



ADOPTED
by the GSA Administrative Board

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Draft Work Programme 2011



Work Programme 2011

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DEFINITIONS

3SC	System Safety and Security Committee
ATL	Authorisation to Launch
CDA	Crypto Distribution Authority
CDR	Critical Design Review
Commission	European Commission
Delegation	Delegation in accordance with Article 54(2)(b) of Council Regulation (EC, Euratom) No. 1605/2002 of 25 June 2002 on the Financial Regulation
DOORS	Dynamical Object-Oriented Requirements Systems
EDAS	EGNOS Data Access System
EGNOS	European Geostationary Navigation Overlay Service
ESA	European Space Agency
FOC	Full Operational Capability
FP7	Seventh Framework Programme for Research and Development of the European Union
GKMF	GNSS Knowledge Management Facility
GNSS	Global Navigation Satellite System
GNSS Agency	European GNSS Agency
GNSS Agency Regulation or New GSA Regulation	Regulation (EU) No 912/2010 of the European Parliament and of the Council of 22 September 2010 setting up the European GNSS Agency, repealing Council Regulation (EC) No 1321/2004 on the establishment of structures for the management of the European satellite radio navigation programmes and amending Regulation (EC) No 683/2008 of the European Parliament and of the Council
GNSS Regulation	Regulation (EC) No 683/2008 of the European Parliament and the Council on the further implementation of the European satellite navigation programmes (EGNOS and Galileo)
GSA	European GNSS Supervisory Authority
GSA Regulation	Council Regulation (EC) No 1321/2004 on the establishment of structures for the management of the European satellite radio-navigation programmes, as amended by Council Regulation (EC) No 1942/2006
GSAP	Galileo Security Accreditation Panel
GSB	Galileo Security Board



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GSC	GNSS Security Centre
GSMC	Galileo Security Monitoring Centre (part of the GSC dedicated to Galileo)
IATO	Interim Approval To Operate
IOC	Initial Operational Capability
IOV	In-Orbit Validation
Joint Action	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
P3RS	Pilot Project for the Public Regulated Service ¹
PDR	Preliminary Design Review
PRS	Public Regulated Service
SAB	Galileo Security Accreditation Board ²
SAS	Security Accreditation Strategy
SME	Small and Medium-sized Enterprise
SSRS	System specific Security Requirements Statements
WG-PRS	Working Group PRS (under GNSS Security Board
Working Group	Working Group under GNSS Security Board
WG-NET	Working Group – National Experts Team
TF-TSI	Task Force – Programme Security Instruction

¹ Former name PIONEER

² Article 11 of GNSS Agency Regulation



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1 INTRODUCTION

The GSA Regulation set up the GSA, whose role has evolved over the last couple of years.

The termination of the Galileo concession on 20 June 2007 and the entry into force of the GNSS Regulation on 25 July 2008 have led to a redefinition of the GSA's tasks. The GNSS Regulation restructures the governance of the European GNSS programmes, which is based on a clear division of tasks between the Commission, the GSA and the ESA. It confers on the Commission the responsibility for the management of the European GNSS programmes and establishes that ESA shall act as procurement agent³. As regards the GSA, the GNSS Regulation confers on the agency the tasks of security accreditation, operation of the Galileo Security Centre, contribution to the preparation of the commercialisation of the systems, including the necessary market analysis, and other tasks that may be entrusted to it by the Commission. By virtue of the GNSS Agency Regulation adopted on 22 September 2010, entering into force on 9 November 2010, the GSA becomes the European GNSS Agency (GNSS Agency)

2 LEGAL REFERENCE FOR THE WORK PROGRAMME 2011

In accordance with Article 11(6) GSA Regulation, the Administrative Board has adopted the Provisional Work Programme 2011 by 29th March 2010. The Administrative Board will adopt the final version of the Work Programme after having received the Commission's opinion. The part of the Work Programme relating to the accreditation activities of the GSA is further subject to the approval of the SAB⁴.

Article 25 GNSS Agency Regulation foresees that "any measure adopted on the basis of the Regulation N° 1321/2004 shall remain valid". The adoption of the Provisional Work Programme by the Administrative Board as described above therefore provides a valid legal basis for the adoption of the final version of the Work Programme.

The Work Programme 2011 reflects the tasks that are entrusted to the GNSS Agency under the GNSS Agency Regulation⁵. It also takes into account (1) the European GNSS Strategic Framework⁶ and Work Programme 2010⁷ prepared by the Commission; and

³ ESA shall also act as design authority for the European GNSS programmes. See Commission Decision C(2008)8371 of 12 December 2008 adopting the 2008 Work Programme of the European satellite radio-navigation programmes (EGNOS and Galileo) and Commission Decision C(2008)8378 of 12 December 2008 adopting the Strategic Framework of the GNSS Programmes.

⁴ See chapter 7.1.1.1

⁵ Regulation (EU) No 912/2010 of the European Parliament and of the Council of 22 September 2010 setting up the European GNSS Agency, repealing Council Regulation (EC) No 1321/2004 on the establishment of structures for the management of the European satellite radio navigation programmes and amending Regulation (EC) No 683/2008 of the European Parliament and of the Council published in the Official Journal of the EU on 20 October 2010 and expected to come into force on 9 November 2010.

⁶ C(2009)8378,12.12.2009

⁷ C(2010)1617, 23.3.2010



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(2) the guidelines issued by the Commission in accordance with Article 16 GNSS Regulation.⁸ The guidelines are attached to the present document as **Annex 1**.

3 MISSION AND TASKS OF THE GNSS AGENCY

The overall mission of the GNSS Agency is laid down in the GNSS Regulation. Article 2 of the GNSS Agency Regulation, which defines the tasks conferred to the GNSS Agency refers to Article 16 GNSS Regulation which reads:

"Subject to the provisions of Article 12 [GNSS Regulation] and the respect of the Commission's role as manager of the programmes, the [GNSS Agency] shall accomplish the following tasks within the programmes in accordance with guidelines to be issued by the Commission:

- (a) with regard to the security of the programmes, and without prejudice to Articles 13 and 14 [GNSS Regulation], it shall ensure:
 - (i) security accreditation; to that effect it shall initiate and monitor the implementation of security procedures and perform system security audits;
 - (ii) the operation of the Galileo security centre, implemented in accordance with decisions taken pursuant to Article 13 [GNSS Regulation] and the instructions provided under Joint Action 2004/552/CFSP;
- (b) it shall contribute to the preparation of the commercialisation of the systems, including the necessary market analysis;
- (c) it shall also accomplish other tasks that may be entrusted to it by the Commission, in accordance with Article 54(2)(b) of the Financial Regulation, addressing specific issues linked to the programmes, such as:
 - (i) promoting applications and services in the satellite navigation market;
 - (ii) ensuring that the components of the systems are certified by the appropriate, duly authorised, certification bodies."

