

Intel and Mitsubishi Electric collaborate to create next generation Factory Automation systems

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Pilot program demonstrates the benefits of End-to-End Internet of Things (IoT) connectivity in industrial settings

News Highlights

- Intel and Mitsubishi Electric are working together to advance Factory Automation (FA) Systems utilising end-to-end 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 realised nine million dollars in savings through cost avoidance and improved decision making.
- The companies are targeting product availability in 2015.

Intel® Corporation and Mitsubishi Electric Corporation have 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 the IoT in a factory setting. The pilot system will focus on delivering productivity enhancement through innovative functions, such as predictive failure, by combining Intel's

expertise developing solutions for the Internet of Things (IoT) and Mitsubishi Electric's "e-F@ctory" automation capabilities. Intel realised savings of nine million dollars 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, part of their 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 minimising misclassification of good units as bad, enabled predictive maintenance and reduced component failures. Initial results include savings of nine million dollars 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 analysed to improve operational performance, yet also contribute energy savings for a more sustainable society. We believe that other manufacturers can benefit from this joint Intel-Mitsubishi Electric solution which combines Big data analysis, optimised data capture and processing to deliver improved performance and optimised maintenance,” said Masayuki Yamamoto, Group Senior Vice President, Factory Automation Systems, Mitsubishi Electric Corporation.

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

Note to Editor: if you would like the text in another language please contact Nicola Bigmore at DMA Europa – nicola@dmaeuropa.com.

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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.

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About Mitsubishi Electric

With over 90 years of experience in providing reliable, high-quality products to both corporate clients and general consumers all over the world, Mitsubishi Electric Corporation 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, as well as in products for the energy sector, water and waste water, transportation and building equipment.

With around 124.000 employees the company recorded consolidated group sales of 39,3 billion US Dollar* in the fiscal year ended March 31, 2014.

Our sales offices, research & development centres and manufacturing plants are located in over 30 countries.

Mitsubishi Electric Europe B.V., Factory Automation European Business Group (FA-EBG) has its European headquarters in Ratingen near Dusseldorf, Germany. It is a part of Mitsubishi Electric Europe B.V., a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan.

The role of the Irish Branch is to manage sales, service and support across its network of local distributors throughout Ireland.

**Exchange rate 103 Yen = 1 US Dollar, Stand 31.3.2014 (Source: Tokyo Foreign Exchange Market)*

Further Information:

Website: ie3a.mitsubishielectric.com/fa

Website: www.mitsubishielectric.com

YouTube: <http://www.youtube.com/user/MitsubishiFAEU>

Twitter: <https://twitter.com/MitsubishiFAIRE>

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Factory Automation

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