June 7, 2018

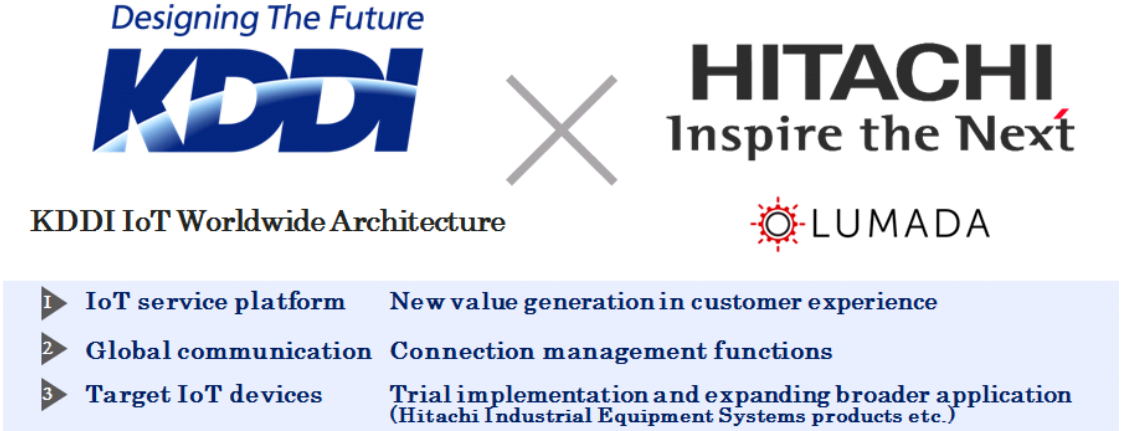
News Release

KDDI CORPORATION
Hitachi, Ltd.

KDDI, Hitachi Collaborate on Global IoT Business

～Contribute to the business transformation of global corporations by linking the KDDI IoT Worldwide Architecture with Hitachi's Lumada ～

KDDI CORPORATION (Headquarters: Chiyoda, Tokyo, President: Makoto Takahashi, "KDDI") and Hitachi, Ltd. (Headquarters: Chiyoda, Tokyo, President & CEO: Toshiaki Higashihara, "Hitachi") are joining forces with the KDDI IoT Worldwide Architecture[1], which provides corporate clients that do business globally with services ranging across IoT connectivity, servicing and data analysis. Going forward, through a broad range of collaborative efforts in diverse areas of industry, KDDI and Hitachi will contribute to the clients' new value creation and business transformation.



Overview of KDDI, Hitachi Collaboration

In recent years, advances in IoT technology, which connects just about anything to the Internet, has made it possible to gather and analyze a vast array of richly varied data from products, facilities and equipment. This, in turn, makes it possible to develop new services and transform business models, which has accelerated the efforts of all companies to create new value.

KDDI is promoting an IoT Worldwide Architecture that will provide services ranging from IoT connectivity to data analysis, enabling worldwide connectivity that links vehicles, industrial machinery and a range of other "things" despite country-by-country differences in telecommunication connectivity standards.
Furthermore, to build the Global Communication Platform, which is the core of this Architecture, KDDI has employed Hitachi`s technology for an important element that enables centralized IoT connection management across the telecommunication carriers plugged into that Platform from each country.

In May 2016, Hitachi began offering Lumada, an IoT platform created through a blending of Hitachi's accumulated operational technology in the manufacturing industry, along with IT expertise which include AI, Big Data analysis and other state-of-the-art digital technologies. Lumada is characterized by an open and adaptable architecture, which simplifies linking with a wide range of other platforms and applications in various industries.

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Up to now, Hitachi has collaborated with diverse partners in Japan and abroad in a wide variety of fields, ranging from social infrastructure such as electric power grids, to transportation, manufacturing and distribution. Hitachi has already a track record of more than 500 customer cases[2] where mechanical fault forecasting has improved operational efficiency and traffic information has been used to optimize logistics efficiency.

Linking KDDI's Global Communication Platform with Hitachi's Lumada will enable to support clients in their worldwide IoT business expansion efforts, fully leveraging Hitachi's broad-ranging industrial capacity and proven performance.

