



CASE STUDY

Battlespace Access Unmanned Underwater Vehicle (BAUUV)

SEA was the prime contractor for the Battlespace Access Unmanned Underwater Vehicle (BAUUV) technology de-risking project for the Ministry of Defence DEC(UWE). Supported by major sub-contractors, National Oceanography Centre, Southampton and Subsea 7.

The project began in January 2003 to efficiently address the objectives of the research programme for a BAUUV of the future and to inform the MOD's UUV procurement process. The initial phase of the project established the mission capability requirements, benchmarked the technology and defined the technology development plan relative to the projected needs, prioritised via a Balance of Investment (BoI) process.

During the second stage of the programme, the core team, supported by a wide range of sub-contracting organisations, made significant advances towards addressing the key technology gaps and understanding BAUUV technology through pursuing a number of the proposed technology development and demonstration projects. A total of 24 technology gap-filling development contracts were completed advancing the Technology Readiness Level (TRL) of a range of technologies.

The programme culminated in 2006 with a successful Integrated System Trial (IST) which utilised SeeByte Ltd's Rauver test bed vehicle to bring together a number of the technologies developed under the project to demonstrate their readiness at an integrated system level, in a representative environment and scenario.

The IST and took the form of a series of short trials at Portmore Loch near Edinburgh and Vobster Quay in Somerset culminating in a customer demonstration in May 2006.

These trials comprised a number of UUV military mission vignettes, bringing together Mine Warfare and ISR, to demonstrate the operation in a system of a number of technologies developed under the BAUUV project including, primarily, modules providing collision/obstacle sensing and avoidance and goal based autonomous mission planning and re-planning and user interface.

In addition the IST demonstrated "guest" technologies that were not developed under the projects: Area Search Sonar (SEA SWATHplus), Obstacle Avoidance Sensor (Tritech Scanning Sonar), CAD/CAC (SeeByte), Video Mosaicing (based on MAVIS project), Underwater Tracking (Sonardyne Scout USBL).

The demonstration day, in particular, employed complex communications systems to provide real-time telemetry and processed data displays for the audience.

