

SyntheSys Commended whilst Supporting the F-35 Lightning II Joint Strike Fighter (JSF) United Kingdom (UK) Interoperability (IO) Trials Programme

Whitby, UK August 2015. Our clients come to us because we enable them to solve common testing challenges in a cost effective way. The UK MoD is the latest customer to benefit from our unrivalled IO test facility. The F-35 Lightning II JSF recently participated in the UK IO Trials Programme Event 6, part of an ongoing series of IO test events, designed to test the F-35 mission system tactical data IO with other UK platforms. The UK IO Trials Programme uses a realistic simulation environment to connect UK Operational Facilities (OPFAC) over a secure wide area network.

In a simulated amphibious operations scenario, UK and US Navy pilots operated the F-35 mission system using Lockheed-built desktop simulators at BAE Systems' UK Samlesbury site.

This event benefited from upgraded briefing/debriefing facilities at Samlesbury, which made for a more interactive and engaging test event, as evidenced by the comments and feedback received from the MoD customers and stakeholders:

“We very much appreciated the insight to the conduct of the experimentation and we were very impressed at the expansion and enhancements to your facility.”

“Through the event we are starting to see the advantages of digital control (C2)..... We now need to grip Link 16 capability and push digital control forward.”

“The UK IO Trials Programme is delivering tangible and significant results..... The Phase 1 Findings report has been well received in MoD and is extremely valuable.”

“The RNAS Culdrose Station Commander was mightily impressed with what he saw (from the Sea King lab) andplans to attend the next event.”

The scenario saw the F-35 successfully connected with the Sea King Airborne Surveillance and Control (SKASaC) helicopter OPFAC at Royal Naval Air Station (RNAS) Culdrose and the Type 45 Daring-class destroyer OPFAC at Portsmouth Technology Park (PTP). SyntheSys was responsible for establishing and maintaining the data exchange mechanism used in support of the SKASaC and Type 45 participation.

A total of three UK sites were networked together with exchange of Tactical Data between the participating platforms achieved by emulating Tactical Data exchange equipment and mechanisms. The SKASaC and Type 45 OPFACs used the UK Multi-Link Test Facility (MLTF) equipment that enables tactical data exchange between real platform equipment, including Link 16 and radar scenario data, and the other platform desktop simulators.

SyntheSys provides the MLTF capability to the UK MoD, operating and supporting it for all Tactical Data Interoperability testing needs. Use of the MLTF equipment in this event supports the UK MoD's verification programme for ensuring the F-35 is interoperable with the existing and future UK inventory.

Connecting the F-35 facility at BAES Samlesbury to other UK platforms using real Tactical Data exchange equipment and MLTF, for example the UK Sentry E-3D and Sentinel aircraft, allows validation of the F-35 IO capability. In addition, it could also support the reverse principle of confirming the IO of other coalition partner platforms, potentially from all over the world, with the F-35.

For more information about our Testing Services, download the information sheet [\[here\]](#).