Space: 26 Galileo satellites now in orbit for improved EU satellite navigation signal

Galileo has been providing positioning and timing services to around 400 million users since December 2016. The launch today brings the constellation close to completion in 2020, which is when Galileo will reach full operational capability. Once complete and with a record precision of 20cm, Galileo will be the most precise satellite navigation system in the world.

Space may be far away but its technology, data and services have become indispensable in our daily lives, be it in rescue searches, connected cars, smart watches, farming or plane navigation. The European space industry is strong and competitive, creating jobs and business opportunities for entrepreneurs. For the next long-term EU budget 2021-2027, the Commission is proposing to bring all existing and new space activities under the umbrella of one single €16 billion 'EU Space Programme'.

Vice-President of the Commission Maroš **Šefčovič** said: "*Another milestone towards the full operational capability of Galileo in 2020! Space is becoming a new economic frontier, as it is vitally linked to a growing number of sectors and driving their profound modernisation. In fact, 10% of the EU's GDP is dependent on space-related services. We therefore need to strive for Europe's global leadership and strategic autonomy.*"

Elżbieta **Bieńkowska**, Commissioner for the Internal Market, Industry, Entrepreneurship and SMEs, who led the European Commission delegation to Kourou (French Guiana), said: *"We can be very proud of our successful space activities. Europe has become a true space power. From the start of the mandate I had clear goals: develop the infrastructure on time and on budget, deliver first services and ensure rapid market uptake. Today we can say – we made it. But work and investment will go on under the new EU Space Programme."*

Galileo currently provides three types of satellite navigation based services:

- **Galileo Open Service:** a free service for positioning, navigation and timing. The timing service is increasingly robust, accurate and fast (in order of nanoseconds) compared to other location systems. It enables the eCall system, which has been mandatory in all new cars in the EU since 31 March 2018, to communicate the vehicle's location to emergency services.
- **Galileo's Search and Rescue (SAR) Service:** localisation of distress signals from an enabled beacon. With the start of Galileo initial services in December 2016, the time it takes to detect a person lost at sea or in the mountains after a distress beacon is activated was reduced from up to 4 hours to about 10 minutes . The accuracy of localisation

has improved too, from 10 km without Galileo to less than 2 km with Galileo. As of next year, the service will also send back a signal informing the person in danger that the distress signal has been picked up and localised.
- **Galileo Public Regulated Service (PRS)**: an encrypted service designed for public authorities for security sensitive use, for instance military operations. PRS aims at ensuring service continuity, even in the most adverse environment. It offers a particularly robust and fully encrypted service for government users during national emergencies or crisis situations, such as terrorist attacks.

Anyone with a Galileo enabled device is able to use its signals for positioning, navigation and timing. Galileo services are based on highly accurate signals, but during the current initial phase they are not available all the time and therefore are used in combination with other satellite navigation systems such as GPS. Every addition to the constellation gradually improves Galileo availability and performance worldwide. Once the constellation reaches 30 satellites in 2020, Galileo will be fully operational and independent, meaning that a position could be established autonomously everywhere and anytime using Galileo satellites only.

Background

All Galileo satellites are named after the children whose drawings were selected as winning pictures in the Galileo Drawing Competition in 2011. The 4 satellites launched on 25 July are named after Tara from Slovenia, Samuel from Slovakia, Anna from Finland and Ellen from Sweden.

Galileo is a civilian system under civilian control, which provides accurate positioning and timing information. Galileo aims to ensure Europe's independence from other satellite navigation systems and its strategic autonomy in satellite navigation. Europe's autonomy in this sector will boost the European job market, help the EU step up its role as a security and defence provider, and support emerging technologies such as Artificial Intelligence, drones, automated mobility and the Internet of the Things.

Other EU space activities include Copernicus (free and open Earth observation data of land, atmosphere, sea, climate change and for emergency management and security), EGNOS (regional satellite navigation system) and Space Surveillance and Tracking (SST).

For the next long-term EU budget 2021-2027, the Commission has proposed a €16bn EU Space Prpgramme covering all existing and new space activities including maintaining the EU's autonomous access to space, supporting space start-ups, and developing new security components such as Space and Situational Awareness (SSA) and Governmental Satellite Communication (GOVSATCOM).

For More Information

Press release (June 2018): EU budget: A €16 billion Space Programme to boost EU space leadership beyond 2020

Questions and Answers (June 2018): The new EU Space Programme

Factsheet: The new EU Space Programme at a glance (June 2018)

Factsheet: EU Space Policy

Space strategy for Europe (October 2016)

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