European Economic and Social Committee

TEN/282
Satellite Navigation
Green Paper

Brussels, 11 July 2007

OPINION

of the
European Economic and Social Committee
on the
Green Paper on Satellite Navigation Applications
COM(2006) 769 final

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On 8 December 2006 the European Commission decided to consult the European Economic and Social Committee, under Article 262 of the Treaty establishing the European Community, on the

Green Paper on Satellite Navigation Applications
COM(2006) 769 final.

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 19 June 2007. The rapporteur was Mr Buffetaut.

At its 437th plenary session, held on 11 and 12 July 2007 (meeting of 11 July), the European Economic and Social Committee adopted the following opinion by 134 votes nem con with five abstentions.

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1. Introduction

1.1 GALILEO is the flagship programme of European space policy. The project's scope and strategic nature have led the European Space Agency (ESA) to work jointly with the European Union. Thus, a culture of intergovernmental and Community cooperation should ensure the success of this venture. In the same spirit of cooperation, the project should be implemented as a public-private partnership.

1.2 The first test satellite, precursor of future satellites that will ultimately form a constellation of 30, was launched into orbit towards the end of 2005. The development of this project is therefore on course, but has not been without its difficulties and delays.

1.3 GALILEO will be a global navigation satellite system, which will provide a set of positioning, navigation and timing services.

1.4 GALILEO, with its 30 satellites and its ground stations, will make it possible to provide information on their geographical positions to users in several economic sectors including transport (locating vehicles, ships, aircraft, guidance systems, travel information searches, etc.), justice, police and customs (border control), public works (topography, geodesy and geographical information systems), leisure (maritime and mountain navigation), social services (e.g. assistance to people with disabilities and the elderly), government security and

safety services, and finally, through emergency beacon location services, rescue at sea or in remote parts of the world.

1.5 The market in products and services derived from navigation applications has been forecast to reach EUR 400 billion by 2025.

1.6 Disagreement among the partners with regard to the business model for GALILEO and governance of the industrial consortium is so profound that concession negotiations have now stalled. The delays accumulated so far and the absence of any sign of progress on the concession negotiation is a risk for the delivery of the project itself.

1.7 Faced with these difficulties, the Transport Council of March had asked the European Commission to take stock of progress in negotiations on the concession contract and look into alternative solutions. Faced with this deadlock, the Commission, in its Communication entitled "Galileo at a cross-road", asked the Council and the European Parliament to take note of the failure of the current concession negotiation and to conclude that it should be ended. However, at the same time, it also asked them to reaffirm their commitment to the continuation of the Galileo programme. The Commission put forward an alternative scenario whereby the development and deployment phases would be supported and financed by the public sector and the concession contract would only concern the operational phase. The European Space Agency would be the procurement agent and design authority on behalf of the European Union.

2. The gist of the Green Paper

2.1 The Commission document provides (a) a swift overview of the system in place and its foreseeable development and (b) an assessment of the possible innovatory applications. In so doing, it recalls the five proposed types of services (the open access service, the commercial service, the safety-of-life service, the search and rescue service, and a government service with restricted access: the public regulated service). The Green Paper does not address the applications covered by the latter service - it is up to the Member States to decide whether they wish to use it or not. For this reason, the Commission will approach each Member State directly on this subject and will then compile and summarise the answers.

2.2 The Commission lists the following sectors as affected by, and potentially interested in, the system.

- Information on geographical location (for the general public) and emergency calls
- Road
- Rail
- Maritime, inland waterways and fisheries
- Aviation
- Civil protection, emergency management and humanitarian aid

- Tracking dangerous goods
- Livestock transport
- Agriculture, parcel measurements, geodesy and cadastral survey
- Energy, oil and gas
- Search and rescue
- Logistics
- Environment
- Sport and tourism
- Law enforcement.

2.3 The length of this list of possible applications highlights the scope and broad range of potential applications.

2.4 As usual, the Green Paper concludes with a list of questions to stakeholders. It is not for the EESC to provide specific answers to these questions, but rather to stress those which it considers particularly important, and raise questions that should have been asked but were not.