Other potential areas for delegations are given in recital n°8 of the GNSS Agency Regulation. Such activities could, for example, include: following the development of coordination and consultation procedures on security-related matters, carrying out research of benefit to the development and promotion of the programmes and providing support in the development and implementation of the Public Regulated Service (PRS) pilot project.

⁸ "Commission guidelines to the European GNSS Supervisory Authority," C(2009)1153 final, 25 February 2009.



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4 LONG-TERM VISION AND STRATEGIC OBJECTIVES

The vision and strategy behind the Work Programme 2011 are based on the Commission's European GNSS Strategic Framework, the GNSS Agency's experience of the programmes, and knowledge of the forward-looking positions of the Council, European Parliament and Commission.

Vision

- Satellite radio-navigation applications will affect and profoundly alter the mobility and security of people and goods.
- The integration in the not too distant future of a reasonably accurate positioning device into every mobile telephone will fundamentally transform the way society deals with the dimensions of time and space.
- The initiative taken by Europe to develop a new generation of global navigation satellite systems will lay the foundations for new high-tech industry development, job creation and overall economic growth.
- Galileo has every chance of becoming a universal system driven by Europe.
- The GNSS Agency will help the EU reap the benefits of EGNOS and Galileo by preparing and promoting the services and launching initiatives to develop new applications.
- The GNSS Agency will contribute to the overall security of the systems by accrediting the different elements thereof and managing the security monitoring centre.

Strategic objectives

The Work Programme 2011 has been designed to reflect the activities that need to be carried out in 2011 towards the achievement of the following main strategic objectives:⁹

- ensure that all prerequisites for secure systems operation are in place in time to protect the Galileo assets and to guarantee the confidentiality,¹⁰ integrity and availability of the services provided;
- ensure, through an accreditation process, that the risks affecting the security of the Galileo system are appropriately mitigated and the residual vulnerabilities reduced;

⁹ The strategic objectives are mid/long-term objectives intended to ensure the full operational capability and exploitation of the European GNSS.

¹⁰ "Confidentiality" in the present context means the need to protect against unwarranted disclosure of information associated with the service.



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- ensure that all prerequisites for efficient operation and extensive utilisation of the systems are in place in time for the exploitation phase;
- ensure a thorough knowledge and understanding of the GNSS market to stimulate successful market uptake, especially of the applications with high potential for economic, social and public benefit; and
- promote the services of the European GNSS systems, with the focus on EGNOS as the forerunner of Galileo.

5 MAIN ASSUMPTIONS OF THE WORK PROGRAMME 2011

The Work Programme 2011 has been drafted on the basis of the following main assumptions¹¹:

Galileo:

- IOV will continue until end 2012.
- The remaining major procurement contracts for WP2 (GMS), WP3 (GCS) are expected to be concluded in 2011.
- An Initial Operations Capability (IOC) with initial implementation of the Open Service, PRS and SAR will be achieved in 2014 within the existing budget provisions. The achievement of FOC will depend on the remaining major procurement contracts, especially WP2 (GMS), and the availability of additional funding.
- A mid-term review of the GNSS-Programmes, including proposals for the operational phase of Galileo will be presented in 2010.
- The accreditation work necessary for the Galileo IOV system security design will be completed in time for achieving the Authorisation To Launch (ATL) milestone for the first two IOV satellites in the first half of 2011. Furthermore, the accreditation work necessary for the IOV Start Endorsement in the second half of 2011 and System Initial Approval To Operate (IATO) in mid 2012 will be completed in time for the IOV Start Endorsement and System Initial Approval To Operate milestones respectively.
- The contract negotiations for the hosting of the GSMC will be finalised by end 2010, in order to ensure availability of the centre in time for initial system pre-operations in 2012.
- The field trials of the PRS Pilot will start in 2011.

¹¹ These assumptions reflect the current understanding of the GSA based on inputs from the European Commission.



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- There will be a need to start Galileo promotional activities in the second half of 2011.

EGNOS:

- The certification process of ESSP for civil aviation to achieve a Safety of Life service declaration will be concluded in 2010 (i.e. system and service provider certification).
- A way forward will be determined for the Commercial Data Distribution Service following successful beta testing which will be formally concluded at the end of March 2010.
- Work on EGNOS promotional activities will continue throughout 2011.

FP7:

- The FP7 3rd call, which was published on 20 July 2010 with a budget of €38 million (covering also calls for tenders and evaluation costs) will be evaluated and projects selected at the beginning of 2011.

SMEs support programme:

- The Commission intends to delegate to the GNSS Agency the operational aspects of a SMEs support programme to provide information on GNSS and foster adoption of the system. The GNSS Agency will - within the delegation - assist in setting up the scheme, supervise the operations, organise events and report to the Commission.

6 PRIORITIES IN 2011¹²

Security

Security accreditation

- Authorisation to Launch (ATL1, mid 2011)
- IOV Start Endorsement (second half of 2011).
- System Interim Approval to Operate (IATO) mid 2012.
- Initialisation and support to the Crypto Design Authority and to the flight key cell.
- Organisation, chair and secretary of the Galileo Security Accreditation Panel (GSAP).

¹² The security related activities are listed in order of priority.



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GSMC

- Preparation of the hosting facilities for the GSMC.
- Expertise support for the GSMC Preliminary and Critical Design Review (PDR and CDR).
- Expertise support for and review of GSMC hosting sites deployment.
- Recruitment and training of GSMC staff.

Support to PRS service¹³

- Assessment of GSMC connections with User (National) infrastructure.
- PRS Pilot Project implementation.
- Preparation of the critical elements of the PRS user segment so that PRS can be used as soon as Galileo is operational.
- Support to the work on the PRS User Segment, by performing market researches in the field of receivers R&D and application areas of homeland security, emergency services, critical infrastructure and defence.
- Definition of a global PRS User Segment Technological Roadmap.

Market Development

Contribution to the preparation of the commercialisation of the systems

- Promotion of EGNOS.
- Marketing of EGNOS in three priority segments: aviation, road and high precision (agriculture).
- Implementation of the necessary service elements for EDAS and for the most promising user communities.
- Support for the Commission on preparing the Galileo exploitation phase.
- Preparation of the market entry of Galileo.

¹³ Support to the Commission within a delegation on security related tasks. The related work programme of the Commission is currently in the approval process .



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R&D

- Management of the portfolio of projects from the 1st and 2nd FP7 calls including the dissemination of the results.
- Publication, evaluation, selection, negotiation and award of FP7 3rd call projects.

7 OUTLINE OF THE WORK PROGRAMME 2011

The following section describes the activities the GNSS Agency expects to perform in 2011 under the supervision of the Administrative Board and in accordance with the Commission guidelines as complemented by the working arrangement between the GNSS Agency and the Commission.

