9].

Work on full EGNOS coverage in Europe, and on an extension beyond European territory, notably into Africa, remains an important activity in 2009.

3.4 Post-FOC studies

The Commission will launch a comprehensive feasibility analysis in 2009 in order to identify and develop the best option for operating and exploiting the Galileo system. On the basis of the results of the analysis, and in accordance with the GNSS regulation, the Commission will make a proposal to the Council and Parliament next year.

Because of the vastness and complexity of the elements involved, early work on the feasibility assessment will be important in order to obtain a clear and timely identification of the possible scenarios and means for operation and exploitation after 2013. Many of those elements require a long preparation period and need to be resolved well in advance of FOC. This includes all commercial aspects of the exploitation as well as the legal, contractual and financing structures of the different exploitation models.

3.5 International activities

The main challenge for the international activities of the GNSS Programmes in 2009 will be to ensure the compatibility and interoperability with Galileo, to access global GNSS-related resources and set worldwide standards, to ensure security of the space segment and network of ground stations, while ensuring a stricter control of sensitive GNSS technologies developed with European funding, to join in an international effort to develop innovative applications and specialised applications of supra-regional interest. An important objective will be to create market opportunities for the European GNSS technology and applications industries.

The cooperation with China will undergo a major test at the next steering committee, jointly set as a key milestone to assess the progress made in the 2008/2009 timeframe on the critical issue of COMPASS/Galileo compatibility. The European side expects positive reactions on the proposals made by the experts. If the problem is not solved promptly, it cannot be excluded that the cooperation with China will get a major reshaping.

3.6 Concluding remarks

The report highlights the status of implementation of some important decisions that were taken in 2008 in close cooperation between the Commission, the European Parliament and the Council. The Commission will seek to ensure close involvement of the other institutions, as appropriate. Their continued support for the further

[9] CDDS consists in the provision to authorised customers (e.g. added value application providers) of EGNOS augmentation messages in real time and of raw data measurements from ground stations in real time.

implementation of the programmes, in line with a shared commitment, is key to the success of the programmes.