



**GLOBAL LEADERS
IN DIGITAL
INTEROPERABILITY
IN THE BATTLESPACE**

2iC

2iC CASE STUDY

SECURE CONNECTION OF A NAVY WARSHIP'S COMBAT SYSTEM WITH A HIGH-SPEED, UN-CREWED, AUTONOMOUS RIB

MISSION SCOPE

Working as part of a strategic supplier consortium and to extremely tight deadlines, 2iC and its unique digital interoperability software were selected to enable different naval craft and systems with different trust domains to operate together in the same shared battlespace.

CHALLENGE

The customer, a major defence force, was developing high-speed, autonomous Rigid Inflatable Boats (RIBs) operating as unmanned craft on surveillance and other missions where it was judged that crew should not be put at risk.

To enable the highest levels of effectiveness, each RIB needed its own onboard systems to be seamlessly connected to the classified secure systems operating on its controlling vessel—a navy warship—and also to public domain data such as the ADS B positioning data feed for commercial aircraft. There also needed to be absolute assurance of maintaining security for the secure systems on the warship.

2iC needed to show that it was possible to take unclassified open data, make it available within the classified secure mission control systems of a modern warship, and achieve secure two-way communication with the lower trust domain of the autonomous RIB. It would do this by working hand-in-hand with another UK SME—a specialist in cyber security—and directly with other consortium companies.

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WHY 2iC?

2iC had previously worked with this other specialist UK SME, who are cyber security experts used to working for defence and government. This company knew that the unique digital interoperability software from fellow SME 2iC was essentially modular and entirely proven in the battlespace. They also knew that 2iC software would save huge amounts of time in the delivery of this project.

ABOUT 2iC: GLOBAL LEADERS IN DIGITAL INTEROPERABILITY IN THE BATTLESPACE

2iC’s unique software layer liberates human capability in the battlespace by digitally automating the exchange of mission-critical and actionable information between commanders, operators and equipment across land, sea and air.

Designed for the very leanest of digital conditions in the modern battlespace, 2iC’s solution delivers two-way communications in environments with low-power computing, low-bandwidth connections, physical landscape challenges or interrupted communications. It effectively delivers the benefits of IoT (the Internet of Things) when there is no viable internet.

Find out more at www.2iCworld.com



WHAT 2iC DELIVERED

2iC TRUST INTERFACE software was used to secure two-way communication between the warship and the lower trust domain of the autonomous RIB, allowing differing information to be sent to and from the autonomous vessel whilst maintaining a secure boundary for the warship. This data included sending video feeds and command and control signals from and to the autonomous vessel.

The type of data flowing between the two platforms had to be of a predefined type, it had to be authorised for a particular direction of travel, and pass validation with Content Checker, which applied fine-grained checks against a data ruleset, before the data was allowed to transition in either direction across security domains.

The modular and platform agnostic approach of the 2iC TRUST INTERFACE software enabled the rapid integration with the warship's pre-authorised hardware components. It also allowed additional unclassified equipment to be securely connected to the warship's command system, including a commercial air traffic data feed (ADS-B) from a third party.

The complete 2iC TRUST INTERFACE solution was integrated, configured and deployed into a live demonstration environment in less than four weeks, demonstrating the power and flexibility of this solution. Trials proved conclusively that the autonomous RIBs could be deployed in a variety of scenarios and yet remain totally integrated with their controlling warships at all times. Envisaged roles included anti-piracy operations, border control, and force protection.

As was expected, subsequent demand for the autonomous craft across this naval service has been high and has extended into several other operational areas.

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GET IN TOUCH NOW

www.2iCworld.com

Email: info@2iCworld.com

Tel: +44 (0)208 1237479

2iC Limited

United Kingdom

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