



Background

Getting Galileo into orbit by 2013

Europe's satellite radio navigation system Galileo should be operational by 2013. A first-reading compromise on its deployment phase was agreed by Parliament and Council in informal negotiations and approved by the Industry Committee on 8 April. At its April plenary session in Strasbourg, the European Parliament will vote on a regulation setting out rules for establishing the 30 Galileo satellites and the network of up-link stations on the ground.

Galileo decisions prior to this compromise were taken in consultation with Parliament, rather than co-decision. The Lisbon Treaty's entry into force will upgrade Parliament's space policy role to co-decision, as European space policy becomes a Community competence.

After a five-year delay, the new regulation will finally allow Galileo's third (deployment) phase to start. Galileo is a joint initiative of the European Union and the European Space Agency (ESA), an intergovernmental organisation of 17 European countries. ESA designed the system's structure from 1999 to 2001.

The launch of the Galileo satellite navigation programme was formally approved by the Council in April 2001, further to a decision to at the Nice European Council in December 2000.

The subsequent development and validation phase, which began in 2002 and runs until 2010, will see the launch of the first set of satellites.

At the start of April an Industry Committee delegation, led by rapporteur Etelka Barsi-Pataky (EPP-ED, HU), reached a compromise with the Council on a proposed regulation setting out the security requirements and public procurement rules for the deployment of Galileo and the European Geostationary Navigation Overlay Service (EGNOS). During the deployment phase, the system will be managed by the European Commission, the European Global Navigation Satellite System Authority (GSA) and the European Space Agency (ESA).

The exploitation phase will follow. The compromise postpones the decision on a public-private partnership for the operation of Galileo after 2013 to a later stage.

Deployment phase to be financed entirely from EU funds

Originally, the Community planned to establish a public-private partnership to take over the deployment and commercial operation of the satellite navigation system. However, after concession negotiations with the private sector failed, Parliament agreed with the Council in November 2007 to finance the deployment entirely from Community funds.

This background note describes Galileo's definition, development and validation, deployment and exploitation phases.

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Development and validation of the system until 2010

The development phase started in 2002, when a Council regulation adopted under the consultation procedure established the Galileo Joint Undertaking (GJU). Responsible for managing the development phase of the Galileo Programme, the GJU's task was to set up a public-private partnership for the deployment of the Galileo infrastructure via competitive tendering. In July 2005, the GJU selected an eight-member private consortium formed by Aena, Alcatel, EADS, Finmeccanica, Hispasat, Inmarsat, Thales, and TeleOp which was to be awarded the Galileo Concession.

However, the private consortium and GJU failed to agree on a concession contract. As the project was put on hold and the development phase could not be completed as initially foreseen by the end of 2005, the Community decided to wind up the GJU by 31 December 2006 and to transfer responsibility for completing the development phase to the European Global Navigation Satellite System Authority (GSA), which was set up in 2004.

In-orbit validation

In-Orbit-Validation requires the launch of a first set of experimental Galileo satellites. The first of these satellites, GIOVE-A, was successfully launched in December 2005; the launch of GIOVE-B from the Baikonur cosmodrome in Kazakhstan is planned for 27 April 2008. Thereafter, four out of the 30 Galileo satellites will be launched to validate the functioning of space and related ground infrastructure.

Deployment of all space and ground-based infrastructure by 2013

In July 2004, the European Global Navigation Satellite System Authority (GSA), became the licensing authority for the eight private undertakings within the then-planned public-private partnership. Yet in May 2007 the Commission concluded that the concession negotiations had failed as a result of unresolved disputes over shares of industrial work, a misjudgement that market risks could be transferred to the private sector, and unresolved questions about the transfer of design risks.

EP and Council agree in November 2007 to invest €3.4 billion in Galileo infrastructure deployment

In June 2007 the European Parliament adopted a resolution calling for the Galileo programme to be funded in full from the EU's budget. As the Budgetary Authority, Parliament and Council decided in November 2007 to finance Galileo's deployment phase entirely from Community funds. By investing €3.4 billion, the EU will become "the owner of all tangible and intangible assets created or developed under the programmes". Member States, third countries or international organisations may provide additional funding. Several countries, including Canada, China, India, and Ukraine, have already signed co-operation agreements with the European Union on Galileo.

