

The Source

Issue 3, November 2021

INTeACT Software Development Kit Working towards an open future in defence



Idea

Cultivate your new and novel concepts for enhanced naval capability



Application Showcase

The SDK provides tools to support the demonstration of developed apps to potential customers and partners fostering collaborative work



Shoreside integration

The SDK helps shorten and de-risk the integration process providing confidence in operability with deployed open Combat Management Systems



Software Development Kit

The SDK provides a toolset that includes software libraries, developer documentation, code samples, processes and guides to help develop and integrate new apps. Freely available under an innovative licensing model



Operational deployment

Allows third party developers to create applications that can readily be hosted onto in-service ships



Delivers an open approach that meets the needs of the Royal Navy's vision for future Combat Systems

inteactsdk@baesystems.com

Welcome to the third issue of The **Source**, the definitive place to find the latest information on the **INTeACT** Software Development Kit (SDK).

The Source newsletter will keep you updated on all the news, releases and upcoming events as well as providing highlights of the feedback and experiences from across the community of using the **INTeACT** SDK.

The Source will be issued periodically as and when we have an update to provide and ensure that the **INTeACT** SDK community can stay connected with all the new developments as they are released.

If you'd like to get in touch to share your own experiences, raise a question, make a suggestion or simply tell us what you think about the SDK then please send us an email at: inteactsdk@baesystems.com.



INTeACT

BAE Systems is a leading supplier and integrator of Combat Management Systems and **INTeACT** is the name of our next generation CMS.

It uses open systems architectures to ensure that state-of-the-art technologies can be adopted quickly to enhance overall ship capability and provide unrivalled information superiority.

INTeACT provides warship crews with all the information they need to track, analyse and respond to threats, as well as the ability to coordinate resources in other operations such as intelligence gathering and humanitarian assistance, both independently or as part of a multinational coalition.

Programme Update

Planning has resumed for the SDK codeathon and we are now expecting to run this event in May 2022. This will be an ideal opportunity to come and meet and engage with the community, showcase and share ideas, and discuss all things SDK-related. Look out for more news about this soon.

In partnership with the Knowledge Transfer Network we would like to invite you to take part in the INTeACT SDK Innovation Challenge (KTN-iX™). This is a call to industry to explore utilising the SDK to develop applications targeted at the Maritime Mission Systems market. Find out more at <https://www.ktninnovationexchange.co.uk>.

Development of the SDK has continued apace and we are pleased to announce that Release 2 is now available to download!

INTeACT SDK v2.0

This significant update extends the SDK by including the Data Distribution Standard (DDS) as a message transport mechanism. In addition the SDK interfaces can now also be directly accessed using Java. Rest assured that SDK Release 2 continues to provide support for both GraphQL and Python.

We have also taken this opportunity to fix a number of bugs and improve some of the supporting documentation.

The SDK Release 2 offers:

Communication Mechanisms:

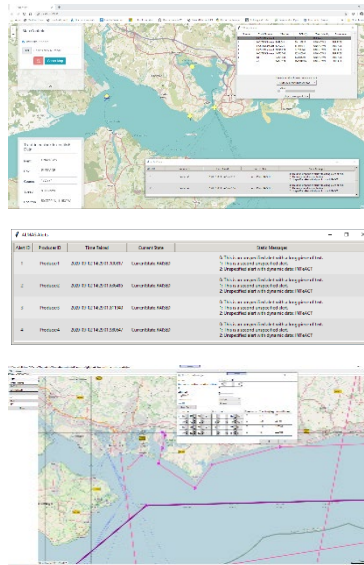
- GraphQL or DDS

Interfaces:

- TACSIT, incl. TEX and TCI
- OARIS 1.1
- ALMAS 1.1
- C2INAV 1.0
- TDA Pre-release

Components:

- Labelled Plan Display (LPD)
- Tactical Picture Service
- Scenario Editor
- Scenario Animator
- Scenario data files with ready-made scenarios



If you are already an SDK user you can download Release 2 from the SDK website as normal.

In order to get access to the SDK you will need to email the SDK mailbox at inteactsdk@baesystems.com registering your interest.

Finally, we would like to send a big thank you to the Knowledge Transfer Network for their continued support.

Knowledge Transfer Network

The INTeACT Software Development Kit (SDK)

The SDK offers open interfaces and emulation tools allowing software engineers to develop their own applications that can integrate with open combat management systems such as **INTeACT**.

Initially aimed at applications dealing with tactical picture visualisation, track correlation and track identity recommendations, the SDK consists of a collection of open interfaces and components supported by tutorials and API documentation.

The open standards (as defined by the Object Management Group (OMG)) interfaces provided by the **INTeACT** SDK include OARIS (Open Architecture Radar Interface Standard), TACSIT (Tactical Situation Specification/TACSIT Data Exchange (TEX)) and ALMAS (Alert Management Service). More information can be found on these open interfaces on the OMG web site <https://www.omg.org/>.

The **INTeACT** SDK utilises GraphQL and the Data Distribution Standard (DDS) as its data and message exchange mechanism, maintaining commonality of approach with the Royal Navy's NELSON data exploitation programme.

The **INTeACT** SDK provides a number of applications and services including:

- Data Service: uses an HTTP Server to store and distribute data between components
- Combat System Track Service: provides a consolidated view from multiple sensors and decision aids
- Combat System Picture Correlation App: determines whether tracks from different sensors correspond to the same object
- Geodesy Service: provides utilities for doing calculations in real-world coordinates
- Display Console: provides a plan display based on content from the Combat System Track Service
- Real World Scenario Simulator: provides a Graphical User Interface (GUI) for crafting scenarios based on the motion of objects in the real-world

Access to the SDK is facilitated by the use of an innovative, free to use, open defence licencing model. Third parties wishing to exploit the opportunities offered by the **INTeACT** SDK are required to sign-up to this licencing model before receiving the SDK.

Get in Touch

If you would like to ask any questions about the **INTeACT** SDK or discuss how it might be useful to you and your business then please get in touch at: inteactsdk@baesystems.com

We want to ensure that we keep the lines of communication open, so please do contact us using our email address if you want to share ideas or comments with our team.

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