

## **USTR Report to Congress on U.S. Equipment Industry Access to the Galileo Program and Markets**

### **Introduction**

In the Joint Explanatory Statement to accompany the Omnibus Appropriations Act of 2009 (P.L. 111-008), Congress requested that the Office of the U.S. Trade Representative (USTR) report on the status of U.S. equipment industry access to the European Community (EC) Galileo program and European markets for related goods and services, in order to assess EC compliance with the Agreement on the Promotion, Provision and Use of Galileo and GPS Satellite-Based Navigation Systems and Related Applications (the “GPS-Galileo Agreement”).<sup>1</sup>

To collect information on this subject from U.S. industry and other interested parties, USTR published a request for public comments in the *Federal Register* on April 15, 2009. USTR received submissions from the United States GPS Industry Council (“Council”) and the European Commission. The Council, a trade association representing several major U.S. manufacturers of satellite navigation user equipment and services, also filed supplementary comments during the reply comment phase of this process. These public comments are posted on the [www.regulations.gov](http://www.regulations.gov) website, under docket number USTR-2009-0010.

### **Background**

#### *The Global Positioning System (GPS)*

GPS is a constellation of at least 24 U.S. Government satellites providing positioning, navigation, and timing (PNT) services on a continuous, worldwide basis, free of direct user charges. Originally developed to support military forces, GPS is now widely used for civil and commercial purposes and is considered a critical component of the global economic infrastructure, improving efficiency and safety in a variety of industries ranging from transportation and construction to telecommunications and finance.

#### *Galileo*

In 1999, the EC announced its plan to deploy an independent, civil-only alternative to GPS known as Galileo. According to the European GNSS Supervisory Authority (EGSA)<sup>2</sup>, Galileo will offer four different PNT services. Like GPS, Galileo will broadcast an Open Service for the general public, free of direct user fees. Galileo will also provide three additional PNT services: an authenticated service for safety-of-life applications; an encrypted service for government

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<sup>1</sup> Joint Explanatory Statement to the Omnibus Appropriations Act, 2009, P.L. 111-008, 155 Cong. Rec. H1653, H1840 (daily ed., Feb. 23, 2009). The Joint Explanatory Statement provides a July 1 deadline for the report; this deadline was subsequently extended to July 15.

<sup>2</sup> According to the European GNSS Supervisory Authority website the EGSA is an official European Union regulatory authority set up in 2004 to manage all public interests related to European satellite positioning and navigation programs which include Galileo.

users known as the Public Regulated Service (PRS); and an encrypted service for professional users known as the Commercial Service.

According to the European Space Agency (ESA), Galileo will feature 27 main satellites plus three spares. The EC has stated that the system is on track to reach full operations in 2013. The program is currently in the development phase, with two test satellites currently in space (GIOVE-A and GIOVE-B) and four In-Orbit Validation (IOV) satellites planned for launch in late 2010 or early 2011.

Since 2007 the Galileo program has operated as a public program funded jointly by the EC and ESA. Prior to 2007, the EC envisioned operating the system as a public-private partnership, with a for-profit concessionaire responsible for developing and implementing the system.<sup>3</sup> The EC announced it was abandoning this concept in 2007, reportedly due to lack of private sector interest and capital, but reserved the right to introduce a concessionaire at a later date, once the Galileo satellites are fully deployed. Thus, for example, the EC continues to retain the intellectual property rights (IPR) associated with the Galileo Open Service, in order to preserve the option to charge licensing fees for the IPR in the future.

### *The GPS-Galileo Agreement*

Upon the announcement of Galileo in 1999, the United States began negotiations with the EC and its member States on an agreement to ensure Galileo would coexist with GPS in a manner that is compatible with U.S. and European individual and mutual national security interests, that enhances civil performance through interoperability at the user level, and that ensures non-discrimination and open markets in terms of trade in civil satellite navigation-related goods and services. In 2004, the United States and the EC and its member States concluded the GPS-Galileo Agreement, which provides a framework for cooperation with respect to the promotion, provision, and use of civil GPS and Galileo navigation and timing signals and services, value-added services, augmentations, and global navigation and timing goods.<sup>4</sup>

