

Press release

Israel Aerospace Industries (IAI) Selects RTI Connex as the Connectivity Software for the OPAL Application Framework

Basing OPAL on Connex Software Enables IAI to Align with the Future Airborne Capability Environment (FACE™) Technical Standard

SUNNYVALE (USA)/London, July 13, 2021 – Real-Time Innovations (RTI), the largest software framework company for autonomous systems, today announced Israel Aerospace Industries (IAI), a world-leading aerospace and defense company, has selected RTI Connex® DDS for real-time connectivity as part of its Operational Avionics Layer (OPAL) Application Framework. IAI's OPAL serves as the infrastructure for networking connectivity, data sharing, and operative actions for air, land and naval forces.

By using Connex to manage data communications, IAI is able to help customers in the Defense industry implement new applications in a fraction of the time while reducing operational costs, decreasing development complexity, and enabling faster time to market. In addition, the OPAL application framework built on Connex DDS will readily enable companies to meet Modular Open Systems Approach (MOSA) program requirements.

Under combat conditions, critical variables, such as poor visibility and unpredictable enemy behavior emphasize why it is vital that warfighter teams must be able to securely and reliably communicate at all times. However, if each friendly force operates on its individual network domain or communication channel, interoperability and joint operations are challenging if not impossible. Without the right technology in place, important data can easily remain stalled in operational silos and not instantly accessible to Command-and-Control (C2) system operators. Conquering this barrier and introducing real-time interoperability capabilities is critical to securing optimal results from any innovative new operational application that is added to a combat platform. Traditionally, the process of adding these new applications

to an airborne platform and achieving full integration could easily take upwards of five to eight years and cost hundreds of millions of dollars.

Shortening these implementation cycles was the primary mission for IAI to develop the OPAL application framework. By implementing RTI Connex DDS, IAI was able to reduce the process of adding applications to airborne platforms from roughly 60 months to just five months. RTI enabled a turnkey approach that now allows defense customers to introduce new applications faster than ever before, which in turn, equates to significant cost savings while accelerating time to market. Connex DDS also delivers the software architecture needed to achieve real-time situational awareness and unified communication to gain a comprehensive operational picture of the battlefield.

Another key highlight of basing OPAL on the DDS standard is that this aligns OPAL with the Future Airborne Capability Environment (FACE™) Technical Standard, Edition 3.1, which defines an open avionics environment for all military airborne platform types. In addition, deploying an Integrated Modular Avionics (IMA) architecture enables OPAL to efficiently introduce new applications while reducing the impact of change and advancing the FACE approach. With this standards-based architecture, OPAL can continue to evolve and deliver even broader compatibility and capability into global avionics platforms.

Read more about IAI's challenges and their RTI Connex-based solution in the Customer Snapshot [here](#).

Quotes

"We created OPAL to provide a solution for different platforms to communicate with one another. RTI Connex serves as a critical component within the OPAL framework to provide our customers with seamless cross-platform interoperability, while reducing time to market dramatically," said Tal Zaharoni, Deputy General Manager, Conversions and Upgrades Division, IAI. "We are proud to collaborate with RTI and look forward to combining our efforts to provide the best possible system."

"The ability to communicate between joint operations forces is one of the most critical and complicated aspects of the warfighting environment when

each entity has developed their own unique and proprietary system,” said Chip Downing, Senior Director, Aerospace and Defense at RTI. “We are proud to be working with a world-leading aerospace and defense company like IAI who is breaking barriers in battle management. We look forward to continuing our work together as we combine the power of the OPAL framework with the globally-proven software in Connex DDS to drive significant advancements for our customers.”

About IAI

Israel Aerospace Industries (IAI) is a world-leading aerospace and defense company innovating and delivering state-of-the-art technologies in space, air, land, naval, cyber & homeland security for defense and commercial markets. Combining the “Start-up Nation” spirit of innovation with decades of combat-proven experience, IAI provides customers with tailor-made, cutting-edge solutions to the unique challenges they face including satellites, UAVs, missiles, intelligence solutions, weapon systems, air defense systems, robotic systems, radars, business jets, aerostructures, and more. Established in 1953, IAI is one of Israel’s largest technology employers with offices and R&D centers in Israel and abroad. For more information, visit <https://www.iai.co.il>.

Picture (source: IAI):



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About RTI (www.rti.com):

Real-Time Innovations (RTI) is the largest software framework company for autonomous systems. RTI Connex is the world's leading architecture for developing intelligent distributed systems. Uniquely, Connex shares data directly, connecting AI algorithms to real-time networks of devices to build autonomous systems.

RTI is the best in the world at ensuring our customers' success in deploying production systems. With over 1,500 designs, RTI software runs over 250 autonomous vehicle programs, controls the largest power plants in North America, coordinates combat management on U.S. Navy ships, drives a new generation of medical robotics, enables flying cars, and provides 24/7 intelligence for hospital and emergency medicine. RTI runs a smarter world.

RTI is the leading vendor of products compliant with the Object Management Group® (OMG®) Data Distribution Service™ (DDS) standard. RTI is privately held and headquartered in Sunnyvale, California with regional offices in Colorado, Spain and Singapore.

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