Competitive tendering for six Galileo infrastructure contracts

The compromise between EP and Council on the deployment of the Galileo infrastructure also stipulates public procurement rules. In order to ensure fair competition, infrastructure contracts will be split into six main packages (system engineering support, ground mission infrastructure completion, ground control infrastructure completion, satellites, launchers and operations) and additional work packages. The competitive tendering of all packages will take place in a single procedure and any one company or group may bid for no more than two of the six main work packages.

The amended regulation also takes up the suggestion, which the EP's Industry Committee made on 29 January 2008, to apply dual sourcing – i.e. using two different suppliers for one product. This procedure should prevent any possible abuse of dominance or long-term dependency on single suppliers. Another amendment taken up says that at least 40% of the total value of the activities must be subcontracted to companies which do not belong to the prime contractor of any of the main work packages.

Galileo Inter-institutional Panel

The compromise text on the deployment phase also foresees the establishment of a new inter-institutional framework. Given the uniqueness of the programmes and the Community's ownership of the satellite radio navigation systems, Parliament, Council and Commission agreed to set up the Galileo Inter-institutional Panel (GIP) which will be composed of three representatives each of the Council and the Parliament, and one representative of the Commission. The GIP will follow closely the implementation of the GNSS programmes, the international agreements with third countries, and the preparation of the satellite navigation markets.

Launch of all 30 Galileo satellites by 2013

Following a successful launch of four Galileo satellites during the In-Orbit-Validation phase, the remaining 26 satellites will be placed in medium orbit to make the Galileo system fully operational from 2013.

Galileo services and applications from 2013

The decision as to whether "public private partnerships or any other form of contracts with the private sector are appropriate for the operation and replenishment of the system after 2013" should be taken at a later stage, says the compromise text on the deployment phase. The text also asks the Commission to table a proposal in 2010 on the public funds and commitments needed for the exploitation phase over the next financial programming period, starting in 2014. That proposal should include a revenue-sharing mechanism and objectives for a pricing policy to guarantee that costumers receive high-quality services at fair prices, says the compromise text.

First global satellite radio navigation system designed for civilian purposes

In contrast to the US American GPS and the Russian GLONASS systems, initially established during the Cold War for military purposes, Galileo will be the first global satellite radio navigation system specifically designed for civilian applications. However, it should also be possible to use the Galileo system for military applications for peacekeeping operations, said the EP's consultation report, drafted by Norbert Glante (PES, DE), on the establishment of the Galileo Joint Undertaking for the development phase which was adopted in February 2002. The Parliament's Subcommittee on Security and Defence is currently drafting a report by Karl von Wogau (EPP-ED, DE) on how space assets can contribute to the European Security and Defence Policy.

Galileo will offer five services. The free open service will provide positioning and synchronisation information for general public applications. The safety of life service is aimed at "users for whom safety is essential", such as the aviation or shipping sectors. A commercial service will improve the development of applications for professional use. There will also be a public regulated service restricted to government-authorised users for sensitive applications. This service will use strong, encrypted signals. Lastly, Galileo will also participate in the search and rescue support service offered by the existing international search and rescue system COSPAS-SARSAT by detecting emergency signals from beacons.

Interoperability

The regulation on the further implementation of Galileo (compromise text) asks the Commission to "pursue the benefits of compatibility and interoperability of EGNOS and Galileo with other navigation systems" and conventional navigation means. The EU signed an agreement with the United States on the interoperability GPS and Galileo in June 2004.

Data protection

The new text also took on board the Industry Committee's call for the Commission to guarantee the protection of personal data and privacy by integrating it into Galileo's technical set-up.

Controlled access to security technologies

The regulation on the deployment phase asks the Commission to lay down the main technical requirements for controlling access to the technologies that provide security to Galileo and EGNOS. Member States should adopt national security regulations that guarantee at least the same level of protection for EU classified information on the two programmes as is required for the industrial security of EURATOM, says the new text. If the operation of the systems poses a risk to the security of the EU or the Member States, joint action will be taken under the Common Foreign and Security Policy.

European GNSS Supervisory Authority will monitor security procedures

Following MEPs' criticism that the role of the European GNSS Supervisory Authority (GSA) was not clearly set out in the Commission proposal for the deployment phase, the agency's tasks were revised. Originally

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designed to be the licensing authority for private undertakings within the public-private partnership first planned, the GSA will now instead monitor the implementation of security procedures and perform system security audits. The authority's tasks will also include the preparation of the commercialisation of the systems, including market analysis.