For Immediate Release

IIJ Opens the Shiroi Wireless Campus
for a Hands-on Experience of the Latest Wireless Technology
—Applying for a local 5G wireless license for the Shiroi Data Center Campus—

TOKYO—November 6, 2020—Internet Initiative Japan Inc. (IIJ, TSE1: 3774), one of Japan's leading Internet access and comprehensive network solutions providers, today announced that, starting November 9, 2020, it will open its mobile technology testbed "Shiroi Wireless Campus" to the public, so they can experience the latest mobile technologies. The Shiroi Wireless Campus is a part of the Shiroi Data Center Campus (Shiroi DCC), which began operations in May 2019 in Shiroi-city, Chiba Prefecture.

Having positioned the Shiroi DCC since its opening as a place to conduct experiments necessary to developing new services, IIJ built an experimental site with indoor and outdoor wireless base stations. There, IIJ will showcase various demonstrations using mobile technologies. The Shiroi Wireless Campus will be open to the public as a facility where customers can experience hands-on the latest wireless communication technology.

Background

Many IIJ customers have expressed interest in trying local 5G, private LTE (sXGP), and other advanced wireless communication technologies, but in most cases, they have not yet considered their specific usage scenarios and implementation requirements. This situation is due to the fact that many advanced wireless technologies are in the processes of standardization, product development, and under regulatory discussions. That has limited the number of compatible devices and facilities available in the market, making it difficult to verify and evaluate wireless technologies' capabilities, and to get a clear picture of how the technology would work in practice. Therefore, IIJ thought to gather a wide variety of wireless communication technologies in a single location and to provide a place for customers to experience the features and capabilities of each through demonstrations and exhibitions. It can be used as a testbed environment for wireless device manufacturers to verify new device operations and test interoperability with core network, where they can apply to conduct proof-of-concept activities of wireless communication network in collaboration with their customers.
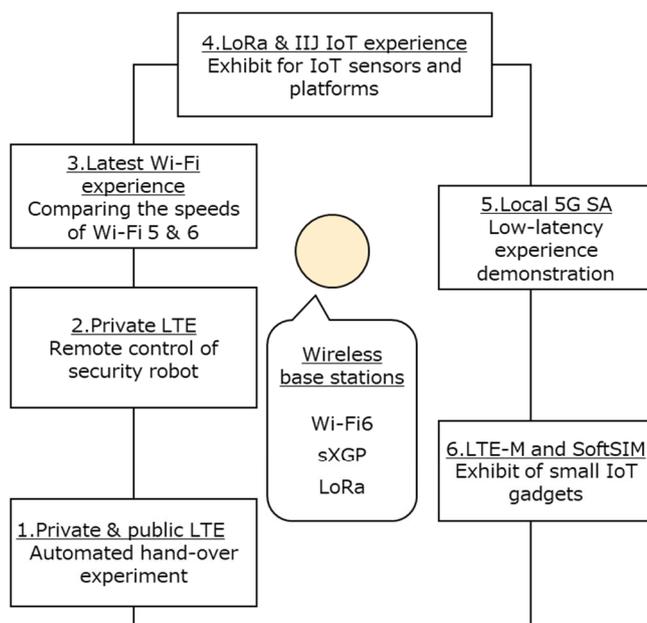
Exhibits

The following demonstrations are available:

1. Automated hand-over between private and public LTE
   Visitors can experience automated switchover of the radio networks when moving between private LTE and public LTE areas[*1] reciprocally.

2. Remote monitoring and control of security robots via private LTE
   Private-LTE-controlled security robots (ALSOK's REBORG-Z) patrol around the Shiroi DCC and attend to visitors. In the future, it is planning to use multiple private LTE base stations to demonstrate the seamless movement of security robots inside and outside the building, as well as a secure communication environment on a closed network.

3. Wi-Fi6
   This demonstration compares Wi-Fi6's capabilities with Wi-Fi5's speed, showing a significant communication efficiency improvement in crowded environments.

