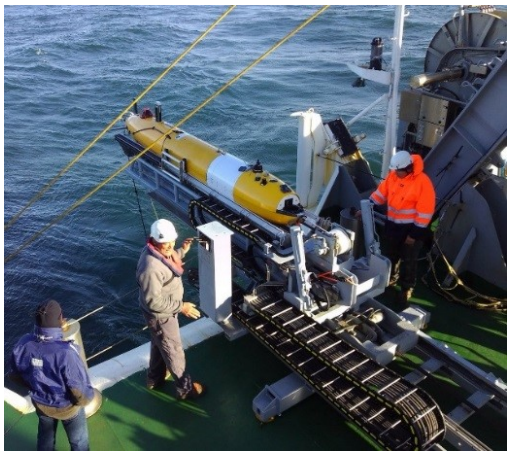
Programme: Persistent Autonomous Reconfigurable Capability

Mission in Brief

The mission of the Persistent Autonomous Reconfigurable Capability (PARC) is to assist NATO in preparing for the unmanned and autonomous system future in the maritime domain.

Overview



Interoperability, security and persistence are key enablers for current and future NATO operations using autonomous/ unmanned systems across all domains. Along with this view PARC Programme is aligned with the ACT Long Term Aspects (LTA) with the objective of transforming NATO forces by delivering an interoperable operational capability using autonomous systems of systems in the maritime domain. PARC seeks to design the architectural framework in which future AUV capabilities will be cast, establishing standards for control, data flow, information security, performance and interfaces, to provide NATO future forces with interoperable systems that are scalable and that reduce risk and cost. The approach is to carry out design studies and to implement generic payloads (interoperable, open-architecture) applying the following assets and techniques:

- Hardware-in-the-loop simulation for system-of-systems (failure management, metrics)
- Development of component capabilities (S&T tools)
- Cost-effective S&T demonstrations using the extensive Centre at-sea assets
- Modelling and Simulation in support of autonomous behaviour evaluation and to de-risk trials
- Continuous alignment with stakeholders through deeply-engaged dialogue
- Collaboration across the board with NATO, STO panels, universities and industry

The programme includes the Communications and Networks in the Maritime Environment project which main objectives have the long-term ambition of:

- Conducting relevant research in the field of underwater communications, spawning collaborative efforts to the benefits of NATO and the Nations.
- Promoting interoperability and standardization of military communications within NATO
- Support the internal CMRE programmes with a comprehensive solution to enable underwater multi-platform cooperation through communication, incorporating requirements and providing solutions for the relevant scenarios.

Contact

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