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Intel and Mitsubishi Electric Collaborate to Create Next-Generation Factory Automation Systems

Pilot Program Demonstrates the Benefits of End-to-End Internet of Things Connectivity in Industrial Settings

NEWS HIGHLIGHTS

- Intel and Mitsubishi Electric are working together to advance factory automation (FA) systems utilizing end-to-end Internet of Things (IoT) connectivity and big data analytics.
- The companies collaborated on a pilot at Intel's manufacturing facility in Malaysia, demonstrating the benefits of IoT. The pilot resulted in improved equipment uptime, increased yield and productivity, the ability to conduct predictive maintenance and reduced component failures.
- As a result of the pilot, Intel realized US$9 million in savings through cost avoidance and improved decision making.
- The companies are targeting product availability in 2015.

TOKYO--(BUSINESS WIRE)-- Intel Corporation and Mitsubishi Electric Corporation today announced a new collaboration to develop next-generation factory automation (FA) systems with Internet of Things (IoT) technologies and a pilot program at Intel's backend manufacturing facility in Malaysia.

The pilot demonstrates the benefits of IoT in a factory setting with a focus on delivering productivity enhancement through innovative functions, such as predictive failure, by combining Intel's expertise developing solutions for IoT and Mitsubishi Electric's "e-F@ctory" automation capabilities. Intel realized a savings of US$9 million over the course of the pilot.

IoT and Big Data in Action

As an initial collaboration, Intel and Mitsubishi Electric implemented the IoT and big data solution at Intel's backend manufacturing facility in Malaysia. Using an Intel® Atom™ processor-based IoT gateway called the C Controller from Mitsubishi Electric's iQ-Platform, Intel was able to securely gather and aggregate data for the analytics server. Data was then processed using Revolution R Enterprise* software from Revolution Analytics*, an analytics software solution that uses the open source R statistics language, which was hosted on Cloudera Enterprise*, the foundation of an enterprise data hub.

The solution has improved equipment component uptime, increased yield and productivity by

minimizing misclassification of good units as bad, enabled predictive maintenance, and reduced component failures. Initial results include a savings of US$9 million through cost avoidance and improved decision making.

“The data mining and analytics pilots done in Malaysia have demonstrated great value and benefits for Intel manufacturing using Intel-based IoT products and technology,” said Robin Martin, vice president and general manager of Intel’s Assembly and Test Group. “Through this collaboration and pilot with Mitsubishi Electric, we will bring the know-how, assets and technology of both companies to develop next-generation factory automation systems with predictive analytic capabilities. This will allow other companies to reap the benefits of the Internet of Things for factory operations.”

“The collaboration between Mitsubishi Electric and Intel on this IoT project has enabled field data from semiconductor manufacturing lines to be collected and analyzed to improve operational performance, yet also contribute energy savings for a more sustainable society,” said Masayuki Yamamoto, group senior vice president, Factory Automation Systems, Mitsubishi Electric Corporation. “We believe that other manufacturers can benefit from this joint Intel-Mitsubishi Electric solution, which combines big data analysis, optimized data capture and processing to deliver improved performance and optimized maintenance.”

The commercialization date for the product is 2015, and the companies will show a live demonstration of the solution in Intel’s booth at the IoT Japan 2014 tradeshow, which will be held October 15-17 at Tokyo Big Sight in Japan.

About Intel

Intel (NASDAQ: INTC) is a world leader in computing innovation. The company designs and builds the essential technologies that serve as the foundation for the world’s computing devices. As a leader in corporate responsibility and sustainability, Intel also manufactures the world’s first commercially available “conflict-free” microprocessors. Additional information about Intel is available at newsroom.intel.com and blogs.intel.com, and about Intel’s conflict-free efforts at conflictfree.intel.com.

About Mitsubishi Electric Corporation

With over 90 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,054.3 billion yen (US$ 39.3 billion[1]) in the fiscal year ended March 31, 2014. For more information visit http://www.MitsubishiElectric.com.

[1]At an exchange rate of 103 yen to the U.S. dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2014

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