

March 6, 2017 Marubeni Corporation

Marubeni Corporation and Oki Electric Industry Co., Ltd. begin social experiment of "Vehicle operation management support service via the ETC2.0 system" publically offered by Ministry of Land, Infrastructure, Transport and Tourism.

Marubeni Corporation ("Marubeni") and Oki Electric Industry Co., Ltd. ("OKI") cooperatively began working on the second term social experiment of "Vehicle operation management support service via the ETC2.0^{*2} system" publicly offered by National Institute for Land and Infrastructure Management ("the experiment"^{*1}) in March, 2017.

Marubeni and OKI combine the wireless communication service of Marubeni's fully-owned subsidiary, Marubeni Wireless Communications Inc. ("MWC") with Location Communication & Mobility "LocoMobi" for the ETC2.0 system of OKI, providing vehicle operation management support service for both Marubeni's fully-owned subsidiary, MARUBENI LOGISTICS CORPORATION ("MLOGI") and ARTERIA Networks Corporation ("ARTERIA") of Marubeni Group.

MLOGI and ARTERIA have conducted operation management of dozens of vehicles. In the experiment, Marubeni and OKI provide vehicle operation management support service including dynamic state management support service utilizing the ETC2.0 system, aiming to improve transportation efficiency as well as evaluate services utilizing the ETC2.0 system.

Marubeni and OKI aim to develop IoT solution beyond the territory of the ETC2.0 system, which helps logistics operators improve transportation efficiency, create daily reports, operate vehicles safely and work on personnel management, improving work environment facing complication of operation and labor shortage through correcting, analyzing and utilizing Big Data such as location and acceleration information via smartphones, fuel consumption and speed information via OBD-II^{*3} and heart rate information via wearable devices.

Marubeni has been providing a wireless communication service of about 530,000 lines as wholesale as of February, 2017, through MWC, which is MVNO and MVNE (*) to several distributors and has begun supply of IoT services for location information management and video monitoring. Over the next few years, Marubeni, utilizing Marubeni Group resources, will provide a one-stop service to customers ranging from wireless devices and lines to IoT solutions, including cloud and application development.

OKI has been, through its effort on the transportation and infrastructure business, providing a toll collection system of ETC and ETC2.0 for road administrators such as Ministry of Land, Infrastructure, Transport and Tourism and road operation companies. OKI has been working on the application of car information gathered through the ETC2.0 system to private companies'



services since last year and as a part of this effort has joined this experiment. Over the next few years, OKI has aimed to develop a variety of IoT solutions utilizing cars as a sensor in collaboration with its customers.

- * Oki Electric Industry Co., Ltd. is commonly called OKI.
- * Other company names and product names are generally trademarks or registered trademarks.

*1. the experiment

Experiment for improving transportation efficiency of trucks. In this experiment, companies operating cars with ETC2.0 on-board devices are provided with location and acceleration information for improving transportation efficiency and safe car operation. Please refer to:

http://www.mlit.go.jp/report/press/road01_hh_000701.html

*2. ETC2.0

A system working as a toll collection system, helping drivers avoid traffic jams, drive safely, involving new services utilizing routing information gathered via ITS spots.

*3. OBD-II

Specification with cars for fault diagnosis; connector and protocol standardized. It is not only expected for fault diagnosis but also vehicle operation management.

*4. MVNO

Wireless communications services provider that does not own the wireless network infrastructure over which the MVNO provides services to its customers.

MVNE

Company that provides network infrastructure and other related services, such as network subsystems, business support systems, provisioning, administration and operations support systems to mobile virtual network operators (MVNOs).

■Oki Electric Industry Co., Ltd.

Head Office : 1-7-12 Toranomon, Minato-ku, Tokyo, Japan

President : Shinya Kamagami Foundation : January 1881 Capital : JPY 44,000 million

Description : Manufacturing and sales of products, technologies, software and solutions for

of business telecommunications systems and information systems, including IT services distribution

and constructions related to these businesses.

HP: http://www.oki.com/jp/

Marubeni

■ Marubeni Wireless Communications Inc.

Head Office : 1-17-18, Shinkawa, Chuo-ku, Tokyo, Japan

President : Satoshi Yamagiwa
Foundation : February 2012
Capital : JPY 15 million

Description : Wireless communication service business(MVNO, MVNE)

of business

HP : http://marubeni-wireless.com/

■MARUBENI LOGISTICS CORPORATION

Head Office : 3-13, Kanda-nishikicho, Chiyoda-ku, Tokyo, Japan

President : Atsushi Shimizu
Foundation : December 2004
Capital : JPY 200 million

Description : International combined transport operation (NVOCC), 3PL (Third-party Logistics),

of business ocean & air freight forwarding, consultancy relating to logistics

HP: http://www.marubeni-logi.com/

■ ARTERIA Networks Corporation

Head Office : 6-9-8, Shimbashi, Minato-ku, Tokyo, Japan

President : Tomitaro Anzai
Foundation : November 1997
Capital : JPY 5,608 million

Description : Telecommunication business, data communication service business, data center

of business business

HP: https://www.arteria-net.com/