



European Economic and Social Committee

TEN/476
**Implementation and
exploitation of European
satellite navigation systems**

Brussels, 28 March 2012

OPINION

of the
European Economic and Social Committee
on the

**Proposal for a Regulation of the European Parliament and of the Council on the
implementation and exploitation of European satellite navigation systems**

COM(2011) 814 final - 2011-392-COD

Rapporteur: **Mr McDonogh**

On 15 December 2011 the European Parliament and on 20 January 2012 the Council of the European Union decided to consult the European Economic and Social Committee, under Article 172 of the Treaty on the Functioning of the European Union, on the

Proposal for a Regulation of the European Parliament and of the Council on the implementation and exploitation of European satellite navigation systems
COM(2011) 814 final - 2011-392-COD.

The Section for Transport, Energy, Infrastructure and the Information Society, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 13 March 2012.

At its 479th plenary session, held on 28 and 29 March 2012 (meeting of 28 March), the European Economic and Social Committee adopted the following opinion by 167 votes in favour, with 4 abstentions.

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1. **Conclusions and recommendations**

- 1.1 The Committee welcomes the Commission Proposal for a Regulation of the European Parliament and of the Council on the implementation and exploitation of European satellite navigation systems. The success of the European Global Navigation Satellite System (GNSS) programmes is vitally important to the future prosperity and security of the EU. We support the Commission's proposal to replace Regulation (EC) No 683/2008 with the new regulation to provide the funding and governance model for the Galileo and EGNOS programmes.
- 1.2 The Committee strongly supports the objective of the Galileo programme to create the first global satellite navigation system (GNSS) under civilian control, completely independent of other existing systems, to provide uninterrupted GNSS services and a strategic advantage for Europe. Satellite navigation is already an essential utility for European transport, industry and citizens and it is unacceptable that we are currently so dependent on the American GPS and Russian GLONASS for positioning, navigation and time. European GNSS services must be provided on European infrastructure, which does not depend on the priorities of the US, Russian nor Chinese military for its reliability.
- 1.3 Given that 6%-7% of European GDP-27, i.e. €800bn, already depends on the American GPS system (European Global Navigation Satellite System Impact Assessment Executive Summary accompanying the document "Proposal for a Regulation of the European

Parliament and of the Council on further implementation of the European satellite navigation programmes (2014 – 2020) – SEC(2011) 1447, 30.11.2011), the Committee welcomes the focus in the regulation on interoperability between Galileo and GPS. However, the EESC believes that in parallel with interoperability, Europe should pursue an aggressive policy of replacing GPS with Galileo and EGNOS technology as the primary technologies for GNSS in Europe.

- 1.4 The EESC recommends that the innovation potential of the European GNSS is heavily promoted in the EU research and innovation programme, Horizon 2020 (Horizon 2020, is the EU €80 billion programme for investment in research and innovation for 2014-2020). The satellite navigation systems will be of considerable value to technology innovation and can yield major macro-economic benefits for the Union.
- 1.5 The successful delivery and management of the European GNSS programmes, both Galileo and EGNOS, is critical to achieving the vision of smart, sustainable and inclusive growth envisioned by the Europe 2020 strategy (EUROPE 2020 A strategy for smart, sustainable and inclusive growth – COM(2010) 2020). The Committee notes that the cost-benefit analysis from the Commission (Impact Assessment accompanying the Proposal for a Regulation of the European Parliament and of the Council on further implementation of European satellite navigation programmes (2014-2020) – SEC(2011) 1446 final) estimates that the GNSS programmes, as proposed, will generate €68.63bn (€16.88bn at constant prices discounted at 4% per annum, in accordance with EU Impact Assessment Guidelines) of net benefits to the Union during the system lifecycle of 2014-2034.
- 1.6 While the EESC supports the policy objectives of the European GNSS and the proposed Regulation for the implementation and exploitation of the systems, the Committee must stress its concern about Europe's management of the programmes to-date, which has resulted in considerable delays, cost escalation and lost benefits. It is hoped that the proposed Regulation will provide the necessary political support, management structures and framework to deliver the European GNSS as now envisaged and the resulting benefits.
- 1.7 The Committee notes that 19.5% of the financial benefits accruing from the European GNSS programme will come from growth in the downstream market for European GNSS applications (Impact Assessment accompanying the Proposal for a Regulation of the European Parliament and of the Council on further implementation of European satellite navigation programmes (2014-2020) – SEC(2011) 1446 final). In this regard, the Committee directs the Commission's attention to its Opinion of 16 February 2011 on the Action Plan on Global Navigation Satellite System (GNSS) Applications¹. In particular, the Committee calls for a detailed business plan from the European GNSS Agency (GSA) to grow this crucial market.