The GPS-Galileo Agreement includes provisions that call for a “non-discriminatory approach” with respect to trade in civil satellite navigation and timing-related goods and services, including unrestricted access to GPS and Galileo open service signals and equal access to the information necessary to develop user equipment for commercial purposes. The GPS-Galileo Agreement establishes several bilateral working groups, including a working group on trade and civil

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<sup>3</sup> When the Galileo project was originally conceived as a public-private partnership ESA was responsible for conducting the procurements associated with the initial research and development. In accordance with the “fair return” concept contained in Article VII of the Convention of the European Space Agency, contracts are awarded based upon the geographical distribution of ESA members funding the project. As a result only companies based in ESA member or associate states that provided funding to ESA were awarded contracts for the initial Galileo research and development. However with the transition to a fully publicly funded project, procurement policy has fallen under the European Commission and the concept of “fair return” is no longer applicable. The European Commission noted in its submission that U.S. companies have participated in the contracts for these later procurements.

<sup>4</sup> White House Fact Sheet, “U.S.-EU Summit: Agreement on GPS-Galileo Cooperation”, June 26, 2004, <http://igscb.jpl.nasa.gov/mail/igsmail/2004/msg00183.html>.

applications (“Working Group B”) to consider non-discrimination and other trade related issues concerning civil satellite-based navigation and timing signals or services, augmentations, value-added services, and global navigation and timing goods. The Department of Commerce serves as the U.S. co-chair of Working Group B; USTR and other agencies also participate in Working Group B.

The GPS-Galileo Agreement, available publicly at <http://pnt.gov/public/docs/2004/gpsgalileoagreement.pdf>, has not yet entered into force, pending action by several EC member States, but is being provisionally applied while the EC member States complete their ratification process. Once these States complete the process, the EC and the United States will exchange diplomatic notes to bring this executive agreement into force. Working Group B has formally convened twice (in January 2007 and July 2008) to discuss various topics of mutual interest, with ongoing informal discussions between meetings. U.S. and foreign commercial entities, including the Council, were invited to participate in the July 2008 meeting.

### **Status of U.S. Equipment Industry Access to Galileo Markets**

As Galileo is not yet operational, the satellite navigation user equipment industry is currently focused on obtaining access to the system information (such as Galileo’s signal designs and commercial usage policies) it needs in order to develop Galileo-compatible products. In its written submission to USTR, the Council cites three concerns regarding U.S. equipment industry access to the Galileo program and markets: (1) lack of information on how to secure licenses to sell products and/or protect intellectual property rights derived from Galileo Open Service documentation; (2) unequal access to Galileo Open Service signal test equipment; and (3) lack of information regarding the three other Galileo PNT services. These issues are discussed below.

#### *Process for Galileo Open Service Licensing and IPR Protection*

In May 2006, the EGSA issued a draft of the Galileo Signal-In-Space Interface Control Document (ICD) that contains information essential for equipment manufacturers seeking to build receivers that would utilize Galileo’s Open Service signals. However, the terms and conditions for obtaining the Galileo Open Service ICD specify that manufacturers need to secure a license from the EC prior to using it for commercial purposes. This means that a company may use the ICD to develop products and services but cannot sell them until it obtains a license. Furthermore, companies are prohibited from registering or protecting IPR they derive from the ICD without a license from the EC.

The Galileo authorities have not yet established licensing procedures for commercializing technology developed using the ICD or for registering or protecting IPR derived from it. The terms and conditions state that, once developed, the EC’s licensing criteria will be nondiscriminatory. Industry has expressed concern that the EC’s delay in specifying a procedure has adversely affected companies seeking to develop Galileo-compatible equipment, including some U.S. companies.

Representatives of the United States raised the commercial licensing issue with their European counterparts at the two formal meetings of Working Group B, but to date have not received clarification regarding whether or how commercial licensing will be conducted with regard to information in Galileo system ICDs. In its submission, the EC noted that following the effective conclusion of a “profound restructuring of the Galileo” program, the Commission was undertaking a review of the “policies for intellectual property and licensing.” This restructuring resulted from the 2007 switch from a public-private partnership to a fully publicly funded program.

