



INTEROPERABILITY STANDARDS FOR UNMANNED ARMED FORCES SYSTEMS

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INTERACT PADR Project



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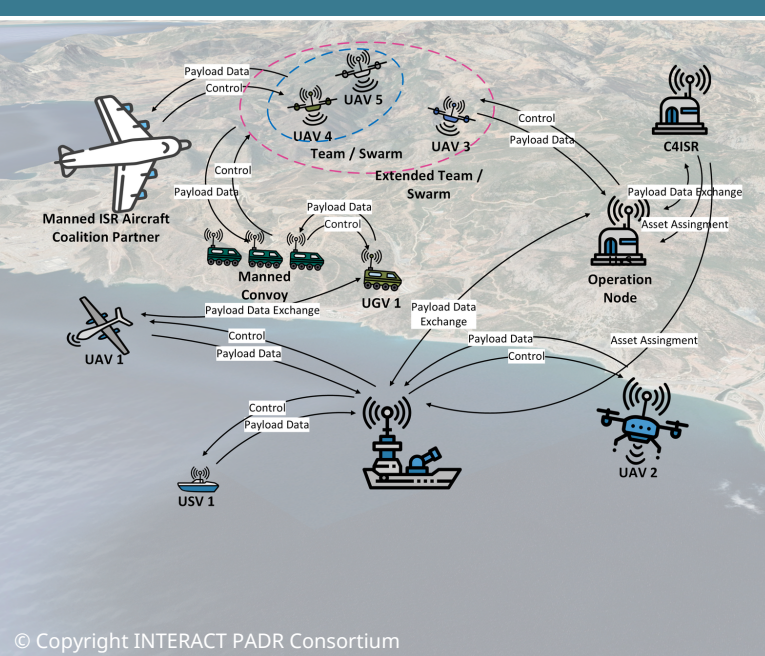
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INTERACT project enhances the capabilities of **European armed forces** to safely and effectively operate unmanned systems together with manned systems in joint or combined operations. The project will deliver the **effective means** to ensure the **interoperability** and **standardisation** of different **unmanned systems, equipment, components** and **procedures** in order to maximise benefit and optimise adoption and integration of **unmanned systems** in the operation of **armed force**.

THE CHALLENGE

Unmanned systems are already broadly used by the armed forces to conduct a wide variety of tasks ranging from data collection, providing services (*like transport, navigation and communication*), and providing effects (*kinematic and non-kinematic*). Currently, unmanned airborne systems are dominating, but unmanned ground vehicles and water-surface systems are also increasingly complementing traditional branch of services and expanding their range of applications. The complexity of the military tasks and missions are expected to extend the use of unmanned systems in the defence domain, often operating together with manned systems and human actors.

The increasingly demand for competitive solutions has led to innovative unmanned military systems that have been developed and tested throughout Europe by various large manufacturers and industries. However, each manufacturer implements different ways of navigation and control, different interfaces for data acquisition and processing, and different possibilities of operating unmanned systems in a complex environment together with manned systems. Consequently, interoperability and compatibility among the systems is reduced, the vendor lock-in is increased and the system life cycle management is hampered.



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THE OFFERED SOLUTION

The development of an interoperable open architecture for mobile, unmanned systems (land, air, and water) by the INTERACT project provides a strategic value for both – operational end-users and industry.

The ability to make the unmanned systems interoperable i.e. exchange data and information from various systems on one hand and ensuring interchangeability across system payloads in a flexible manner on the other hand, will enable the armed forces to react comprehensively to rapidly changing requirements.

In brief, the INTERACT solution will:

- Enable a smoothly adoptable composition of systems and teams (*both manned and unmanned*);
- Facilitate that required resources can be exchanged rapidly and reallocated;
- Reduce or avoid system downtimes by optimally distributing and exploiting systems or system parts.

All the above can apply within armed forces units, between different armed forces units or service branches but conceptually also across national forces.

Lastly, standardized interfaces for human-machine interaction can achieve continuity in the handling of the systems with positive effects on the certification, training and relevance of the assets.

OBJECTIVES

The **INTERACT project** will propose a set of interoperability standards for military unmanned systems which will be compatible across the domains of:

- **IT services;**
- **data;**
- **data links** and
- **engineering procedures.**

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CONSORTIUM