¹ OJ C 107, 6.4.2011, p 44-48.

- 1.8 The Committee believes that strong marketing and commercial leadership is urgently needed for the European satellite navigation systems, backed by adequate investment in commercialisation programmes. The commercial development of EGNOS and GALILEO is critical to long-term success; it is essential that the value of the European GNSS is communicated to the market and use promoted. Too little work has been done to-date on this vital, complex challenge.
- 1.9 The EESC welcomes that the Commission stresses the requirement for sound financial management of the programmes, budgeted to cost €7.89bn at current prices during the next financial framework period, 2014-2020. The Committee welcomes that the Regulation specifies that the EC must manage the funds allocated to the programmes, and supervise the implementation of all activities of the programmes, including those delegated to both the European GNSS Agency (GSA) and the European Space Agency (ESA). The EESC also welcomes the Commission's plans to develop a risk management mechanism and management tools to minimise the probability of programme cost overruns.
- 1.10 However, the EESC also notes the Commission's warning that investment in satellite navigation technology is subject to great uncertainty and risk that makes it difficult to accurately forecast the programme costs. Therefore, notwithstanding any delegation agreements (in accordance with Regulation (EC, Euratom) No 1605/2002 and, in particular, Article 54 thereof), the Committee recommends that the Commission should hold monthly stewardship meetings with both the GSA and the ESA to monitor the progress of the programmes and to deal quickly with any problems that arise. Furthermore, the EC should receive detailed management reports and accounts from both the GSA and the ESA at least every three months.
- 1.11 The Committee refers the Commission to previous opinions by the Committee on GALILEO, EGNOS, and Europe 2020².

2. **Background**

- 2.1 Global Navigation Satellite System (GNSS) technologies, with their ability to provide highly reliable accurate measurements of position, velocity and time, are fundamental to improving efficiency in many sectors of the economy and in many areas of citizens' daily life.
- 2.2 Until Galileo is operational, Europe has to use the satnav services of the American GPS or Russian GLONASS for positioning, navigation and time. Europe's dependence on GPS satellite navigation is estimated to represent 6%-7% of EU-27 GDP, i.e. €800bn (SEC(2011) 1447 of 30.11.2011). Yet the military operators of these systems can give no guarantee of maintaining an uninterrupted service.

² OJ C 221, 8.9.2005, p. 28; OJ C 317, 23.12.2009, p. 103-104 and OJ C 107, 6.4.2011, p 44-48.

- 2.3 Although independence in global satellite navigation is the main driver behind the Galileo programme, interoperability with existing and future satellite navigation systems, particularly the US GPS, is an important added value.
- 2.4 The Galileo programme was initiated with the aim of establishing an independent European Global Navigation Satellite System (GNSS).
- 2.5 EGNOS is a regional satellite-based augmentation system for Europe that improves the signals coming from existing satellite navigation systems such as GPS.
- 2.6 Galileo, the European satellite navigation programme, was launched in 2001. Initially the project was based on a Public-Private-Partnership with the Galileo Joint Undertaking (GJU) acting as a common management and funding platform. In 2006, GJU was replaced by the European GNSS Agency (GSA) (formerly known as the European GNSS Supervisory Authority – GSA), in charge of managing the public interest aspects of the European GNSS programmes. The European Space Agency (ESA) was responsible for the technical management and implementation of the GNSS programmes.
- 2.7 Adopted in 2008, the GNSS Regulation³ made the EU the sole political body in charge of steering and fully funding the European GNSS policy. The GNSS Regulation set out the EU funding for the Galileo and EGNOS programmes for 2007-2013. The budget of €3.4 billion was split across the remaining of Galileo development phase, the Galileo deployment phase and the operation of EGNOS.
- 2.8 The Commission's proposal for the next multiannual financial framework for the EU Budget 2014-2020 (COM(2011) 500 of 29.6.2011 - A Budget for Europe 2020) proposes financing the GNSS programmes fully from the EU budget with a proposed ceiling of €7 billion at 2011 constant prices.
- 2.9 Progress on implementing the European satellite navigation programmes is hampered by two key problems:
- 1) Because of cost overruns and delays in delivering the system, the GNSS to be established under the Galileo programme will not be fully operational in 2013 as planned.
 - 2) As the 2008 GNSS Regulation does not lay down the financing and governance framework for Galileo and EGNOS programmes after 2013, a new legal basis is needed for the systems to be operational, maintained and managed in the long term.
- 2.10 The proposal from the Commission will address these problems by creating a new Regulation to replace Regulation (EC) No 683/2008, thus providing the funding and governance structure for the successful delivery and operation of the Galileo and EGNOS programmes.

