

For Immediate Release

June 27, 2023
Internet Initiative Japan Inc.

IIJ Begins Provision of a Multi-Profile SIM That Maintains Mobile Service by Switching Cellular Networks on One SIM Card When Network Trouble Occurs

Adopted in CONEXIO's edge computing gateway

TOKYO - June 27, 2023 - Internet Initiative Japan Inc. (TSE Prime: 3774), one of Japan's leading Internet access and comprehensive network solutions providers, today announced that it has begun providing a multi-profile SIM, enabling connection to multiple cellular networks with one SIM card, for providers of network equipment and IoT terminals. A multi-profile SIM is able to store on a single SIM card the profiles (information for connecting to a cellular network) of multiple communication service providers. Profiles can be switched freely by command execution on the terminal end. In the case of a terminal such as an IoT gateway, for example, by embedding a program that switches profiles when an outage is detected in the main cellular network, communication can be maintained by switching to a sub-link, without human intervention.

Following the development of this SIM, from October 2022 IIJ conducted a PoC (Proof of Concept) with CONEXIO Corporation. It has now been officially adopted in that company's edge computing gateway CONEXIOBlackBear for use as its mobile link automatic switching function. CONEXIOBlackBear is an IoT gateway for collecting data from sensors installed in factories, plants or other workplaces. Mounting the SIM in this gateway helps to ensure stable, continuous data collection by automatically switching to a sub-link in case the main link suffers an outage due to a disaster or cellular network equipment trouble.

Advantages of a multi-profile SIM

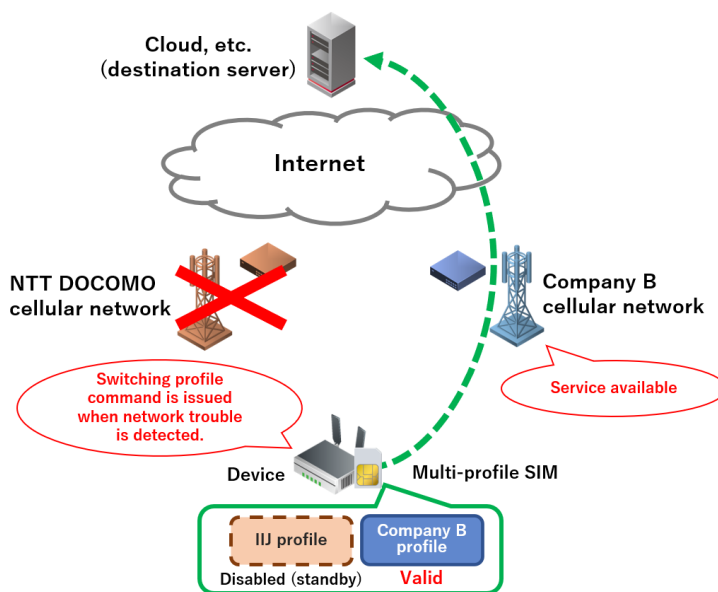
- Can be used without changing hardware design
With the dual SIM approach, connectivity can be assured in the event of a network outage by inserting two SIM cards in the device, each capable of connecting to a different network. Since this approach requires the device to have two SIM slots, however, not only does the hardware design need to be changed; higher component costs and bigger circuit board footprint are also hurdles to be overcome. With a multi-profile SIM, only one SIM slot is required for switching between multiple cellular networks, eliminating the need for hardware changes. Profile switching can be performed by sending a simple command from a program in the device, so that existing devices can support the multi-profile SIM with only minor software changes.
- More reliable than roaming
Cellular roaming is another way to connect to multiple cellular networks with one SIM

card. However, roaming requires a subscriber database operated by the roaming provider (HLR/HSS=Home Location Register/Home Subscriber Server, located in the mobile operator's core network for managing SIM card information). If network trouble prevents normal operation of this subscriber database, the roaming service will be unavailable. With a multi-profile SIM, the subscriber databases for each profile are independent from each other, so that even if network trouble affects the subscriber database that manages one profile, connectivity can be maintained by switching to the other profile.

- Lower communication charges

While the communication charges for roaming services tend to be expensive, with a multi-profile SIM those charges can be reduced to a reasonable level by selecting the non-roaming IJ profile as the main profile. Moreover, unintended excessive use can be prevented by taking advantage of such functions as alarm mail or automatic stopping of communication in case of over-use.

Service Illustration



For Reference

Press release of October 25, 2022:

“IIJ Develops a Multi-Profile SIM That Enables Connection to Multiple Cellular Networks”

<https://www.ij.ad.jp/en/news/pressrelease/2022/1025.html>

■ About CONEXIO Corporation

Since its establishment in 1997, CONEXIO has been supporting the business activities of its customers in the field of enterprise mobile solutions, by proposing solution services using smart devices and providing managed mobile services and device kitting matched to customer needs.

➤ Corporate Information: <https://www.conexio.co.jp/>

➤ About CONEXIOBlackBear: <https://tribe-biz.jp/service/MPS>

About IJ

Founded in 1992, IJ is one of Japan's leading Internet-access and comprehensive network solutions providers. IJ and its group companies provide total network solutions that mainly cater to high-end corporate customers. IJ's services include high-quality Internet connectivity services, systems integration, cloud computing services, security services and mobile services. Moreover, IJ has built one of the largest Internet backbone networks in Japan that is connected to the United States, the United Kingdom and Asia. IJ was listed on the Prime Market of the Tokyo Stock Exchange in 2022. For more information about IJ, visit the official website: <https://www.ij.ad.jp/en/>.

The statements within this release contain forward-looking statements about our future plans that involve risk and uncertainty. These statements may differ materially from actual future events or results.

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