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Mitsubishi Electric Develops Searchable Encryption Platform Software

*Japan's first software to support encryption and access control for cloud services*

TOKYO, July 3, 2013 - Mitsubishi Electric Corporation (TOKYO: 6503) announced today it has developed Japan's first searchable encryption platform software that supports both data encryption and access control for users who perform keyword searches in the cloud. The new software will enhance the security of cloud services where sensitive information normally is uploaded in encrypted code but retrieved without decrypting. The software will be presented at the DICOMO 2013 Symposium, which will take place at the Hotel Daiheigen in Hokkaido, Japan from July 10–12.
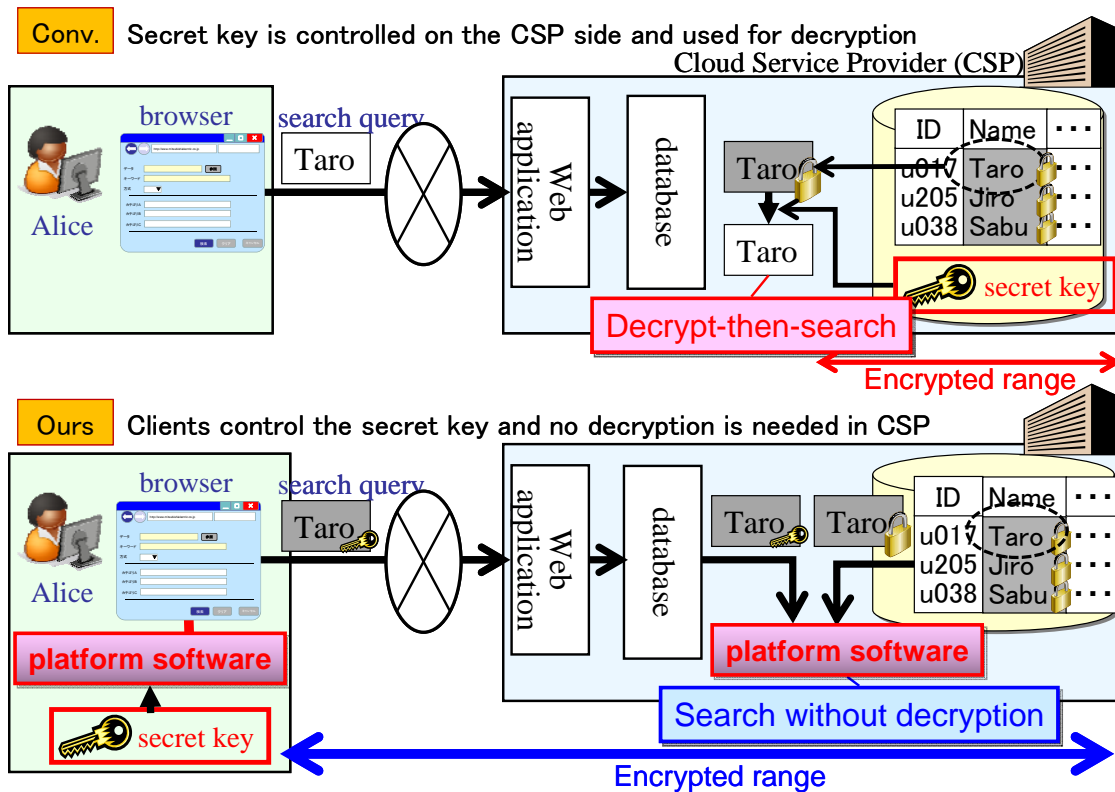
Key Features

