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Mitsubishi Electric Develops 3-D Model Reconstruction Technology

Enables easier on-site renovation planning using tablets

TOKYO, February 12, 2015 – <u>Mitsubishi Electric Corporation</u> (TOKYO: 6503) has developed three-dimensional (3-D) model reconstruction technology to reconstruct accurate 3-D models of large indoor areas, using a tablet equipped with a 3-D sensor, for efficient on-site planning of renovation work. The company plans to commercialize a 3-D modeling tool for offices, factory interiors and elevator shafts in 2018.



The new technology extracts planes automatically from 3-D point-cloud data captured using a tablet equipped with a 3-D sensor. The technology registers a sequence of 3-D data by automatically finding and associating identical planes and points in different frames to reconstruct an accurate 3-D model of an entire area. A software processes the 3-D data in real time at a speed of four frames per second.

The 3-D models can be used, for example, to measure distances between specific locations or avoid collisions when moving an object, enabling highly efficient planning.



Example of distance measurement

Example of collision avoidance

Efficient and accurate 3-D modeling is very useful because 2-D floor plans and 3-D models of existing constructions-such as elevator shafts, pipes and wires in factories, and details of building interiors-often are not available, or are not accurate. Conventional systems for reconstructing 3-D models require extensive time to take measurements, or are not suitable for large areas.

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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*) in the fiscal year ended March 31, 2014. For more information visit http://www.MitsubishiElectric.com

*At an exchange rate of 103 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2014