The Work Programme 2011 is based on the resources that the GNSS Agency expects to have in 2011, as presented in the draft Budget and Establishment Plan 2011, which were submitted to the Administrative Board together with the Work Programme 2011. If the expected resources fail to materialise and/or the specific guidelines issued by the Commission entail significant additional effort, the scope and priorities of the Work Programme 2011 will have to be adjusted accordingly. Concerning the security area, the security priorities n° 1 (security accreditation) and n° 2 (GSMC) shall be achieved in the first place.

7.1 Security

In 2011, the main systems security activities for the GNSS Agency will be related to: i) security accreditation; ii) preparation of the GSMC. The activity on accreditation includes the management of the GSAP, of the CDA as well as the secretariat of the SAB.

In addition, the following activities will be pursued in support of the Commission, subject to a working arrangement with the Commission: iii) GNSS security requirements; iv) PRS Pilot Project; v) PRS user segment; vi) European GNSS technology control regime and vii) GNSS Security Board and associated working groups.

Such working arrangement shall outline the cooperation between the Commission and the GNSS Agency to increase the efficiency of both the GNSS Agency and the Commission in particular as concerns its responsibility as programme manager, to avoid overlapping of activities between the GNSS Agency and the Commission and to prepare future Delegations of the Commission to the GNSS Agency. The approval of the working arrangement by the GNSS Agency's Administrative Board and its conclusion are expected in 2010.



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7.1.1 Galileo security accreditation

A Security Accreditation Board for European GNSS systems ("Security Accreditation Board" or "SAB") shall be established within the GNSS Agency. In relation to the European GNSS systems, the Security Accreditation Board shall have the tasks of the security accreditation authority. The SAB shall perform the tasks entrusted to the GNSS Agency with regard to security accreditation under Article 16(a)(i) of the GNSS Regulation and take "security accreditation decisions". Such decisions shall include:

- the approval of the security accreditation strategy and of satellite launches,
- the authorisation to operate the systems in their different configurations and for the various services,
- the authorisation to operate the ground stations and in particular the sensor stations located in third countries,
- as well as the authorisation to manufacture receivers containing PRS technology and their components.

The GNSS Agency expects the SAB to be set up in 2010¹⁴, after the entry into force of the GNSS Agency Regulation, and to be fully operational in 2011. The GNSS Agency will ensure the setting-up as well as the work of the SAB.

The Security Accreditation Board shall set up special subordinate bodies, acting on its instructions, to deal with specific issues. In particular, while ensuring necessary continuity of work, it shall set up:

- a panel (GSAP) to conduct security analysis reviews and tests to produce the relevant risk reports in order to assist it in preparing its decisions;
- a Crypto Distribution Authority (CDA) to assist the Security Accreditation Board in particular with regard to questions related to flight keys¹⁵.

In 2011, the accreditation activities of the GNSS Agency will focus on the support required by the SAB from the GNSS Agency staff¹⁶, for the preparation of the above mentioned accreditation decisions and in particular on site accreditation, system accreditation and component, PRS user segment accreditation.

¹⁴ First informal meeting scheduled for the 28 September 2010

¹⁵ Article 11(11) GNSS Agency Regulation

¹⁶ Article 11 (10) GNSS Agency Regulation



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Main tasks in 2011

- Set up the SAB and ensure its secretariat.
- Provide all required support to the SAB according to the work plan (management plan) approved by the SAB.
- Set up, coordinate and chair the work of the GSAP.
- Set up, coordinate and chair the work of the CDA.
- Define the Flight Key Cell Operations and implement them for the IOV launches.
- Participate in the Galileo procurement reviews on accreditation-related matters.
- Provide support to the Security Accreditation Strategy (SAS)¹⁷
- Review the technical documents needed for Galileo security accreditation at system, segment and element level.
- Assess and review the security of the system design and system deployment and associated risks and produce the respective accreditation reports.
- Prepare the site security strategy and conduct site security accreditation inspections.
- Define and prepare Independent Testing activities regarding the security of the Galileo system.
- Participate in and analyse results of security audit (statements of compliance) at system, site and component level.
- Define the PRS receiver accreditation framework and PRS manufacturer accreditation

7.1.2 GSMC

The GSMC will be the hub of European GNSS security. It will ensure that sensitive information relating to the use of PRS is suitably managed and protected and is not exposed to the Galileo Operating Centre. The GSMC will also allow the GNSS Agency

¹⁷ Article 10 (e) of the GNSS Agency Regulation



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continuously to monitor the security-related status and performance of the elements of EGNOS and Galileo and of the operation of the PRS.

The GSMC equipment, the part of the GSC dedicated to Galileo, will be procured as part of the Galileo FOC by ESA. However, the hosting facilities will be procured by ESA within the frame of the delegation agreement between the Commission and ESA.

The GSMC's mission comprises:

- European GNSS security and status monitoring (for FOC, Galileo only).
- Command and control of European GNSS in accordance with the Joint Action.
- Management of PRS access.
- Provision of PRS and GNSS security expertise and analyses on request.

The GNSS Agency as operator of the GSMC will ensure that the operations of the GSMC are prepared in due time before the formal transfer. This will entail important work from future staff of the GSMC which is expected to be available in 2011¹⁸.

From 2011 on, the GNSS Agency has to tackle the following tasks in preparation of the GSMC operations:

- lead the GSMC operations engineering to prepare the necessary operational documentation for the GSMC operations¹⁹;
- define the need of staff, the administrative equipment for the GSMC, staff requirements, qualification, training.
- contribute to the GSMC infrastructure development, participate in project reviews and provision of GNSS Agency specific hosting requirements including the negotiation of the necessary seat arrangements with the Hosting Entities (FR & UK).
- support the ESA lead GSMC Qualification Programme, especially by contributing to the Programme reviews on the GSMC.

¹⁸ Originally 6 members of staff, who were not authorised by the Budgetary Authority.

¹⁹ The GSF PDR (Galileo Security Facility – Preliminary Design Review) identified that this activity is not covered by the GSF contractor and is also not part of the Galileo operations preparation work which takes place in WP6.



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Main tasks in 2011

- Prepare the GSMC initial operations.
- Follow-up the preparation of the hosting facilities for the GSMC.
- Follow-up the procurement of the hosting facilities for the GSMC undertaken by ESA.
- Follow up GSMC technical definition and procurement undertaken by ESA.

7.1.3 GNSS security requirements

Technical support to the Commission for the evolution of the Galileo SSRS will have to be provided in 2011. Such technical support will be subject to a working arrangement to be agreed with the Commission. This task may include maintaining a DOORS database, providing support for the update of the GNSS security policies, establishing any relevant EGNOS security-related requirements and updating specific security documentation.

The tasks outlined in this chapter will be performed in support to the Commission.

Main tasks in 2011

- Maintain the Galileo SSRS DOORS database for security accreditation purposes (if requested by the Commission).
- Support updating of the Galileo SSRS.
- Support updating of GNSS (Galileo and EGNOS) security policies, threats and vulnerabilities analysis and risk assessment.
- Support establishment of any relevant EGNOS security-related requirements.
- Support updating of specific system security documentation.