1) Robust encryption technology for secure storage in cloud services

The platform software incorporates Mitsubishi Electric's searchable encryption algorithm, which supports simple but useful access control functionality, such as group-based document sharing. The encryption algorithm enables documents to be encrypted so that only the users of designated groups (departments, divisions, etc.) can perform keyword searches.
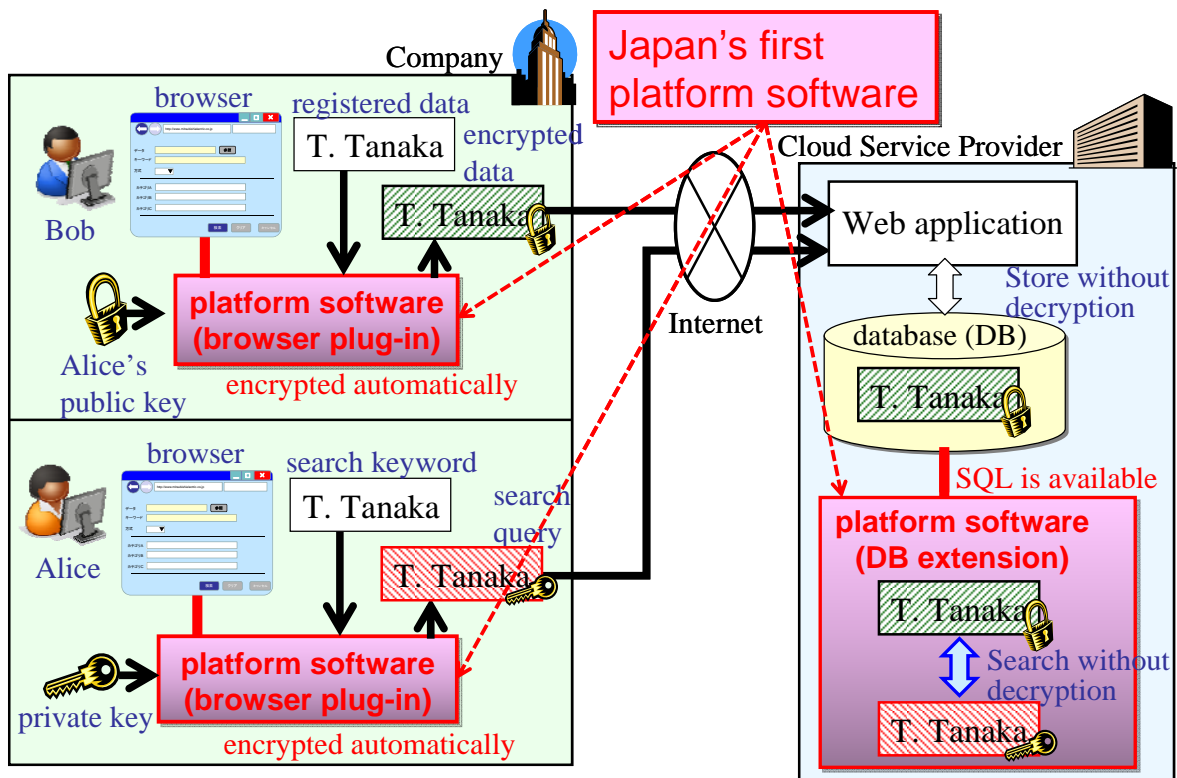
2) Large data searches in 1–3 seconds, or less

Mitsubishi Electric's new index generation software for searchable encryption allows authorized users to issue a ticket, which is then used by the cloud service provider to generate an index from the encrypted data for accelerated searches. Each one-bit index accelerates the search by a factor of approximately two. Mitsubishi Electric also has implemented a new automatic parallelization system in the platform. As a result, searches require no more than 1–3 seconds for 100,000 pieces of data, which is several hundred times faster than Mitsubishi Electric's prototype system utilized for research.
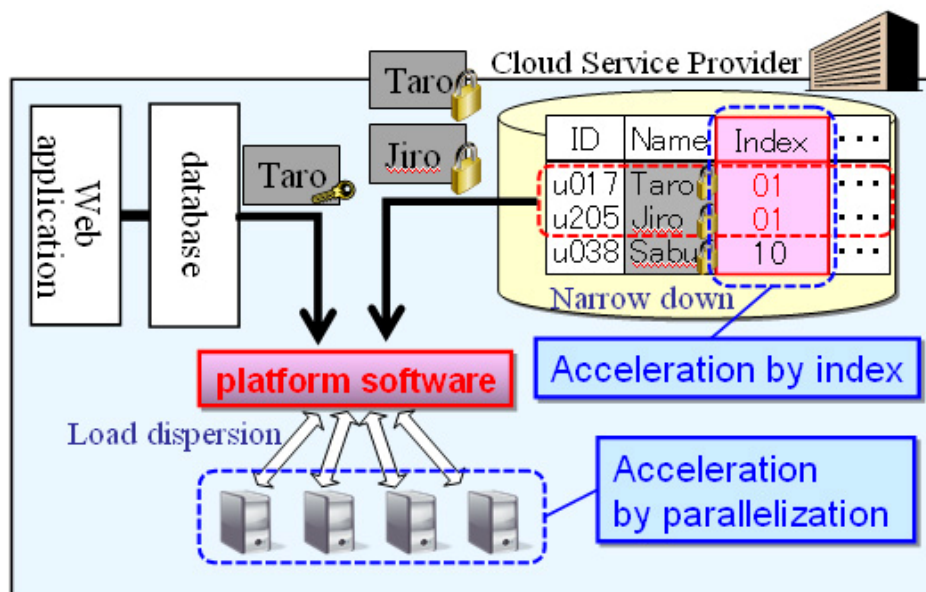
3) No dedicated application required in client PCs

Encryption and key management programs are implemented as an ActiveX plug-in module, so users on the client side are not required to install dedicated application software in their PCs. Instead, they access the cloud services via Internet Explorer. Also, the platform can be used with commercial DBMS software, and SQL languages can be used to access the platform.

Patents

Pending patents for the technology total three in Japan and two overseas.

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 3,567.1 billion yen (US$ 37.9 billion*) in the fiscal year ended March 31, 2013. For more information visit http://www.MitsubishiElectric.com
*At an exchange rate of 94 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2013

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