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TOPIC

Announcement of the Local 5G Implementation Guidelines

- Institutional Development for Local 5G implementation

1. Background and Outline of Revision

The Information and Communications Council has been studying the technical conditions of a new-generation mobile communications system since October 2016, with the aim of realizing as early as possible a new wireless system that will enable the full-scale arrival of the IoT era. This era will see the needs for future radio wave use increase, and lead to a society where everything around us is connected to the Internet. Japan plans to roll out the fifth-generation mobile communications system (hereinafter referred to as “5G”) in 2020. The performance features of 5G, such as ultra-speed, multi-connection, and ultra-low latency, are expected to solve various industrial applications and regional challenges.

In December 2018 the Ministry of Internal Affairs and Communications (MIC) began to study the basic concept, basic licensing policy, and technical conditions for local 5G that various actors, such as local governments and local companies, can flexibly construct and use in order to meet the diverse needs for 5G. As a result, MIC received a partial report on June 18, 2019, from the Information and Communications Council in regard to the technical requirements for the 5G mobile communications system that should be available to various entities according to their regional and individual needs (local 5G).

With consideration for this partial report, MIC drafted a ministerial ordinance, as well as pertinent conditions, for a partial revision to the Regulations for Enforcement of the Radio Act in order to make institutional development necessary for the introduction of local 5G. Furthermore, from the perspective of promoting the entry of local 5G, MIC drafted the Guidelines for Local 5G Implementation for the purpose of clarifying the applicability of the Radio Act, and the Telecommunications Business Act, to the application procedures for radio station licenses, and also to define the concept of introducing local 5G as a telecommunications business.

MIC finalized and announced the Local 5G Implementation Guidelines on December 17, 2019, based on the results of public comments.

MIC issued and implemented relevant ministerial ordinances and notifications on December 24, 2019, and begin accepting applications for radio station licenses for local 5G.

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2. Outline of the Local 5G Implementation Guidelines

(1) Local 5G Licensees

- For the time being, local 5G will basically be used within licensees' own facilities or land.
- Facilities and landowners may obtain local 5G radio station licenses.
- Other parties may obtain licenses and construct systems at the request of facilities and landowners.
- Mobile network operators (MNO) (i.e., network operators using frequency bands for mobile phone services and broadband wireless access, except for a range of 2575 to 2595 MHz) cannot obtain local 5G licenses.

(2) Procedures for Radio Act

- An application for radio station licenses and prior countermeasures against radio interference will be required. (Usual license processing period is about 6 weeks.)
- Base stations require a separate license application. Terminals are subject to a blanket license using a simplified procedure.
- An annual radio usage fee for local 5G is 2,600 Japanese yen for base stations and 370 Japanese yen for terminals (with a blanket license).

(3) Procedures for Telecommunications Business Act

- Depending on the form of service to realize local 5G, a telecommunications business registration or notification is required.

(4) Collaboration with Mobile Network Operators (MNO)

- From the viewpoint of promoting the provision of local 5G, support from mobile network operators is possible. However, the use of local 5G as a supplement to their own services is prohibited.
- From the standpoint of ensuring fair competition, local 5G operators are not allowed to discriminate unfairly regarding roaming connection conditions (e.g., exclusive cooperation between specific operators).
- Substantial mobile communication services from NTT East and NTT West through collaboration with mobile network operators are prohibited.

Local 5G

- Local 5G enables various players, such as **local enterprises or governments**, based on the individual needs of regions and industries, to flexibly **establish their own networks using their own facilities and premises**.

[Local 5G Features]

- Unlike 5G services by mobile carriers, Local 5G enables the following:
 - The establishment of 5G systems **prior to area coverage by mobile carriers**;
 - The establishment of **customized networks** with flexible specifications that meet local needs
 - The operation of networks **less vulnerable to communication failures and disasters**.
- Compared to Wi-Fi networks, **more stable networks based on the radio station license** will be available to Local 5G operators

Operates as a private 5G network inside facilities and premises

General Constructor Remote Control

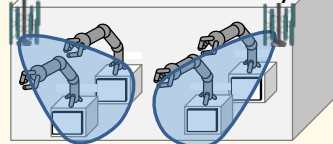


Construction sites

Distant Control



Smart Factory



Factories

Factory Operator Smart Factory



Infrastructure Monitoring

River Supervision

Agricultures

Smart Agriculture

Agriculture Smart Agriculture



Local Government Remote Monitoring



Disaster prevention

Sensors, 4K/8K Cameras