7.1.4 Pilot Project and user segment

The first PRS signal in space broadcast is expected to be available for validation and testing purposes in the first half of 2011. The PRS user segment must be prepared in



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parallel with the Galileo infrastructure deployment so that PRS can be used as soon as Galileo is operational.

To that end, in 2008, the concept of the PRS Pilot Project was launched, with a view to validating PRS operational and user functions and accelerating preparatory activities in Member States. The overall objective of the PRS Pilot Project is to perform, within a single framework, an optimised (significant scale) pre-operational validation of the PRS user functions, including testing of the overall PRS security framework. The PRS Pilot Project, which is owned by the European Commission, is designed for the benefit of the Member States to stimulate and support the implementation of the Member States' infrastructure and services.

This pre-operational validation is essential as the PRS environment is more complex than that of the other services: in addition to the deployment of a service with particular technical features and performances, a security framework has to be put in place, which affects not only the infrastructure architecture but also the Member States as future users.

The first implementation activities of the PRS Pilot Project has been launched in 2010 through the P3RS projects and initial proposals for improving the use of the PRS service will be prepared on the basis of the first results. The cooperation on the PRS projects is ruled by the working arrangement. The GNSS Agency provides support on the P3RS projects I and II launched in 2010. It is intended that it will receive a related Delegation²⁰ for the following P3RS projects II to be launched in 2011 onwards.

Furthermore, since a large proportion of the PRS receivers will be near a communication facility, the impact that a communication channel could have in terms of both control of PRS access and PRS navigation performance needs to be evaluated. The GNSS Agency will continue research activities in this area in 2011, in support to the Commission.

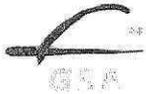
The GNSS Agency will also support work on the PRS user Segment, by performing market researches in various application areas, e.g.: low cost and unclassified PRS receivers, homeland security, emergency services, critical infrastructure and defence. This will allow the market potential of PRS to be evaluated and will be of inestimable value in identifying the most effective market entry approach.

The tasks outlined in this chapter will be performed in support to the Commission.

Main tasks in 2011

- Issue calls for tenders, select, negotiate and award contracts supporting the implementation of the PRS Pilot Project, in accordance with the Commission guidelines and in accordance with the working arrangement with the Commission.

²⁰ See footnote 15



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- Provide expertise and support to the GNSS Security Board Working Group PRS (WG-PRS), especially regarding the definition of guidelines and rules for the management of PRS in EU Member States and the definition and implementation of the PRS implementation plan.
- Develop cost studies, concept of low cost receivers, support the development of demonstrators or PRS receivers (in particular fitting the purpose of trials foreseen in the PRS Pilot Project) and propose a standardisation strategy and process for the next 5 years.

7.1.5 European GNSS technology control regime

In 2009, the GSA drafted a discussion paper²¹ to support the Commission in defining the objectives of a European GNSS technology control regime. The GNSS Agency expects to continue providing this support in 2010 and to start looking at various aspects of the implementation of the regime, such as the definition of tools and methods that can be used to ensure compliance.

There might be a role of the GNSS Agency in developing an implementation plan for any Control Regime by consolidating current best practice and the impact of the Control Regime on current licensing practice

The tasks outlined in this chapter will be performed in support to the Commission.

²¹ "Towards a Galileo Control Regime: Objectives and Requirements of Control Regime for Galileo Assets and of Transfers and Exports of Sensitive GNSS Items".



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Main tasks in 2011

- Support to the Commission in preparing and updating the Galileo Control Regime as follow-up of GNSS Agency's 2010 activities on the running of the GNSS Security Board Task Force Control.
- Identification of the tools and methods that can be used to actually enforce the European GNSS technology Control Regime.
- Support the Commission on an implementation plan for any Control Regime by consolidating current best practice and the impact of the Control regime on current licensing practice and support to the Commission for the initial implementation of the European GNSS technology control regime.

7.1.6 GNSS Security Board and associated working groups

The GNSS Agency shall provide a transverse support to the Commission in the management of the GNSS Security Board and associated Working Groups, in line with its specific responsibilities in the security accreditation of the systems and in the operations of the Galileo Security Centre.

Main tasks in 2011

- Technical, secretarial and logistical support to the WG-PRS.
- Technical support to the WG-NET and to the TF-PSI.
- Chairmanship, technical, secretarial and logistical support to the TF-Control.
- Establishment and management of a Documentation Management System (DMS) ensuring a coordination and update of the GNSS Security Board documentation, the Systems Security Accreditation documentation and of the PRS User Segment documentation.



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7.2 Market Development

It is presumed that in 2010 the Commission will present to the Council an official communication on the post-2013 operations of the GNSS systems to the Council. The GNSS Agency's activities in the field of market development build on this proposal, with a focus on market entry and business development actions for different exploitation scenarios of the Commercial Service.

The GNSS Agency's activities will also contribute to, and will be aligned with, the Application Action Plan²² (GNSS APAP) adopted by the Commission in June 2010²³. They will continue to be coordinated with the relevant activities undertaken by the European Space Agency and the European Commission and where appropriate inscribed in the joint annual GNSS Communication Strategy of the three organisations.

7.2.1 Contribution to the preparation of the commercialisation of the systems

Important benefits of the European GNSS programmes will come from the market place, as underlined by the Commission in its communication to the European Parliament and the Council.²⁴

Following the entry into force of the GNSS Regulation, the GNSS Agency has been assigned the task of promoting the market take-up of the GNSS systems in order to reap the maximum benefit from the systems. This task, as defined by the Commission guidelines, can be grouped as three main axes of activity:

- supporting the exploitation and commercialisation of:
 - EGNOS, which reaches full operational capability through the declaration of availability of the EGNOS Open Service on 1 October 2009;
 - Galileo, whose market entry needs to be prepared as from 2011;
- understanding the potential and main trends of the GNSS market, i.e. assessing the environment in which satellite navigation applications can develop, including downstream markets, assessing the various options for improving the dynamics of the market (such as a market observatory, providing information and assistance tools for potential users, promoting industry and user fora), and making suitable recommendations to the Commission; and

²² List of actions established by the European Commission in order to foster the development of the applications of Galileo and EGNOS.

²³ COM(2010)308, 14.6.2010

²⁴ COM(2007)534 final, 19 September 2007.



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- contributing to the development of the market with actions to encourage the take-up of European GNSS services, leveraging on FP7 application projects with a particular focus on supporting SMEs and promotional initiatives.

The Commission plans foresee several activities to support SMEs: communication and information on GNSS programmes, improving access to financing instruments and specific support SME via a voucher scheme. This scheme will require development and management of specific tools (e.g. SMEs database, info on funding instruments, tracking system for the returns, dissemination, business matching). The GNSS Agency will take care of the operational aspects of this programme by Delegation of the Commission.

