GENIUS: Next Generation AI Systems and Combat Clouds for the Neutralization of Explosive Threats

The GENIUS project is launched to revolutionize the detection and neutralization of threats in modern warfare

Press Release

March 4' 2025.- An innovative initiative to redefine security and operational efficiency in conflict zones has been officially launched under the coordination of GMV Aerospace and Defence. The **GENIUS** project (**Next Generation AI Systems and Combat Clouds for the Neutralization of Explosive Threats**) is funded by the European Commission through the European Defence Fund. It brings together 18 leading European entities, including the **National Institute of Aerospace Technology** (**INTA**) and the Barcelona Supercomputing Center-National Supercomputing Center (BSC-CNS), in a joint effort to address the urgent challenges posed by improvised explosive devices, unexploded ordnance (UXO), and landmines.

Traditional methods for detecting and neutralizing these threats are often insufficient, posing significant risks to human safety and operational success. With a comprehensive and high-tech approach that integrates advanced sensors, unmanned platforms, and artificial intelligence, **GENIUS** aims to offer unparalleled precision and reliability in threat management, reducing risks to personnel and increasing mission effectiveness.

Over the next **36 months**, the **GENIUS** consortium will focus on developing solutions that:

- Increase the likelihood of threat detection in complex and high-risk environments;
- Provide reliable threat management systems adaptable to the realities of current conflicts;
- Reduce false alarms to improve confidence and operational efficiency.

Following the official launch of the project in December 2024, the consortium held its first meeting in January 2025 at GMV's facilities in Madrid. During the meeting, members discussed the project's roadmap to overcome technical challenges, as well as its ethical and safety compliance framework, marking the beginning of this ambitious and innovative initiative.

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EUROPEAN CONSORTIUM

With 18 participating entities, the GENIUS project brings together a diverse consortium, including a medium-sized project coordinator, 3 large companies, 6 SMEs, 5 RTOs, and 3 academic institutions from 7 EU Member States, fostering cross-sector collaboration.

- GMV AEROSPACE AND DEFENCE SA (Coordinator), Spain;
- AALBORG UNIVERSITET, Denmark;
- AIRBUS DEFENCE AND SPACE GMBH, Germany;
- APPLIED INTELLIGENCE ANALYTICS LIMITED, Ireland;
- AUREA AVIONICS, Spain;
- BARCELONA SUPERCOMPUTING CENTER - NATIONAL SUPERCOMPUTING CENTER, Spain;
- C&V CONSULTING, Belgium;
- EVIDEN GERMANY GMBH, Germany;
- FRAUNHOFER INSTITUTE FOR APPLIED SOLID STATE PHYSICS IAF, Germany;
- HCR - CTRO, Croatia;
- NATIONAL INSTITUTE OF AEROSPACE TECHNOLOGY "ESTEBAN TERRADAS", Spain;
- MBDA DEUTSCHLAND GMBH, Germany;
- NUMALIS, France;
- ROYAL MILITARY ACADEMY, Belgium;
- SPACE APPLICATIONS SERVICES, Belgium;
- UNIVERSITY OF THE BUNDESWEHR MUNICH, Germany;

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- ULM UNIVERSITY, Germany;
- XENOMATIX, Belgium.

PROJECT SELECTED BY THE EUROPEAN DEFENCE FUND

The **GENIUS** project was selected by the European Commission for funding through the **European Defence Fund** (**EDF**) in 2024. The **EDF** is the Commission's instrument to support research and development actions in the Defence sector. Its main objectives are to foster cooperation between companies, including SMEs, and Research and Technology Organizations (**RTOs**) across the Union, promote the development of defence capabilities through investment, and help EU companies develop advanced and interoperable defence technologies and equipment.

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