

Press release

Levita Magnetics Selects RTI Connex as the Connectivity Solution for its MARS Surgical Robotic System

Connex Enables Flexible and Scalable Innovation for Levita's MARS Surgical Platform: the First-of-its-kind to Advance Minimally Invasive Surgery

SUNNYVALE (USA)/London, June 11, 2024 – [Real-Time Innovations](#) (RTI), the infrastructure software company for smart-world systems, today announced [Levita Magnetics](#) has selected [RTI Connex](#) to provide real-time connectivity for [MARS](#): the first and only FDA approved surgical robotic platform that revolutionizes surgery with magnets and machines. MARS is designed to improve patient outcomes and clinical efficiency in high-volume abdominal surgeries, and has completed hundreds of successful surgeries in the US and Chile. With Levita's technology, patients can look forward to a faster recovery, less pain, and better cosmetic results.

When it comes to command and control in minimally-invasive therapies, it is critical that data communications are received and transferred correctly. Levita required a reliable, robust, and scalable software solution that transferred data in real time, ensuring patient and system safety. Connex, based on the [Data Distribution Service \(DDS\)](#) standard, enables secure real-time information exchange, modular application development, and rapid integration of distributed systems. [RTI's Routing Service](#) was particularly helpful as it enabled seamless communication between two disparate communication protocols. This allows teams to efficiently design a flexible and holistic communication architecture to accelerate the development of clinical solutions.

“RTI Connex enables advanced controls and visualization in the surgical field, enriching the surgeon's experience as well as patient care,” said Chauncey Graetzel, VP of R&D at Levita Magnetics. “We will continue to push boundaries through leading edge innovation in surgical robotics while maintaining unwavering commitment to safety and security standards.”

As Artificial Intelligence (AI) continues to grow in the healthcare industry, Levita is also the first company to use Augmented Reality (AR) for abdominal surgery. In the future, the AR component will act as an accessory to the MARS system to improve visualization, enhance minimally invasive techniques, and promote collaboration within the medical field. All of the most popular AR headsets can be used in conjunction with MARS, providing surgeons with comprehensive images and more accurate analysis of patients.

“The convergence of robotics, AI, data analytics, and visualization technologies is paving the way for a new era in MedTech with connectivity at the core,” said Darren Porras, Market Development Manager, Medical at RTI. “To fully leverage new technologies, robotically-assisted systems need to be designed with architectures that allow for rapid evolution while also addressing demanding and simultaneous requirements for reliability, cybersecurity and performance. We’re proud to work with Levita to leverage the power of magnets to reduce incisions and make surgery less invasive, delivering a triple impact that benefits patients, surgeons and hospitals.”

Visit rti.com/healthcare to learn how leading MedTech companies are using Connex to transform healthcare.

Picture (source: Levita Magnetics):



BU: The convergence of robotics, AI, data analytics, and visualization technologies is paving the way for a new era in MedTech

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About Levita (www.levita.com):

Headquartered in Silicon Valley, Levita Magnetics was founded by innovator and surgeon Dr. Alberto Rodriguez-Navarro. Its technology is designed to advance minimally invasive surgery. Levita developed the Levita Magnetic Surgical System and MARS, proprietary technologies designed to minimize the footprint of surgery and improve patient outcomes. For more information visit levita.com.

About RTI (www.rti.com):

Real-Time Innovations (RTI) is the infrastructure software company for smart-world systems. RTI Connex is the world's leading software framework for intelligent distributed systems. Uniquely, Connex 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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