7.2.2 EGNOS marketing

The first axis is intended to ensure the early adoption of EGNOS in market segments identified as having the greatest short-term or medium-term potential.

In 2009, the GSA proposed to the Commission that EGNOS market entry activities should target three priority market segments selected on the basis of their respective potential in terms of economic benefits and maturity: aviation, which will remain the top priority, followed by road and high precision applications.

In 2010 the GNSS Agency as a key contributor continues to carry out priority actions derived from the aforementioned EGNOS market entry approach, in the context of the Commission "Application Action Plan," including: developing and presenting cost-benefit analyses, disseminating trial results, co-marketing with players in the value chain, building market awareness and supporting promotional activities.

The Commission has requested GNSS Agency's support on:

- The delivery of specific activities planned in the GNSS APPAP;
- The set up, maintenance and regular upgrade of a detailed monitoring system that will periodically report (every 6 months):
 - on some key market figures that the GNSS APPAP is targeting²⁵;
 - on the status of the execution of the 24 actions of the GNSS APPAP, their impacts and related key performance indicators.

The single actions will be coordinated and detailed with the European Commission.

Furthermore, with EGNOS becoming fully operational and certified for civil aviation in 2010, the EGNOS marketing activities should be stepped up in 2011, following first initiatives addressed to potential early adopters of the open signal in 2009 and 2010.

²⁵ As described in the Commission communication COM(2010)308 of 14.06.2010 to the Council and Parliament

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The promotion of EGNOS will require extensive contributions to the work coordinated by the Commission with Member States, user communities and all agents of the value chain.

In 2011, one of the most important pillars will be EGNOS' entry in the air navigation market. To this purpose, the GNSS Agency will enact the market entry strategy for aviation that the Commission will propose in 2010. The GNSS Agency will keep on contributing to the promotion of adoption schemes for aviation via initiatives targeted at airlines and airports, leveraging on FP7 2nd call projects.

In order to accelerate the use of EGNOS in the road segment, the promotion of the system and its services will focus on developing a convincing value proposition in different market sub-segments, identified as the most promising from "ability to compete" and "time to market" point of views (e.g. road network management, safety systems and assistance to the driver, specialised logistics, etc.). This activity will leverage on demonstrations of features, differentiators and benefits, including through real-scale and cross-border trials when appropriate (that is to say within the scope of FP7). In 2011, based on this value proposition, a set of focused actions to support the adoption of EGNOS will be specified and implemented.

In 2011, the promotion of EGNOS in Precision Agriculture will continue, with the goal to increase the market share, reaching 70% by 2012.

In addition, other sub-segments are being defined as targets in High Precision domain (e.g., thematic mapping and surveying applications). In 2011, a focused set of actions to support the adoption of EGNOS will be implemented.

The beta test of the EDAS, started at the beginning of 2009, is the first proxy of a European GNSS commercial service. It provides important information regarding demand (e.g. customer profile and benefits, market potential) and suitability of the current mode of access to service data. This information will allow the GNSS Agency to evaluate the economic potential, design the service model and prepare the commercialisation of the service if appropriate. The experience acquired with EDAS will also be a highly valuable asset for the definition of the Galileo Commercial Service.

At the request of the Commission, the GSA has implemented an EGNOS Applications Development Portal²⁶, aggregating information of special interest for investors and developers of new applications and for potential users in general. The GNSS Agency expects to continue devoting special attention to improving this portal.

Finally, the GNSS Agency will help communicate the operational status of EGNOS to the market, including by developing specific instruments to raise EGNOS awareness in target segments and effectively communicate EGNOS as a value proposition.

²⁶ On-line web interface gathering information on EGNOS.

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Main tasks in 2011

- Continue the actions deriving from the EGNOS market entry strategy.
- Promote the utilisation of the EGNOS open signal and safety-of-life service including stepping up EGNOS marketing activities for aviation with a view to publication of EGNOS landing procedures in major European countries by the end of 2011.
- Specify and implement the EGNOS market adoption plan for road.
- Contribution to the definition and implementation the EDAS service model and related promotion activities.
- Organise EGNOS marketing communication initiatives.
- Continue to improve the EGNOS Applications Development portal.
- Define the market entry approach for other market segments on the basis of promising prospects for EGNOS utilisation.
- Contribute to the implementation of the GNSS APPAP
- Monitor the impact of actions, track market indicators and continue the actions deriving from the EGNOS market entry strategy.

7.2.3 Market monitoring

The second axis is improving the knowledge of the market. The Market Monitoring and Forecasting model developed in 2009 is a key tool for this activity. It provides a structure for the market research data and allows market analyses and forecasts to be carried out that enable a better understanding of the GNSS market and of the overall public benefit created by the systems. The GNSS Agency and the Commission are closely coordinating on the market monitoring activities, including the monitoring needs of the European Commission, and on the related communication policy. In October 2010 the Commission requested the GSA to procure a GNSS Industry database.²⁷

²⁷ The implementation of such a procurement is currently under investigation in a working group between the GNSS Agency and the Commission and the implementation is subject to the available resources.



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Main tasks in 2011

- Act as a source of GNSS market information for the Commission, following the Market Monitoring and Forecasting process implementation in 2010.
- Regularly refine and improve the Market Monitoring and Forecasting process²⁸, in order to reflect changes in the market and in technology.

7.2.4 Development of the Galileo market

Finally, the third axis of market-related activities focuses on promoting new applications of the European satellite navigation systems. This activity is key to ensuring the sustainability of the systems and to giving an edge to the European industry in the global satellite-navigation market. The development of new applications will leverage on the FP7 funds, the management of which has been delegated to the GSA by the Commission.

The GNSS Agency will focus on the markets where Galileo will offer the highest value added, as identified in the Commission Action Plans. In particular, activities will focus on:

- LBS, e.g. mobile mass market and social LBS.
- Road management, e.g. innovative schemes which shape mobility demand, intelligent navigation with information from all vehicles for active traffic management.
- Road ADAS²⁹, e.g. safety of drivers and vulnerable users (pedestrians and cyclists).
- Maritime and rail, e.g. applications to improve safety and allow inter-modality.
- PRS market.
- Implementing the market development actions with a view to Galileo Commercial Service as defined in 2010 in consultation with the Commission.

As regards new applications, the GNSS Agency will continue to follow closely the development of the market in general and try to pre-empt (or at least reduce) market imperfections, in line with the strategy and methodology developed in 2008 and 2009.

²⁸ Provides reliable GNSS market information and revenues projections, covering global GNSS market, Galileo and EGNOS contribution and indirect public benefits.

²⁹ Advanced Driver Assistance Systems.



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The GNSS Agency will increase the contact it has with representative market agents (e.g. focus groups).

The GNSS Agency will also support the Commission in the context of the Galileo and ITS Action Plans.