The first business effort to result from the new collaboration begins in July 2018, when Hitachi Industrial Equipment Systems Co.,Ltd. (Headquarters: Chiyoda, Tokyo, President: Yutaka Araya , "Hitachi Industrial Equipment Systems") will undertake a trial implementation of Global Communication Platform for industrial inkjet printers, which are deployed worldwide.

Industrial inkjet printers are typically used to print manufacturing lot numbers, expiration dates and other information on food packages. Many of the machines made by Hitachi Industrial Equipment Systems are used overseas. Efforts have been made to support remote monitoring aims to print quality management and stable operational performance. However, issues in connectivity have posed problems for a stable worldwide implementation of such monitoring activities. The ability to make use of Global Communication Platform will ensure a secure, high-quality environment for connectivity, which makes it possible to work with increasingly large volumes of data. As a result, we expect high-quality remote monitoring on a global scale. In the future, Hitachi aims to expand into advanced maintenance services, which include fault forecasting based on specific warning signs and reduction of costs.

KDDI and Hitachi plan to test out the management applications of this Architecture to create new value from the vast and diverse data gleaned from plants and equipment in a wide range of fields such as construction machinery, manufacturing plants, energy, transportation and other forms of social infrastructures. This is a part of a broader effort by KDDI to accelerate the promotion of worldwide IoT business deployment.

1. KDDI Offers Integrated Architecture for Worldwide IoT Accelerating New Value Generation, Efficiency for Global Corporations (http://news.kddi.com/kddi/corporate/english/newsrelease/2018/06/07/3188.html)
2. As of end-March, 2018

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[Attachment]

1. Company roles

(1) KDDI

1. Promotion of KDDI IoT Worldwide Architecture
2. Development and service offering of Global Communication Platform

(2) Hitachi

1. Linking Lumada IoT platform with KDDI's Global Communication Platform
2. Supporting the development of a major element of KDDI`s Global Communication Platform

2. Trial implementation of industrial inkjet printers

(1) Overview

Hitachi Industrial Equipment Systems will use the Global Communication Platform to perform remote monitoring of industrial inkjet printers for one of their clients, a major U.S. food products manufacturer. Conventional efforts in this area faced problems when wired local area network (LAN) systems made it necessary to run cables through factory facilities, and wireless connections posed security challenges and entailed working with complex settings and configurations. This time, the secure, high-quality Global Communication Platform will be utilized, enabling remote monitoring through mobile networks. The trial run will verify the ability of the system to enable management of print quality and equipment functionality at a glance. It will also verify the system's ability to help lower maintenance costs.

(2) Project period

Beginning of July 2018

(3) About industrial inkjet printers

Hitachi Industrial Equipment Systems' industrial inkjet printers are high-speed printers that use a contactless printing method in which ink is propelled through the air onto the printed surface. Its special characteristics include the ability to print at high speeds over surfaces that are rough or have protrusions and indentations, as well as soft and fragile surfaces. Inkjet printing also makes it possible to change settings easily with a touch panel to alter printed text content, character font and size. The printers are used in many countries and regions for a wide range of uses including printing expiration dates on foods and beverage products and pharmaceuticals, as well as printing serial numbers on automotive and electronic parts.

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3. About Global Communication Platform

KDDI's Global Communication Platform provides a worldwide communication environment by making it possible to automatically connect and switch between selected mobile telecommunication providers in various countries and regions. Managing a wide range of IoT devices, KDDI's Global Communication Platform enables integrated management of connectivity statuses and billing statuses of devices, as well as usage histories and user account management. In addition to "things", such as vehicles and construction machines which move from one country or region to another, it also enables integrated management of a wide range of industrial equipment that is shipped worldwide. The platform eliminates the necessity to consider varying mobile telecommunications environments, thus supporting seamless global business deployment and operation. The platform has been adopted as the basis for the Connected Car concept put forward by Toyota Motor Corporation and KDDI. In the future, KDDI plans to expand its application beyond vehicles to a wide range of industrial fields.
In developing new Global Communication Platform, KDDI has employed Lumada technology and know-how by Hitachi.[3]

3. Hitachi Application Framework/Event Driven Computing (HAF/EDC), core Lumada technologies, will be applied for these purposes.

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Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.