4. LoRaWAN®, a wireless communication technology for the IoT
   This exhibit showcases LoRaWAN®-compatible IoT sensors and a user interface of IIJ's IoT service.

5. Video transmission over a wired network that emulates local 5G StandAlone (SA) radio network
   This demonstration uses 3D motion sensors to allow computer operation through finger movements. Real-time processing of 3D dynamic analysis using MEC[*2] that combines with the 5G SA mobile system allows users to experience a world of ultra-low latency and enhanced broadband local 5G networks.

6. Cellular LPWA (LTE-M) and SoftSIM
   This exhibit introduces a gadget that combines cellular LPWA, which enables wide coverage and low power consumption through mobile carriers' wireless networks, with IIJ's SoftSIM, which is useful for reducing the size and power consumption of terminal equipment.

   *1 Press release dated June 5, 2019
       "The University of Tokyo and IIJ to Begin Japan's First PoC Trial Linking Public and Private LTE"
       https://www.iij.ad.jp/news/pressrelease/2019/0605.html (Japanese text)
   *2 Multi-access edge computing: A technology that enables data processing with ultra-low latency by distributing decentralized servers to have them close to computing devices.

Floor plan


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         ┌────────────────────────────────┐
         │ 4.LoRa & IIJ IoT experience     │
         │ Exhibit for IoT sensors and     │
         │ platforms                       │
         └────────────────────────────────┘
┌──────────────────┐           ┌──────────────────┐
│ 3.Latest Wi-Fi   │           │ 5.Local 5G SA    │
│ experience       │   ◯       │ Low-latency      │
│ Comparing the    │           │ experience       │
│ speeds of        │           │ demonstration    │
│ Wi-Fi 5 & 6      │           └──────────────────┘
└──────────────────┘   Wireless base stations
┌──────────────────┐   Wi-Fi6
│ 2.Private LTE    │   sXGP
│ Remote control   │   LoRa
│ of security robot│           ┌──────────────────┐
└──────────────────┘           │ 6.LTE-M and      │
┌──────────────────┐           │ SoftSIM          │
│ 1.Private & public│          │ Exhibit of small │
│ LTE              │           │ IoT gadgets      │
│ Automated hand-  │           └──────────────────┘
│ over experiment  │
└──────────────────┘
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Outdoor facilities
(Wi-Fi 4/5 access points and LoRa antennae for IoT)

Exhibition room

➤ Video showcasing the Shiroi Wireless Campus
   https://www.iij.ad.jp/DC/gallery/movies.html (Japanese text)

Future plans for local 5G

Regarding the local 5G Non-StandAlone (NSA) installation, IIJ plans to procure regional BWA[*3] and 5G NR[*4] wireless base stations from Grape One Co., Ltd., a joint venture between IIJ and Sumitomo Corporation. In addition, IIJ is currently in the process of applying for a local 5G frequency assignment for the Shiroi Data Center.

Regarding the future local 5G SA installation, IIJ plans, starting in June 2021, to build a testing environment using 5G NR that combines core networks and wireless base stations provided by domestic manufacturers. This project is in line with the allocation of sub-6 GHz frequencies (the sub-6 band) for Local 5G scheduled for the end of 2020.

IIJ will continue to actively promote and disseminate new wireless communication technologies through research and development, and through demonstrations at the Shiroi Wireless Campus.

About IIJ

Founded in 1992, IIJ is one of Japan's leading Internet-access and comprehensive network solutions providers. IIJ and its group companies provide total network solutions that mainly cater to high-end corporate customers. IIJ's services include high-quality Internet connectivity services, systems integration, cloud computing services, security services and mobile services. Moreover, IIJ has built one of the largest Internet backbone networks in Japan that is connected to the United States, the United Kingdom and Asia. IIJ was listed on the First Section of the Tokyo Stock Exchange in 2006. For more information about IIJ, visit the IIJ Web site at https://www.iij.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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