Press release

RTI Announces Data Distribution Service (DDS™) Integrated into EUROCAE ED-247 Revision B Standard

The DDS standard delivers data-centric, robust, and secure communications, offering a compelling solution for avionics testing

SUNNYVALE (USA)/London, April 2, 2024 – Real-Time Innovations (RTI), the infrastructure software company for smart-world systems, today announced the integration of the DDS Standard into the EUROCAE Standard ED-247 Revision B, which provides a complete framework for the validation and verification of avionics equipment through intensive usage of virtual components in both virtual and hybrid test benches. As a co-author of the DDS standard, RTI has over 20 years of experience in helping global customers and organizations design and test for intelligent, distributed, and mission-critical systems.

The DDS standard provides a data-centric and platform-independent software framework and offers various features that make it an ideal real-time alternative to message-based middleware, as well as raw UDP and TCP transport protocols. DDS offers reliable communication over UDP, support for transport independent communication, fine grained configurability via QoS, fine grained security control, built-in redundancy, and peer-to-peer communications over Wide Area Networks (WAN).

Current tests used in aircraft system development are costly and difficult to replicate, which cause bottlenecks in the validation process. The industry's unique challenges require an internationally recognized standard to ensure interoperability and streamline the exchange between and integration of virtual and real components. ED-247 Revision B establishes standards for main processes such as communication, command and control, time management, failures and signal injections, monitoring, etc., involved in virtual and hybrid testing.

"Realizing the importance of building code on top of proven standards is the first step towards a data-centric solution in avionics testing," said Gerardo

Pardo, CTO at RTI. "We're proud to work with the EUROCAE Organization on defining an improved standard that expedites the testing process while providing more scalability, security, and reliability."

Additional benefits of DDS include:

- Transport independent communication: DDS follows a transport-agnostic architecture, which allows ED247 applications to send data through different transports such as UDP, TCP, TSN, shared memory, and more.
- Native data fragmentation: DDS supports a configurable way of fragmenting the data, independently of the transport used.

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Picture:

Caption: Defense Avionics cockpit control screens (Image: RTI/Shutterstock 179227766)

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About RTI (www.rti.com)**:**
Real-Time Innovations (RTI) is the infrastructure software company for smart-world systems. RTI Connext® is the world's leading software framework for intelligent distributed systems. Uniquely, Connext users can build systems that combine advanced sensing, fast control, and AI algorithms.
RTI is the market leader in products compliant with the Data Distribution Service (DDS™) standard. With 2,000 customer designs, RTI excels at getting customers to production. RTI software runs over 250 autonomous vehicle programs, supports dozens of automotive ADAS and software-defined architectures, controls the largest power plants in North America, integrates over 400 major defense programs, drives a new generation of MedTech systems and robotics, and underlies Canada's air-traffic control and NASA's launch control systems.
RTI runs a smarter world.

RTI is privately held and headquartered in Silicon Valley with regional offices in Colorado, Spain, and Singapore.

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