Further to its written submission, the EC has indicated that it recently submitted a plan to its member States that includes a proposal it believes would resolve the IPR licensing issue for the Open Service, if accepted by the member States. While USTR welcomes the information received from the EC noting its commitment to ensure nondiscriminatory access to information and licensing, and the progress which it indicates is being made to ensure that the IPR issue is resolved with respect to the Open Service, it urges the EC to take the necessary steps to ensure that the licensing framework is implemented as soon as possible, to allow industry to be prepared to take advantage of the Galileo Open Service.

#### *Access to Signal Test Equipment*

The four Galileo IOV satellites are scheduled to be launched in late 2010 or early 2011. The ESA website notes that these four satellites, the minimum required for satellite navigation, are designed to validate the Galileo concept. According to the Council, as soon as these satellites are operational, the market for Galileo user equipment is expected to become active. Since, according to the Council, the research and engineering necessary to develop new, market-ready user equipment takes between 18 and 24 months, companies interested in selling Galileo-capable receivers by the time the first satellites are launched need to have begun the process of designing their products.

As noted above, the Galileo Open Service ICD bars the sale of any commercial product derived from the document without a license from the EC. This includes not only user equipment but also Galileo signal testing equipment that receiver developers need to finalize their products for the market. Such test equipment, known as signal generators or simulators, mimic the signals (including frequency bands and modulation schemes) utilized by the Galileo satellites. According to the Council, the EC’s delay in issuing licenses for commercial use of the ICD has kept European manufacturers of Galileo signal simulators from exporting the test equipment to the United States. The Council further states that this has resulted in U.S. companies being unable to test their Galileo user products and services in a cost-effective manner.

The United States first raised the Galileo signal simulator issue during the July 2008 meeting of Working Group B. Upon a request by the EC delegation for more information, the U.S. co-chair sent the EC a letter in August 2008 proposing that, to accelerate worldwide development and acceptance of Galileo user equipment, the EC authorize immediate commercial sales of Galileo Open Service signal simulators. While initial discussions of the proposal were positive, the EC has not provided a formal response to the U.S. proposal. However, in its supplementary comments in this process, the Council reported that some EU manufacturers are now exporting

signal simulators to companies in the United States. The Council indicates that it has not seen any EC document formally authorizing such exports, but indicates that it is possible that such documentation exists or is imminent.

USTR is encouraged by the Council's report that the simulators are being made available, and urges the EC to ensure that the simulator manufacturers are given the formal approval they need to ship the simulators.

#### *Access to information regarding other Galileo services*

U.S. industry also faces challenges in obtaining information necessary to develop equipment for the other services provided by Galileo, namely, the Safety-of-Life Service, the Public Regulated Service (PRS), and the Commercial Service. Since these signals are expected to be functional in the IOV satellites planned for launch in late 2010 or early 2011, it is important that the ICDs for these signals be made available to all parties in the coming months.

The EC in its submission acknowledges that the development of the relevant technical specifications for these other services has lagged behind that of the Open Service, but reiterates its intention to make such information accessible to manufacturers on a non-discriminatory basis once it is available. During the July 2008 meeting of Working Group B, the U.S. Government inquired about the timeline for the release of the Commercial Service ICD; the EC indicated that the document would likely be released in 2009. It now appears that the document may not be released until after 2009.

As is the case with the Galileo Open Service ICD, it remains unclear how the EC authorities intend to license commercial products and IPR related to these other signals. Companies seeking to incorporate this technology into their equipment are waiting for the EC to establish an IPR registration regime with respect to the Commercial Service signal.

USTR, working with other U.S. agencies, will engage with the EC in Working Group B and other fora to remain apprised of the progress being made on developing the ICD and licensing scheme for the other services, and to ensure that the information is made available consistent with the Agreement.

#### **Next Steps**

USTR, in cooperation with other U.S. agencies, will continue to monitor the manner in which the EC releases information for the Open Service, as well as for the additional services, to ensure that U.S. equipment manufacturers are not placed at a competitive disadvantage vis-à-vis European and other equipment manufacturers. With the scheduled launch of the first operational Galileo satellites potentially less than 18 months away, it is critical that the EC ensures that all parties have equal access to information necessary to design and build Galileo compatible equipment.

USTR, in cooperation with other U.S. agencies, will also encourage more frequent meetings of Working Group B, recognizing that it is the primary venue for bilateral discussions on trade and civil applications related to GPS and Galileo.