

Advantages and Disadvantages of 5G

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Q 3-02

Even with the adoption of 5G, it is expected that utilities will continue to adopt a mix of radio technologies for different purposes. Describe the differences, advantages, and disadvantages between 5G and other wireless radio technologies in the context of power utility use cases.

Answer

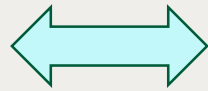
1. The advantages of deploying 5G include the ability to provide high-capacity, multi-terminal connections, and ultra-low latency communications, as well as network slicing, which divides the bandwidth to allow stable transmission of various communications with different requirements.
2. Although multiple wireless technology configurations have been adopted, they will be consolidated into 5G, enabling the streamlining and cost reduction of network systems. On the other hand, it is assumed that 5G-compatible receiver terminals will be required, and in order to cover a wider area, the number of base stations is expected to increase, resulting in higher costs. This is a disadvantage.

Group Discussion Meeting

Network Slicing

Dividing the bandwidth to offer stable transmission of various communications with different requirements

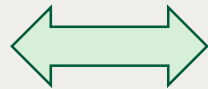
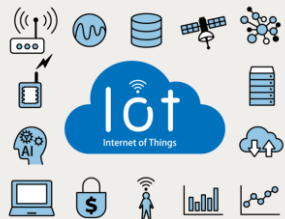
High-definition video communications



eMBB
(enhanced Mobile
Broadband)

Application

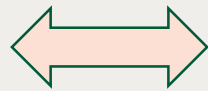
Sensors



mMTC
(massive
Machine-Type
Communication)

Application

Remote / automatic operations



URLLC
(Ultra-Reliable and
Low Latency
Communications)

Application

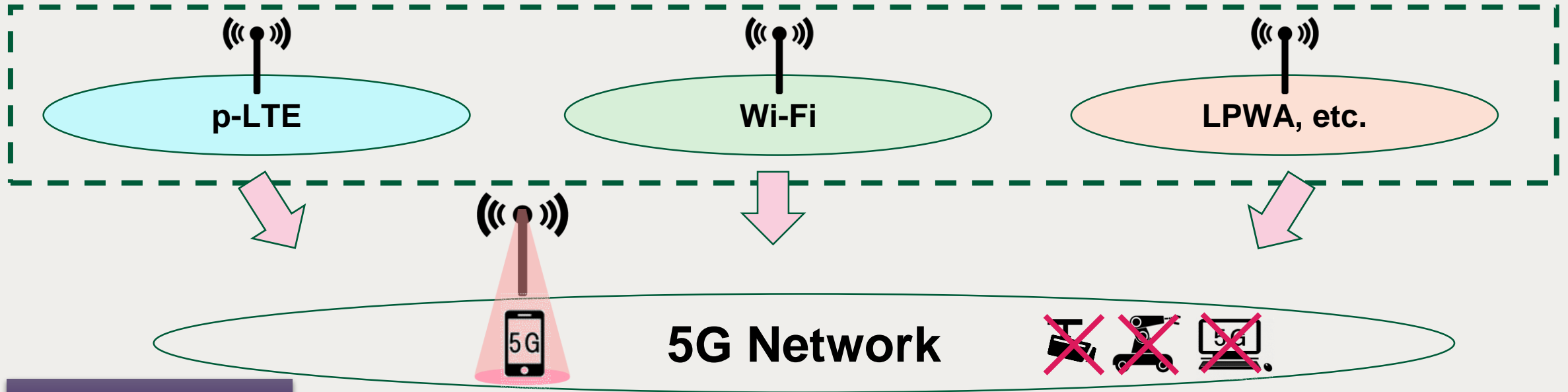
5G network

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2. Advantages and Disadvantages of 5G

Advantage

Consolidating multiple wireless technologies into a 5G network will enable facility streamlining and reduce costs



Disadvantages

- Receiving terminals compatible with 5G may be unavailable or expensive
- 5G reception may be spotty, making extensive coverage difficult

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