

STELLAR consortium, led by Telespazio France, successfully concluded the Galileo EWSS demonstration campaign

Telespazio France, a subsidiary of Telespazio – a joint venture between Leonardo (67%) and Thales (33%) – has successfully concluded, as leader of an international consortium and in collaboration with national civil protection authorities from several EU member states, the STELLAR project demonstration campaign, which aims to consolidate the Galileo Emergency Warning Satellite Service (EWSS).

The test campaign ended on January 23rd, 2024, in Arlon, at the Belgium and Luxembourg border, where the consortium, in collaboration with the Belgian National Crisis Center and the Department of Civil Security of the Luxembourg Ministry of Home Affairs, have reproduced the scenario of the floods that affect Belgium, Luxembourg, Germany and France in the summer of 2021, demonstrating how the EWSS can effectively respond to major emergencies on a transnational scale.

The primary goal of the STELLAR project, developed by consortium led by Telespazio France and composed by CNES, EENA 112, F24 France & Belgium, and Thales Alenia Space, is to showcase to Civil Protection Authorities the added value of the use of the EWSS together with existing public warning systems, including mobile networks, TV, radio, sirens, internet, and social networks. Additionally, the campaign aimed to gather feedback from authorities to fine-tune the service and promote its widespread adoption.

Since 2023, the STELLAR project has conducted several demonstrations of the Galileo EWSS, all in the presence of representatives of the European Commission and the European Union Space Programme Agency (EUSPA).

The inaugural demonstration, held in Toulouse, France, in early June 2023, in collaboration with various entities including the French Ministry of Interior, Prefecture of Haute-Garonne, Toulouse City Council, Emergency services of Haute-Garonne (SAMU 31), and SDIS 31, sought to replicate the tragic explosion at the AZF facilities in September 2001, claiming the lives of 31 people.

The second demonstration took place in Leverkusen, Germany, at the end of June 2023, in collaboration with the Federal Office of Civil Protection and Disaster Assistance (BBK), the Federal State of North Rhine-Westphalia (NRW), and Leverkusen Fire Station. This demonstration centered around a factory incident, recreating the 2021 Leverkusen Chemical Park explosion.

These demonstration scenarios were chosen for their relevance to the local context and the critical CBRNe (chemical, biological, radiological, nuclear, and high-yield explosive) hazards that civil protection authorities deemed essential for an alert to be delivered via a satellite link.

The third demonstration occurred in Paphos, Cyprus, in early October, in collaboration with the Cyprus Civil Defence Force, focusing on staging two simultaneous disasters: a forest wildfire and a tsunami.

The fourth and final demonstration has been held at the Belgium and Luxembourg border on January 23rd, showing how the EWSS can be instrumental in responding to large-scale emergencies that transcend national borders.

Promoted by the Directorate General for Defence Industry and Space (DEFIS) of the European Commission, the Emergency Warning Satellite Service (EWSS) will support and complement existing public warning systems by utilizing Galileo's global coverage.

The EWSS utilizes Galileo's messaging function to transmit alerts to smartphones with instructions based on the user's location. Operating independently of mobile networks, it can reach any smartphone with a Galileo chip in a specific target area with satellite coverage. This feature enables the service to reach people in rural regions with poor mobile signal and can even be available during a disaster that affects ground infrastructure. The Galileo Emergency Warning Satellite Service is planned to enter into operation in 2025.

The STELLAR project aligns with the Early Warnings for All (EW4All) initiative, launched in March 2022 by the UN Secretary-General, calling for global protection through early warning systems by 2027. The Galileo Emergency Warning Satellite Service (EWSS) addresses the third pillar of this initiative: efficient communication and dissemination to warn people in remote locations or when ground infrastructure is destroyed.

Axelle Pomies, Head of Business Development at Telespazio France, stated: "Telespazio France has been involved in the development of EWSS since the early stages, in 2016. We have developed a unique expertise, combining Space and Public Warning solutions, recognized by Civil Protection stakeholders at the European level. Thanks to the STELLAR consortium, we demonstrated the effectiveness of the EWSS, successfully transmitting alert messages to citizens' mobile phones mere seconds after activation! We are very proud to be part of this adventure that will help to accomplish the noble mission of saving lives."

About the STELLAR project:

The STELLAR project, initiated in 2022, is funded by Horizon Europe, the European Union's Programme for Research and Innovation, and is managed by the European Commission, DG DEFIS. STELLAR is a continuation of the GRALLE project (2016-2018) that resulted in the first definition of the Galileo Emergency Warning Satellite Service (EWSS). The objective of STELLAR is to consolidate the EWSS concept and prepare for the introduction of the service into the Galileo operational infrastructure by developing a full representative prototype architecture and organizing demonstrations throughout Europe in collaboration with civil protection authorities to exhibit the performance of this future alert service. STELLAR brings together a unique consortium of EU companies with expertise in satellite navigation and emergency management. It is led by Telespazio France and is composed of CNES, EENA 112, F24 France & Belgium, and Thales Alenia Space.

About Galileo Emergency Warning Satellite Service:

The Emergency Warning Satellite Service (EWSS) is a new service that would utilize Galileo, the global satellite navigation system of the European Union. It exploits the advantage of the Galileo infrastructure to offer a satellite channel to national civil protection authorities to send alerts to the population in the case of a looming disaster. In practical terms, this means that in the event of a nature-derived or man-made disaster, civil protection authorities can utilize Galileo to broadcast an alert message, which will then be received on the mobile phones of individuals within the affected area

through a satellite link. This service is free of charge and provides an additional channel to civil protection authorities, which can be integrated within existing public warning systems. Its use, in combination with other technologies, can ensure the widest possible reach of a warning message. The Galileo Emergency Warning Satellite Service will allow civil protection authorities to deliver clear and specific instructions to individuals in the event of a disaster, enabling them to take action quickly, even if telecommunication networks are disrupted or down. Beyond smartphones, the EWSS has been designed to be received directly on any device capable of processing Galileo signals, such as car navigation, fixed receivers on the roofs of buildings, public billboards, etc.

About Telespazio France:

Based in Toulouse, Bordeaux, Paris, and Kourou, Telespazio France is a subsidiary of the Telespazio group, a joint venture comprising Leonardo (67%) and Thales (33%). It is a key player in operations related to space infrastructure and value-added satellite space services. With over 30 years of experience and nearly 500 employees, this French subsidiary of the international group covers all essential areas of space, including telecommunications, Earth observation, and navigation. With more than 150 people at the Guiana Space Center, Telespazio France is also the primary industrial partner of the Kourou base and ensures daily maintenance and operation of ground infrastructure facilities.

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