

Next generation predictive maintenance tools have the edge

Mitsubishi Electric's latest cloud-based predictive maintenance solution is supported by the AI platform within IBM Watson and implemented with voice control and AR features. This innovation shows how interconnected, intelligent systems can maximise responsiveness, productivity and plant control while reducing costs and downtime.

Automation is empowering companies to control and optimise their industrial processes to unprecedented levels. By analysing the vast amount of data generated continuously by industrial machines, it is possible to identify the initial signs of machine failure and conduct effective predictive maintenance before the issues impact the entire plant.

Accessing online AI functionality

Mitsubishi Electric's approach to proactive maintenance is based on machine usage and wear characteristics. A working example could monitor the status of a robot with an AI analysis platform, supported by IBM Watson Analytics in the Cloud. This software combines predictive maintenance models, digital simulation, prediction and extrapolation of trends to give easy access to accurate advice on status and the right action to take.

Augmented visualisation is made reality

Machine data analytics is useless if not associated with an appropriate communication system that informs the human operator about the condition of the robot. Therefore, an AR interface has been developed to ensure a useful conversation can be had between humans and robots.

A robot conversation

The operator can initiate contact and easily visualise the predictive maintenance analytics and monitor the robot while walking past using a tablet computer. Users can even receive maintenance information or run hands-free operations on the machine via voice commands. The robot can also report the status of a task verbally.

Smart glasses

Not long ago this was part of a vision of factory maintenance in the future, but once the AR platform is enabled, smart glasses can be used to manage and conduct maintenance works. Through them, human operators can receive information, such as CAD drawings superimposed on the robot, and receive guidance on issues or tasks to perform, e.g. via maintenance manuals or specific instructions.

Image 1: By analysing the vast amount of data generated continuously by industrial machines, it is possible to identify the initial signs of machine failure and conduct effective predictive maintenance before the issues impact the entire plant.

[Source : Mitsubishi Electric Europe B.V., Getty Images]

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Note to Editor: if you would like the text in another language please contact Carolin Heel at DMA Europa – carolin@dmaeuropa.com.

About 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 4,444.4 billion yen (in accordance with IFRS; US\$ 41.9 billion*) in the fiscal year ended March 31, 2018.

Mitsubishi Electric Europe, Industrial Automation – UK Branch is located in Hatfield, United Kingdom. It is a part of the European Factory Automation Business Group based in Ratingen, Germany which in turn is part of Mitsubishi Electric Europe B.V., a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan.

The role of Industrial Automation – UK Branch is to manage sales, service and support across its network of local branches and distributors throughout the United Kingdom.

**At an exchange rate of 106 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2018*

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