Main tasks in 2011

- Leverage on FP7 projects and complementary interaction with industry and potential users to promote the development of new applications.
- Provide information and assistance to potential users and investors in new applications.
- Promote industry and user fora in priority market segments.
- Support the Commission in promoting the European GNSS Programmes.

7.2.5 SME support programme

The Commission Action Plans provide for several activities regarding SMEs: communication and information on GNSS programmes, improving access to financing instruments and specific support via a voucher scheme. This scheme will require development and management of specific tools (e.g. SMEs database, info on funding instruments, tracking system for returns, dissemination, business matching). The Commission has delegated responsibility for the operational aspects of this programme to the GNSS Agency.

The GNSS Agency is also expecting the Commission to delegate to it the management of the operational aspects of an SME support programme to disseminate information on European satellite navigation systems and promote their adoption. The task of the GNSS Agency will be to help set up the scheme, supervise operations and organise events and related communications.

7.3 Research and Development

7.3.1 FP7

As outlined in the Commission guidelines, FP7 projects on applications and security R&D will be managed by the GNSS Agency in accordance with the terms of the Delegation made under Article 54(b) of the Financial Regulation and with the working arrangements agreed with the Commission in relation to the PRS applications and to the security related R&D activities.

In managing the projects, the GNSS Agency's objectives are:



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- to keep the projects in line with the strategic objectives;
- to maximise the project results; and
- to produce an effective communication action for each project.

The supervision of the projects from the FP7 1st and 2nd calls will continue. By mid-2010 a total of 51 projects (covering both satellite navigation applications and security) shall be managed by the GNSS Agency.

At the Commission's request, the GSA has prepared and launched the FP7 3rd Call, in the second half of 2010, leveraging on the proven methodology and the experience and initial results of the FP7 1st and 2nd call projects.

The handling of a new FP7 call (from the preparation of the publication to the signature of the grant agreements or contracts) consumes considerable resources and has to respect strict deadlines. This work has to be closely coordinated with the management of the portfolio of on-going projects from previous calls. A peak in the workload under FP7 is expected in 2011.

7.3.1.1 Satellite navigation applications development and promotional initiatives

18 projects were launched in 2008 under the FP7 1st call and 29 in 2009 under the FP7 2nd call. Consequently, at the beginning of 2010, 47 application projects are running³⁰.

Following the adoption of the work programme for the FP7³¹, the 3rd call for proposals was launched on 20 July 2010³² guided by the principles followed in the two previous calls: FP7-funded activities will, first, support a vertical market acceleration strategy and an action plan to stimulate the most valuable or mature market segments and, second, offer opportunities for break-through innovation independent of the area of application; a considerable part of the funds available will be dedicated to innovative applications, SME and international cooperation.

Main tasks in 2011:

- Manage and close-out the FP7 1st call and FP7 2nd call projects.
- Launch and manage approximately 30 satellite navigation application related projects under the FP7 3rd call (from preparation of the publication to the signature of grant agreements and contracts).

³⁰ More details are provided in the 2009 Annual Activity report of the GSA (adopted on 29 March 2010)

³¹ C(2010)4900 of 19.7.2010.

³² Calls for proposals under the 2010 and 2011 work programmes of the Seventh Framework Programme for Research, Technological Development and Demonstration Activities, OJ C196/11 of 20.7.2010



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7.3.1.2 Support activities in the security domain

A study on the preparations for prototyping and manufacturing PRS receivers (PROGRESS³³), including the process of standardisation, safety certification and security accreditation, was launched under the FP7 1st call and will end in 2011.

For the FP7 2nd call, the main contracts on security and PRS are: the demonstrator of anti-tampering technologies at receiver level (FORTRESS³⁴); a PRS management simulation tool to support the PRS pre-operational phase (PROPHET³⁵); and a study on interference and jamming detection and mitigation to support the validation of requirements at system and user segment levels (PROTECTOR³⁶).

The definition of the security-related projects under the FP7 3rd call has been finalised in 2010 before the launch.

The activities outlined in this chapter will be performed in accordance with the terms of the Delegation of the Commission to the GNSS Agency on FP7 and in accordance with the working arrangements agreed with the Commission as well as in accordance with other guidelines provided by the Commission in relation to the PRS applications and to the security related R&D activities.

Main tasks in 2011

- Manage and close out the FP7 1st Call and 2nd Call contracts (PROGRESS, FORTRESS, PROPHET, PROTECTOR).
- Launch and manage security related projects under FP7 3rd call

7.3.2 GKMF

The virtual library known as GKMF was opened for limited public access through the Internet in January 2009. In 2010, the two years of production will have provided sufficient experience and a review of its functionality and an upgrade of its capacity will most probably be necessary.

In 2011 all the information on the systems and results of the R&D projects will continue to be uploaded, structured and made available through secured access, according to the access rights assigned to users. Other information will be added to cover the widest

³³ PROGRESS: PROgramme for Governmental Receivers Specification and Standardisation.

³⁴ FORTRESS: FORge of Tamper-RESistant Security module.

³⁵ PROPHET: PRS Operations Performance Handy Evaluation Tool.

³⁶ PROTECTOR: PRS Operational Tool to Evaluate and Counteract Threats Originating from Radio-sources.



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possible range of relevant activities. In addition, information from the virtual library that is publicly accessible will be made available through satellite navigation-related web portals. GKMF will also be an important tool for the dissemination of the results produced under FP7 and other research and development programmes.

Main tasks in 2011

- Upload new information on the systems and the results of the R&D projects.
- Improve and upgrade the GKMF platform.

7.3.3 Application Projects with MATIMOP – Israeli Industry Centre for R&D

Following a request by the Commission ³⁷ the GSAGNSS Agency will continue the activities for the implementation of the GIUS-1 and GIUS-2 projects until further notice. Such implementation is done according to the terms of the cooperation agreement with MATIMOP, which the GSA inherited from the GJU. The Commission will notify the GSAGNSS Agency as soon as possible on the further cooperation scheme with Israel .

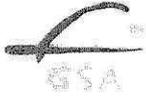
Main tasks in 2011

- Review the ongoing projects in GIUS-1 and GIUS-2;
- valorised the results of the related projects;
- update the hand-over files for the Commission.

7.4 General Administration

A substantial part of the GNSS Agency resources and efforts will continue to be invested in the financial, legal and human resources tasks that underpin the core activities of security and commercialisation of the European satellite navigation services, the proper functioning of the GNSS Agency as an EU agency with legal personality and the work of the Administrative Board. Procurement and contract management for the day-to-day business of the GNSS Agency as well as for the projects will continue to be a very demanding challenge, with resources needing to

³⁷ See Letter of the Commission of 17 February 2010 (TREN/G4/D/201052237) to the Israeli authorities, Letter of the Commission of 12 July 2010 to the GSA (ENTR/F3/ST/mb D(2010)458158) and letter of the GSA to the Commission of 29 July 2010 to the Commission (GSA/2010/MKD/OED/D465677)



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match projects requirements. A particular challenge will be the preparation of the operation of the GSMC and the related administrative support.

