CYBER, C4ISR

(FI) Arctic Command & Control Effector and Sensor System (ACCESS)

(Established in May 2023)

For Public Release

PROJECT DESCRIPTION

The ACCESS project aims to create a knowledge base and concept for a new generation of scalable and multifunctional transceivers that can provide comprehensive situational awareness across all domains, including MANET data links, electronic surveillance, and blue force tracking. By leveraging technological trends such as miniaturization and convergence, the project seeks to develop a software-based system that can combine multiple functionalities into a single piece of equipment, reducing weight and cost while improving performance and reliability.

To achieve this, the project will coordinate between Member States and associated countries, identifying synergies and establishing technical requirements and specifications for a new generation of multifunctional transceivers that can operate in various environments, including arctic conditions and GNSS denied environments, with a focus on modularity and scalability. Through a series of workshops and coordination with existing and future RD projects, the ACCESS project will establish a knowledge base for the development of interoperable and multifunctional communication and electronic warfare systems and identify specific development projects to incorporate and further these goals.

OBJECTIVES/PRODUCTS

- Information exchange aiming to create a knowledge base for the development of new concepts and battlefield solutions making use of technological convergence. Such concepts should consider especially how multifunctional systems can simultaneously provide capabilities such as C2, sensors and effectors spanning a wide spectrum, also enabling an enhanced situational awareness.
- Conceptualizing the development of technological solutions providing the combined capabilities of wireless software-based C2 and sensor systems, especially with a view to operating in arctic conditions. The solutions should constitute a convergence-based system combining functions of C2, situation awareness, electronic protection and electronic support.

INDICATORS

Project Execution Year (PEY) and Project Completion Year (PCY):

2023
5th Wave

2023
PEY

2029
PCY

FI, EE, FR, SE

BG, DE, NL

IDEATION
INCUBATION
EXECUTION
CLOSING

Contribution to the more binding commitments
Yes

Capability Perspective

EU CDP priority
C4ISTAR & EMSO Dominance
Future Soldier Systems
Space Operations

CARD references
Communication Security and Information Management
Data Links and Tactical CIS and C2

Operational Viewpoint

HICG
CIS-Friendly Forces Identification and Tracking
Land ISTAR

EDA support

No

DELIVERABLES ACHIEVED

- Several research and development projects synergic with the aims of ACCESS have been identified, but further elaboration is needed in order to better determine to what extent the synergies can be realized on the level of the concrete development of technical systems. The ACCESS workshops yielded valuable information on the scoping and technical feasibility of an AIMA system, which has significantly contributed to the high-level requirements of the EDF24 Call AIMA as well as the corresponding proposal prepared by the Consortium backed up by six contributing Member States.
- Future work within ACCESS will focus on the one hand, on refining the requirements and further exploring use cases for an AIMA system, and, on the other hand, on exploiting the synergies between AIMA and other identified projects.
- One preliminary result of the ACCESS workshops was the redefinition of the AIMA timeline, since the level of technical ambition of the project has proven to be very high. Most probably AIMA1 will require a follow-up project in the order of magnitude of €100M to reach a TRL corresponding to the needs of the modern battlefield. (TRL6 is expected by the end of AIMA1 in 2029).

CRITERIA FOR SUCCESS

- The ACCESS project is expected to enhance the information superiority capabilities of the Member States and associated countries. In the increasingly complex and multidimensional operational environments of the modern battlespace, secure and efficient operations will be facilitated with the development and deployment of scalable, integrated, multifunctional RF transceiver technologies.
- The security, accuracy and speed of data transfer and communication technologies will be improved. Moreover, the development of a new generation multifunctional transceiver technology combining RF communications with electronic signal management and electronic protection will enable improvements in logistics and possibly even tactical innovations.
- EU defence industrial autonomy for critical communications systems will be increased to the extent that the development of the aforementioned technologies will reduce dependency from non-EU products and technology supply.