

Press release

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RTI Announces the First Medical-Grade Connectivity Framework

RTI Connex 6 Enables Healthcare Companies to Lower IIoT System Costs, Enhance Security and Decrease Time to Market

SUNNYVALE (USA)/London, February 11, 2019 – Real-Time Innovations (RTI), the Industrial Internet of Things (IIoT) connectivity company, announced a variety of new capabilities to its industry-leading connectivity software, RTI Connex DDS, designed to advance the development of complex medical systems. Based on the Data Distribution Service (DDS) Standard™, this new product release will provide medical device manufacturers with the connectivity technology needed to address critical design challenges faced in developing secure, interoperable medical devices for healthcare systems of the future.

Systems of medical devices communicating seamlessly and securely have the opportunity to improve patient outcomes, reduce medical errors and lower healthcare system costs. To realize these benefits, the healthcare industry must collect and transport unprecedented amounts of data in real time, across a large number of diverse devices. For example, in the connected hospital of the future, data will not just be sent to a proprietary onsite server or cloud for analysis, but devices will share real-time data with each other securely and reliably, providing a foundation for AI and Clinical Decision Support (CDS).

Healthcare IoT systems and connected medical devices are highly complex and face a number of challenging issues throughout the design process. Developers of medical-grade products must address five major design challenges:

- Provide syntactic interoperability to lay a foundation for standards-based semantic (i.e., data model) interoperability in the future.

- Ensure a secure system according to governing regulatory bodies, such as the FDA's Guidance on Cybersecurity.
- Provide access to real-time patient data from a variety of near patient medical devices.
- Enable connected health solutions to scale to thousands of nodes providing critical infrastructure for device manufacturers and providers.
- Provide the foundation for a highly reliable network of devices and applications with no single points of failure

RTI Connex 6 is the first solution on the market to satisfy all of these complex, system-level requirements simultaneously, without the need to make any tradeoffs or compromises in the process. For example, developers can build their systems to scale as large as they need to without having to compromise on the level of security. This enables them to design products faster while lowering costs and allowing them to focus on their core competencies – system development, data analysis and user experience.

New capabilities in Connex 6 provide:

Increased Security

In any type of healthcare environment, maintaining the highest degrees of security is of the utmost importance. The Connex DDS connectivity framework allows medical device manufacturers to secure the data in-use down to the data-type level meeting the requirements of the FDA cybersecurity guidance and minimizing the impact to system performance.

Decreased Time to Market

To design the connectivity software required for medical-grade systems, medical device manufacturers have the choice of designing the software in house (which is expensive, difficult and time consuming), or adopting an off-the-shelf-solution. Those that choose a well-documented, off-the-shelf connectivity framework like Connex DDS are able to meet development and security requirements, solve specific design challenges and get to market faster.

Connex Product Line Scalability

New features are compatible and interoperable across the RTI Connex product suite: Connex DDS Secure and Connex DDS Professional for standard processors and microcontrollers, Connex DDS Micro for highly resource-constrained microcontrollers and Connex DDS Cert for the most safety-critical applications

“Of all the industries adopting the IoT, the Healthcare market will have one of the most profound impacts on the quality of human life,” said David Niewolny, Director of Market Development, Healthcare at RTI. “We have the opportunity to improve patient care, make treatments more accessible and cost-effective and help generations live longer than ever before. But with this digital revolution, new systems require new technology. With Connex 6 we’ve combined our deep expertise in healthcare with our legacy of mission-critical connectivity software to introduce a medical-grade offering that meets the stringent requirements of the market. From surgical robotics to proton-beam radiation therapy, we are thrilled to work with our healthcare customers to build the connected medical systems of our future.”

Additional new product capabilities and benefits include:

- **Large Data Distribution:** Allows streaming of high-bandwidth data from many disparate sources and sensors, important in both 3D imaging and Healthcare IoT application.
- **Data Extensibility:** Supports longevity and evolution of large, expensive medical equipment, such as large CT scanners – enabling interoperability across generations of products.
- **Data-Centric Gateways:** Provides intelligent data routing for greater efficiency and support for integrating and scaling distributed medical systems, easing integration with legacy medical devices and enterprise.
- **Enhanced Performance:** Reduces CPU overhead and end-to-end latency in distributed applications – a necessity for haptic control loops in surgical robotics and for the development of real time near-patient Clinical Decision Support (CDS), like in surgical robotics systems.

Packaging and Availability

New features and capabilities are available in Connext 6, generally available in Q1 2019. RTI customers can request a preview release by contacting their local sales representative. For pricing and licensing, please contact sales@rti.com

For more information on Connext DDS and a full list of new features, please visit: <https://www.rti.com/products/connext-6>.

Pictures (source: Shutterstock):



[Stock footage ID: 1011038321]



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About Real-Time Innovations, Inc. (RTI) (www.rti.com):

Real-Time Innovations (RTI) is the Industrial Internet of Things (IIoT) connectivity company. The RTI Connext® databus is a software framework that shares information in real time, making applications work together as one, integrated system. It connects across field, fog and cloud. Its reliability, security, performance and scalability are proven in the most demanding industrial systems. Deployed systems include medical devices and imaging; wind, hydro and solar power; autonomous planes, trains and cars; traffic control; Oil and Gas; robotics, ships and defense.

RTI lives at the intersection of functional artificial intelligence and pervasive networkingSM.

RTI is the largest vendor of products based on the Object Management Group (OMG) Data Distribution Service™ (DDS) standard. RTI is privately held and headquartered in Sunnyvale, California.

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