The GNSS Agency will continue to pursue efficiency gains in 2011, focusing in particular on information systems and process design. Following the roll-out of several new information systems in 2010 (e.g. HR information system, activity-based costing system, contract management solution), the focus in 2011 will be on the consolidation these systems and the efficiency of processes.

A handwritten signature in black ink, appearing to read "Per Tegnér".

<p>Per TEGNÉR Chairman of the Administrative Board Date and signature:</p>



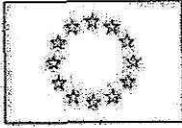
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List of Annexes

Annex 1: Commission guidelines to the GSA (C(2009) 1153 final)



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 25.2.2009
C(2009) 1153 final

ANNEX

Commission guidelines to the European GNSS Supervisory Authority

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I. INTRODUCTION

The GNSS Regulation which entered into force on 25 July 2008¹ created a legal framework for the EU satellite navigation programmes EGNOS and Galileo, as well as budgetary stability. The Regulation has also recast the division of competences between the various actors involved, including the European GNSS Supervisory Authority.

In accordance with the GNSS Regulation the European Parliament and Council are the ultimate political decision-making bodies for the programmes, in particular for the overall programme objectives and definition of services to be provided by EGNOS and Galileo and for the decisions on the subsequent phases of the programmes.

For its part, the European Commission is responsible for the overall management of the programmes including for the management of the funds allocated to the programmes (Article 12(2) of the GNSS Regulation). The Commission exercises responsibility for the implementation of Galileo and EGNOS and controls the mission and system definitions as well as the system implementation, including system security, of EGNOS and Galileo. This includes coordinating stakeholder requirements, the prevention of duplication of tasks and establishing appropriate risk-management mechanisms. It designates a Programme Manager with operational responsibility for the implementation of the Galileo and EGNOS programmes as well as the necessary technical and management personnel who ensure all appropriate interfaces with the GSA.

The GNSS Regulation also addresses the role of the European GNSS Supervisory Authority (GSA) in the further implementation of the European GNSS Programmes, stating specifically in its article 16 that

"...the Authority shall accomplish the following tasks within the programmes in accordance with guidelines issued by the Commission:

(a) with regard to the security of the programmes, it shall ensure:

(i) security accreditation; to that effect it shall initiate and monitor the implementation of security procedures and perform system security audits;

(ii) the operation of the Galileo security centre, implemented in accordance with decisions taken pursuant to Article 13 and the instructions provided under Joint Action 2004/552/CFSP;

(b) it shall contribute to the preparation of the commercialisation of the systems, including the necessary market analysis;

¹ Regulation (EC) No 683/2008 of the European Parliament and of the Council of 9 July 2008 on the further implementation of the European satellite navigation programmes (EGNOS and Galileo), OJ L 196, 24.7.2008, p. 1

(c) it shall also accomplish other tasks that may be entrusted to it by the Commission, in accordance with Article 54(2)(b) of the Financial Regulation, addressing specific issues linked to the programmes, such as:

(i) promoting applications and services in the satellite navigation market;

(ii) ensuring that the components of the systems are certified by the appropriate, duly authorised, certification bodies³.

This document establishes the Commission's guidelines to the GSA referred to above. In doing so it follows the distinction of the three areas of work outlined above – security, commercialisation and "other tasks", providing targets and methodological guidance in each of these areas.

The actual tasks to be performed by the GSA will be defined in detail by the work programme of the GSA, according to Article 11 of the GSA Regulation.²

In conformity with the principle of a strict division of responsibilities and in order to avoid duplication of tasks as highlighted by Article 12.1 and 12.2 of the GNSS Regulation, and taking into account the institutional framework, the present document also provides guidelines for the interaction between the Commission and the GSA.

Revisions to this document are delegated to the Director-General of DG TREN.

2. THE GSA'S CORE TASKS

As described above, the GNSS Regulation assigns specific tasks to the GSA, referred to as core tasks here, but also leaves the possibility of further tasks being conferred to the GSA by the Commission. This chapter lists the tasks attributed to the GSA by the GNSS Regulation itself, notably paragraphs (a) and (b) of article 16. These tasks are to be carried out by the GSA on the basis of its own, available resources.

2.1. Security Accreditation

2.1.1. Scope and objectives

The European GNSS Supervisory Authority ensures security accreditation of the systems. To this effect, the GSA engages and supervises the implementation of security procedures and performs security audits of the European GNSS systems.

2.1.2. Galileo security accreditation

(1) The final accreditation frame will be defined by the foreseen Regulation amending Regulation 1321/2004 which will align the latter on Regulation 683/2008.

³ Council Regulation (EC) No 1321/2004 on the establishment of structures for the management of the European satellite radio-navigation programmes, OJ L 246, p. 1.

- (2) Until entry into force of the new frame, and without prejudice to effects of the foreseen Regulation amending Regulation 1321:
- (3) The GSA shall be responsible for managing the process of security accreditation.
- (4) The GSA shall detail the schedule of activities and deliverables, including a security accreditation implementation plan, in its annual work programme.
- (5) As decided by the GSA Administrative Board, the GSA provides the appropriate management and technical support to ensure that the Galileo Security Accreditation Panel (GSAP) addresses the associated issues.

The GSAP is key to coordinating the various partners at European and national level. It assists the GSA in undertaking the technical and operational activities needed for the validation of the security features of Galileo in the frame of its accreditation.

- (6) The GSA shall submit all technical reviews and their outcomes in the form of accreditation reports to the GSAP, for their analysis and final approval.

2.2. Operations of the GSMC

2.2.1. Scope and objectives

The European GNSS Supervisory Authority operates the European GNSS Security Monitoring Centre (GSMC).

2.2.2. The European GNSS Security Monitoring Centre (GSMC)

- (1) The GSA shall assist the Commission in preparing the operations of the GSMC. It will notably be involved, at the request of the Commission Programme Manager, in aspects of the definition, development and deployment of the GSMC. The GSA shall provide a draft, detailed GSMC development plan and, if confirmed by the Commission Programme Manager, prepare and procure a GSMC site and deploy the GSMC interfaces with the Member States and the Council, in close co-ordination with the former. Furthermore, the GSA will be provided by the Commission's Programme Manager copies of all interim and final deliverables of the GSMC. The GSA finally operates the GSMC interfaces between the GSMC and the Member States, Council and other relevant bodies, in close coordination with the Commission's Programme Manager. This activity will need to take into account a future decision on the location of the GSMC as well as the development and deployment planning stemming from the FOC contracts.

In terms of scheduling, the GSA is expected to be ready to assist the Commission in the development of the GSMC and plan its operational responsibility. Handover of the operations of the GSMC to the GSA should occur in 2011. Full operational status of the GSMC is expected in 2012.