2.5 The Commission is analysing the feedback on the Green Paper received from interested parties. Feedback is quite scant and sometimes too general to draw conclusions. As a result, the Commission intends to complete the process by undertaking further in-depth consultations with a view to publishing an action plan in October 2007. To date, no major economic sector has shown any real interest in the paid services. This is a good illustration of the difficulties involved in competing against a service that is available to the public free of charge, even if the latter is not guaranteed. This therefore raises the question of the economic and financial equilibrium of the European system, a civilian service that does not benefit from the same level of public backing (in this case from the military) as the American GPS.

3. **Key questions**

3.1 Question 2[1] on the protection of privacy is a matter of particular importance, to which the EESC has already given special attention by calling for the stringent protection of the right to privacy. This raises the question of striking a balance between the right to privacy and the possibilities offered by this technology. It should however be emphasised that the satellite positioning and navigation systems enable users to establish their position, but this position is only known to themselves and is not available to third parties unless the user decides to pass on the information, for instance via a form of mobile telecommunication like GSM. Since they are one-way systems, the operator of a navigation system - be it GPS, GALILEO, or the Russian system GLONASS – does not know who the users are and has no way of finding out who is using the navigation signals, let alone their geographical position. As a result, the issue

1 COM(2006) 769, Section 4.

of protecting the right to privacy has to be studied on the basis of the individual applications offered to users. Many of these services require the user's geographical position to be instantly re-sent to a server, which will then be able to provide the information requested by the latter (e.g. information about road traffic).

3.2 Question 5[2] on international cooperation raises a number of issues. The European Union has signed cooperation agreements with China, Israel, South Korea, Morocco and Ukraine, and other agreements are being considered with India, Brazil, Argentina and Australia. Although these cooperation agreements are clearly desirable to strengthen GALILEO's international scope, mainly in connection with such issues as standardisation, the opening of markets, certification, frequencies and intellectual property rights, we should nevertheless exercise caution because the main motive of some partners is the acquisition of knowledge and European know-how in order to gain time in developing their own technologies, which would then compete against GALILEO. It has now become abundantly clear that this was China's primary intention when it signed a cooperation agreement on GALILEO with the EU in 2003. Furthermore, it is surprising to note that neither Norway nor Switzerland have as yet concluded an agreement with the EU covering their cooperation in the GALILEO programme, despite the fact that they are financing its development/validation phase through their participation in the European Space Agency. As a result, their potential access to GALILEO's public regulated service has yet to be determined.

3.3 In any event, and in general, the cooperation undertaken did not involve the public regulated service. Moreover, negotiations for international cooperation have slowed down because the main priority is the effective implementation of the European satellite navigation project, a phenomenon that is symptomatic of the difficulties encountered.

3.4 Questions 6 and 7[3] on standards and certification raise the problem of certification for the equipment and the system itself and onboard navigation terminals. This is a particularly sensitive issue for aviation and rail transport, two sectors where safety and signalling equipment are subject to rigorous internationally recognised certification procedures. The certification of the GALILEO system itself only makes sense in the context of a specific sector of application, e.g. civil aviation, which lays down applicable rules and procedures for certification. The certification of terminals and equipment on board mobile machinery using the GALILEO services involves more than just the positioning terminal. It also involves all the other equipment that uses the position information and finally delivers the information gathered to the pilot or captain. The usual certification procedures for that specific application therefore apply. Thus, the issue has to be dealt with separately for each specific application.

2 COM(2006) 769, Section 5.3.

3 COM(2006) 769, Section 5.4.

3.5 Another aspect of the matter, liability, is barely touched upon, whereas it is of considerable importance. Its exceptional complexity has to be acknowledged. The relatively straightforward issues of contractual liability must be considered, but so must those relating to extra-contractual liability, which are far more difficult to deal with. Furthermore, it should be remembered that the degree of liability may vary depending on whether it concerns the open access service, the commercial service or the public regulated service. The European Commission is considering a system similar to the one applied in civil aviation, i.e. a fixed amount to be covered by insurance and the rest by the public authorities. In this case, the key question would be to establish the threshold at which the liability of the authorities would be triggered. The threshold currently being considered is high – approximately a billion euros.

