

March 18, 2020

MIRAIT Holdings Corporation

**[MIRAIT Corporation]****Provides System for Precise Tracking of Positional Information as a Partner Company for “Team Position Management Proof of Concept” in Emergency Service Training by the Tokyo Fire Department**

MIRAIT Corporation (head office: Koto-ku, Tokyo; President: Toshiki Nakayama; “MIRAIT”) implemented a Team Position Management Proof of Concept (PoC) conducted in an emergency services training session by the Tokyo Fire Department training team conducted at the Tokyo Fire Department Shiomi Training Center (Koto-ku, Tokyo) on February 21, 2020. The PoC provided a system for precise tracking of positional information of “people and goods” outdoors using LoRaWAN and high precision GNSS devices independently developed by MIRAIT as a partner company.

MIRAIT is verifying the utility of LPWA communications technology for realizing long-distance data communication with low power consumption at low cost based on the recent rise in the need for utilization of IoT. As part of this, a LoRaWAN<sup>TM\*1</sup> network was established in the Tokyo Bay area (Toyosu, Shinkiba, Edagawa) centered on Toyosu where the head office is located in November 2017. Utilizing this communication network, a free support service for supporting the LoRaWAN<sup>TM\*1</sup> network and network connectivity for partner companies, etc. jointly conducting field trials. Specific examples of utilization of LoRaWAN<sup>TM</sup> being worked on include field trials for visualization of information on vacancy of parking areas, monitoring of the deterioration of solar panels, and transmission of running data from smart shoes.

The mission of Tokyo Fire Department<sup>\*2</sup> is the protection of the lives, physical wellbeing and property of people living, working and visiting Tokyo, which is one of the world’s largest cities, from all disasters, and performs life-saving operations such as firefighting, relief activities and rescue activities, and a variety of operations for preventing damage from fire

and disasters.

It is necessary to have overall control for having a broad perspective of fire and disaster sites, swiftly determining actual conditions and making decisions based on conditions, and issuing commands and orders to teams in the field. In an effort to seek ways to perform swift and multifaceted determination of actual conditions through audio reports via radio and visual inspection, the Tokyo Fire Department conducted the Team Position Management Proof of Concept at the Tokyo Fire Department Shiomi Training Center.

As a partner company, MIRAIT provided the local LoRaWAN area on a LoRaWAN gateway and also provided independently developed tracker devices and a cloud system for tracking positional information made up of LoRaWAN and high-precision GNSS devices carried by team members.

MIRAIT will utilize the knowledge gained through this PoC to continually enhance LPWA networking technology and IoT technology, with the aim of working with partners to create new value and contribute to the realization of an enriched society.

**\*1 LoRaWAN™**

LoRaWAN™ is a communication standard for IoT established by the members of the LoRa Alliance including semiconductor manufacturer Semtech and IBM. LoRaWAN™ is a trademark of Semtech Corporation.

**\*2 Tokyo Fire Department**

Japan's largest firefighting organization with approximately 18,000 employees, making it one of the largest in the world. It conducts activities to protect the capital, Tokyo, which is one of the largest metropolises in the world, from all kinds of disaster, and communicates information on advanced disaster prevention expertise and technology.

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■ Scenes from the Team Position Management Proof of Concept

Implementation date: February 21, 2020

Implementation location: Tokyo Fire Department Shiomi Training Center, Koto-ku, Tokyo



Fig. 1: Mobilizing



Fig. 2: Training



Fig. 3: Training



Fig. 4: Screen of the positional information tracking system



Fig. 5: Some of the equipment used

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