



Digital Advanced RADAR Electronic Surveillance Technology (DART)

The wideband Digital Radar Electronic Surveillance (RES) Research Programme has shown that, with development, a digitally based signal capture and processing system can successfully operate in an increasingly congested RF environment.

SEA is supplying key components of the at-sea Digital Advanced RES Technology (DART) demonstrator to further investigate the technology and corresponding increase in military capability.

The SEA DART system design follows the latest best-practise in open architecture system development; it is highly granular and modular, providing a flexible and expandable solution with numerous options for future capability insertion

The DART design applies appropriate exploitation of commercial-off-the-shelf (COTS) processing and communications hardware and software.

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These processing and communications elements of the system conform to open, published standards and can be thus be upgraded with more capable versions as and when they become available.

As an example of this openness the system interfaces, both copper and fibre optic, are based on publicly available specification high-reliability, high-performance, high-bandwidth data links, but supported by clearly defined data interfaces based upon modern service-orientated architecture technologies.

The software structure is modular enabling each function to be replaced or upgraded without adversely impacting the rest of the system and incorporates durable (stable or slowly evolving) component interfaces that facilitate component replacement and the addition of new capabilities.

At the hardware level, all processing functions are implemented in standard racking using well defined backplane standards.

DART thus sets the standards for future RESM systems through well-defined, widely used and interchangeable components, interfaces, services, formats and is upgradeable through the incorporation of additional, or more capable, components with minimal impact on the system configuration.