3.6 To what extent does the signal provider guarantee performance? This question is of acute importance in the aviation, rail and even maritime sectors.

3.7 If, for instance, a bad quality signal results in a plane crash or shipwreck, possibly causing an oil spill: who would be liable and to what extent? A distinction would have to be drawn here between contractual liability and extra-contractual liability.

3.8 Would the GALILEO operator be wholly liable or would liability be shared with States? And if so, which States: the launching State, the European Union, or the States participating in the GALILEO project? These issues must be addressed and settled in order to ensure that GALILEO's commercial applications can be developed in a satisfactory and reliable legal framework.

3.9 There are precedents, e.g. Ariane. The risk of damage to third parties caused by launches is carried by Arianespace for up to EUR 100 million. Anything in excess of this amount is covered by the French State. There are similar risk sharing arrangements between commercial operators and States in the civil aviation sector, which might perhaps be applied to GALILEO. Nevertheless, the sensitive issue remains the need to agree where to draw the dividing line: what is the appropriate share of liability to be borne by the public authorities and the operator, especially for new services?

3.10 A system based on the latter, if applied to the GALILEO programme, would obviously involve clearly specifying which public authority would be in a position to share liability with the GALILEO operator.

3.11 Question 9[4] on intellectual property is important. Even if public institutions finance initial research, it is important that intellectual property rights to the applications should belong to the companies, especially the SMEs, that develop and implement them.

4 COM(2006) 769, Section 5.6.

3.12 The military uses of GALILEO also have to be considered. Unlike GPS, a military system made available for civilian purposes on a discretionary basis, GALILEO is a civilian system. As is the case with the GPS civilian signal, there is nothing to prevent the armed forces of any country from using GALILEO's open access service for a military purpose, even though the public regulated service, which is specifically regulated by the EU Member States, offers more advantages than other GALILEO services in that it is more powerful in terms of scrambling and independence (different bands and frequencies are used).

3.13 Without entering into a discussion of the various military uses of GALILEO's public regulated service, which lie well outside the scope of this opinion and are not dealt with in the Green Paper, the fact remains that GALILEO's financial equilibrium partly depends on this service. This point will undoubtedly continue to be discussed in the new configuration for the GALILEO programme proposed by the Commission. Moreover, in its Communication, the Commission states that "whilst maintaining the system as a civil system significant revenues could also come from military users".

4. Conclusion

4.1 The Green Paper on satellite navigation applications provides an overview of many of the sectors for which satellite navigation would indeed be relevant. It needs to be completed in a number of very important areas such as intellectual property rights in processes that could open the way to new fields of application, and certification and liability arrangements.

4.2 The matter of government or even military use of GALILEO by EU Member States, which is handled through direct dialogue between the Commission and the Member States, and among the Member States themselves within the GALILEO security board, is very important insofar as it has a significant impact on GALILEO's financial model. It seems clear that this matter needs to be re-examined, particularly since the public sector contribution looks set to increase substantially as a result of the failure of the first public-private partnership scenario.

4.3 It is extremely useful and interesting to consider satellite navigation applications. However, it is also necessary to be sure that the constellation is completed. The Commission's new proposals are the GALILEO programme's last chance. The EESC is well aware of the financial effort they require of Member States. However, at a time when the EU is dealing with its citizens' scepticism, and a certain "disenchantment" revealed by debates on the draft Constitutional Treaty, the impact of abandoning the GALILEO programme would be disastrous in Europe and abroad. Its failure would show the world that the European Union was unable to rally round an ambitious scientific, technical and business project. It is essential to complete the GALILEO programme in order to demonstrate the European Union's ability to bounce back and successfully complete major forward thinking projects.

4.4 The truth is that, for these reasons, the GALILEO project is going through a difficult period. The EESC cannot but note that if this EU flagship project fails, it would seriously undermine people's confidence in European integration. Every effort must be made to ensure that this does not happen.

Brussels, 11 July 2007

The President of the European Economic and Social Committee	The Secretary-General of the European Economic and Social Committee
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