

"Connext DDS offered a complete, solid solution set that supported all of the technology we are using. We needed a solution that ran across the entire platform and RTI was the only vendor we looked at that provided that."

Arun Kesavan Global Director, Controls and Automation, Komatsu

- Komatsu is an international leader in industrial-use products and services including construction and mining equipment.
- In 2011, Komatsu chose the Connext DDS modular infrastructure for its flexible architecture and real-time data analytics.
- With Connext DDS, Komatsu can manage and analyze equipment data in real-time, delivering intelligent capabilities and predictive maintenance.

COMPANY OVERVIEW

Komatsu Mining Corp. (formerly Joy Global) is a worldwide leader in high productivity mining solutions. Established in 1921, Komatsu is a diversified provider of industry-use products and sservices, sudh as construction and mining equipment, industrial machinery and vehicles, and other solutions-based operations.

Komatsu has the world's largest and most extensive direct aftermarket service and support infrastructure in place of any underground mining equipment supplier. Its Life Cycle Management program helps customers better manage their equipment to maximize production. Komatsu's Smart Services program maximizes customer assets by providing better machine availability and utilization, minimal downtime and reduced costs.

Komatsu's vision is to be a world-class service company delivering the most reliable and productive products, systems and solutions that solve mining's toughest challenges.

CHALLENGE

Komatsu was looking for a software architecture and modular infrastructure that would provide the company with the ability to easily add applications and software to their machines.

Prior to working with RTI, Komatsu wrote their own middleware. The company also had legacy hardware about to reach its end-of-life. As a result, Komatsu decided to revamp their infrastructure so they could focus on applications instead of infrastructure. They evaluated several vendors and considered building their own solution in-house.

SOLUTION

In 2011, Komatsu's team chose the RTI Connext $^{\text{TM}}$ DDS modular infrastructure for its upgradeability, future maintainability and real-time data analytics. Komatsu needed a solution that could run across a huge platform and solve a

wide variety of challenges. Ultimately, Komatsu selected RTI because of the strong RTI solution set and services. Komatsu felt confident that RTI would act as a true partner and stand with them to achieve success.

The RTI Connext DDS product suite was easy to integrate and supported multiple operating systems. The RTI solution set operates on both the embedded controller and on the Windows side of the machine, monitoring and collecting the information shared between the two. This functionality allows information to flow between those two interfaces, recording information on the Windows side for equipment analysis.

Komatsu takes that information and seamlessly forwards it to the top of the mine for additional data analysis and to deliver Smart Services capabilities with predictive analytics.

BENEFITS

Having branded mining machines continuously operating is the key to Komatsu's success; second only to promoting a safety-first work environment. Komatsu uses Connext DDS for both uptime and safety enhancements by continuously recording data and using that data to help prevent future safety issues.

"From day one, our services team was fully committed to making the implementation successful and we are thrilled with the result."

Stan Schneider CEO. RTI

ABOUT RTI

Real-Time Innovations (RTI) is the largest software framework provider for smart machines and real-world systems. The company's RTI Connext® product enables intelligent architecture by sharing information in real time, making large applications work together as one.

With over 1,500 deployments, RTI software runs the largest power plants in North America, connects perception to control in vehicles, coordinates combat management on US Navy ships, drives a new generation of medical robotics, controls hyperloop and flying cars, and provides 24/7 medical intelligence for hospital patients and emergency victims.

RTI is the best in the world at connecting intelligent, distributed systems. These systems improve medical care, make our roads safer, improve energy use, and protect our freedom.

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 headquarters in Spain and Singapore.

Download a free 30-day trial of the latest, fully-functional Connext DDS software today: https://www.rti.com/downloads.

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