- (2) The GSA shall ensure that the GSMC establishes and maintains a database of all PRS Users and receivers duly authorised and that it will undertake the distribution of the keys needed for access to the service for all of them.
- (3) The GSA shall ensure that the GSMC is operated in full compliance with the PRS access policy, with the security instructions and with any relevant concept of operations.

2.3. Contribution to the preparation of the commercialisation of the systems

2.3.1. Recommendations for the exploitation phase

The GNSS Regulation requires the Commission to submit to the European Parliament and the Council in 2010 a proposal for the exploitation phase of the GNSS programmes, addressing public ownership of the system, possible revenue-sharing mechanisms and pricing policies.

- (1) At the request of, and in full coordination with, the Commission Programme Manager, the GSA shall help carry out the analyses on which the Commission will base its proposals for the exploitation phase of the GNSS Programmes. It shall notably:
 - provide recommendations and carry out actions regarding the development of markets and in order to promote the exploitation and commercialisation of EGNOS and Galileo.
 - contribute to establishing relevant policies for, and in, the application sector (e.g. IPR, liability regimes).

2.3.2. Encouraging market take-up

The development of satellite navigation application with high potential for economic, social and public benefit should be one of the priorities of the market development activities.

- (1) The GSA, in coordination with the Commission services in charge of GNSS applications at the European Commission, shall assess the environment in which satellite navigation applications can develop, including the commercial market, and propose strategies and undertake actions to encourage the take-up of GNSS services, leveraging FP7 application projects. A particular focus should be on supporting small and medium-sized enterprises and market initiatives.

To achieve this, the GSA shall assess the various options (such as market observatory, providing information and assistance tools for potential users, promoting industry and user fora) and make suitable recommendations to the Commission.

- (2) The GSA shall give advice on the requirements of SMEs in terms of innovative financial tools and of clustering and on educational programmes on satellite navigation.

3. OTHER TASKS ENTRUSTED TO THE GSA

This chapter outlines the activities falling under Article 16(c) of the GNSS Regulation, i.e. entrusted to the GSA on initiative of the Commission. Several activities are already entrusted to the GSA by Delegation Agreement C/2007/6439 of 12/12/2007 from the Commission.

The activities described below require the conclusion of Delegation Agreement(s) between the Commission and the GSA, in accordance with Article 54(2)(b) of the Financial Regulation, covering also the transfer of budget (FP7, MEDA and others).

The activities to be delegated to the GSA will be detailed further in the respective Delegation Agreement(s) and are therefore only broadly outlined here, in order to provide a complete picture of the GSA's potential mandate for action.

The GSA might be charged with implementing these activities, including making project proposals to the Commission's Programme Manager, organising the evaluation of project proposals and preparing the selection of retained projects, concluding the contracts and managing their technical, contractual and administrative follow-up and providing for regular reporting to the Commission of relevant project results. The GSA shall closely coordinate these activities with the Commission's Programme Manager.

3.1. Applications development and promotion

The objective of these activities is to foster the use of positioning and navigation applications in the foreseen GNSS mass-market applications and to place EU industries, with Galileo and EGNOS, at the forefront in order to capture part of the growing worldwide satellite navigation market.

This will be achieved by encouraging research and development activities taking up end user requirements for the whole range of Open Service, Safety of Life (e.g. authentication, simplified use of integrity information) and commercial service applications of EGNOS and Galileo, in line with the Commission GNSS strategies and action plans for application development and international cooperation.

3.2. Support activities in the security domain

Further work is needed on certain aspects of the GNSS security policy. Specifically, this concerns application development in key technologies required for the PRS user segment; further research and development into security certification and specific security accreditation issues, such as related to PRS receivers and technology accreditation mechanisms.

Preparatory work needs to be undertaken on the Galileo Security Monitoring Centre, including on the preparation and implementation of the PRS Access Policy and its operational management, as well as issues related to export control.

Further research and development must also be undertaken to ensure compliance of the GNSS services with security requirements of safety critical applications in land transportation, marine navigation and civil aviation.

4. GENERAL PRINCIPLES OF COOPERATION BETWEEN THE COMMISSION AND THE GSA

The success of the European GNSS programmes requires a joint effort of the actors concerned. Close cooperation and coordination and good communication are basic prerequisites for effective programme management.

4.1. Management coordination

The Director in charge of GNSS at DG TREN and the Executive Director will meet regularly for an exchange of views on the overall strategic

4.2. Contact points

To ensure appropriate, stable and timely communications, contact points will be nominated in the Commission services and the GSA who will be responsible for the exchange of information in their respective fields of activity. These contact points will ensure that the respective teams in the two organisations work jointly towards the implementation of the GNSS Programmes whilst maintaining their respective areas of competence and responsibility.

The Commission contact point for general relations with the GSA, given his overall coordination role within the Commission, should be kept informed and put in copy on all GSA communication with other Commission services.

4.3. Reporting

4.3.1. Reports on staff and budget indicators

Without prejudice to the reporting requirements formulated in the Delegation Agreement(s) signed between the Commission and the GSA, the Director in charge of GNSS at DG TREN requires quarterly reports on budgetary and financial execution from the GSA. The GSA shall endeavour to submit these reports by the end of the first week following the 31 March, 30 June, 30 September and 31 December.

4.3.2. Task specific reports

If the Director in charge of GNSS at DG TREN deems appropriate, he may request implementation reports on the specific activities of the GSA. In such a case, the scope and focus of the desired report will be outlined.

4.4. Annual work programme of the European GNSS Supervisory Authority

Before presenting a draft or revision of its work programme to its Administrative Board, the Director in charge of GNSS at DG TREN shall be consulted. For this purpose, he shall receive the draft at least two weeks before the submission deadline to the Administration Board to allow for substantive consultation and Commission internal coordination.

To ensure the final adoption of the GSA Work Programme before 30 November of each year as required by GSA Regulation, the draft that should form the basis of the

official Commission opinion on the work programme in line with Article 6 b) of the GSA Regulation should be sent to the Director in charge of GNSS at DG TREN by the end of August.

The two organisations should aim to achieve adoption of the Commission's opinion on the GSA's Work Programme in due time before its presentation to the GSA's Administrative Board.

4.5. Preparation and attendance of GNSS Committee meetings

Subject to the applicable rules of procedure, representatives of the GSA will participate as observers at the meetings of the European GNSS Programmes Committee, as well as other working groups of relevance to the GSA's activities. Participation should be at the appropriate level, namely its Executive Director, the managers of the GSA and the desk officers concerned by the agenda items to be discussed during the meeting of the Committee.

The GSA will be invited to contribute and comment on the documents to be delivered to the GNSS Committee which concern areas of activity of the GSA. On request of the Director in charge of GNSS at DG TREN, the GSA will provide contributions for Committee meetings, e.g. by giving presentations or providing written texts.