³ OJ L 196, 24.8.2008, p.1.

- 2.11 Regarding infrastructure, the cost-benefit analysis attached to the proposal shows that the optimum solution is to deploy the 30-satellite constellation as originally planned, but to implement a simpler ground infrastructure. This solution would enable the GNSS to provide all of the planned services and benefits originally envisaged, except that the full "Safety of Life Service" (the EGNOS Safety-of-Life Service enables precision approaches by aircraft, rendering air navigation safer. It also helps reducing delays, diversions and cancellation of flights. The EGNOS Safety-of-Life Service also allows airports to increase their capacity and to cut operating costs. Last, it contributes to CO₂ emissions reduction in the sector) would only be available in interoperability with the US GPS.
- 2.12 The best option for providing a governance framework is to add the programme management tasks of the exploitation phase to the existing security and market-related responsibilities of the European GNSS Agency. The Commission will retain responsibility for managing the funds allocated to the programmes, and supervise the implementation of all activities of the programmes, including those delegated to both the European GNSS Agency (GSA) and the European Space Agency (ESA).

3. **General comments**

- 3.1 The EGNOS and Galileo programmes need clear leadership and unambiguous, full support from the EU to repair the damage to market confidence caused by the collapse of the GJU PPP. The 2014-2020 budget allocation and the proposed Regulation from the Commission is a good beginning, but it will be necessary to demonstrate good management and consistent policy support for the programmes from now-on to underpin market confidence.
- 3.2 Europe needs to accelerate the pace of GNSS deployment and market development, especially considering the cost of Galileo's delay and the increasing competition from the US, Russia and China. China is expanding its military Beidou satellite navigation system into the global COMPASS system with the intent of offering competitive civil service worldwide by 2020, including Europe. GALILEO and EGNOS must become the GNSS standard in Europe as quickly as possible.
- 3.3 The European satellite navigation systems should be an important part of the Horizon 2020 research and innovation programme. The creation of new products and services based on the European GNSS will not only boost smart growth, but will also support sustainable development by helping to increase energy efficiency and by reducing the environmental impact of economic development.
- 3.4 While respecting global competition laws, perhaps EU measures should be identified which would favour the selection of Galileo technologies over inferior technologies, especially for applications that demand confidence in continuity of service or high levels of accuracy and integrity, or for security.

- 3.5 Given the importance of receiver chipsets (a chipset or chip set refers to a group of integrated circuits, or chips, that are designed to work together. They are usually marketed as a single product. A chipset is usually designed to work with a specific family of microprocessors. Because it controls communications between the processor and external devices, the chipset plays a crucial role in determining system performance) to a market penetration and application development strategy, the development of low-cost dual receiver chipsets (GPS + Galileo) is critical. R&D spend should be especially targeted at this objective.
- 3.6 A strategy is needed to capture the experience curve effects of high volume production critical to low cost manufacture of receiver chipsets, so that dual GPS + Galileo chipsets can compete on a cost-basis with GPS only chipsets.
- 3.7 To grow the downstream market for European GNSS products and applications, the GSA needs an aggressive market development strategy, led by a highly skilled team.
- 3.8 A global brand strategy should be developed for EGNOS/Galileo to align objectives, highlight the brand value, simplify market communications, and bring clarity to marketing priorities.
- 3.9 The quality of Galileo technology and services introduced to the market must be always of the highest standard. Strict quality control on technology development and implementation at end-user level must be maintained.
- 3.10 Unfortunately, some early EGNOS products have not been technically good enough to meet customer requirements. As part of a brand strategy, a quality mark should be developed for all EGNOS/Galileo approved technology so that the brand can be protected from reputational damage.

Brussels, 28 March 2012.

The President
of the
European Economic and Social Committee

Staffan Nilsson
