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디지털 뉴딜 기술 핵심

Session 3-2

5G 상용화 현황 및 진화 (5G Commercialization and Beyond)

류탁기 팀장 (SK텔레콤)



[요약문]

본 강연에서는 SK 텔레콤의 5G 상용화 현황 및 진화 방향을 발표한다. 세계최초 상용화를 위한 기술 개발 과정과 상용화 이후의 성과 및 현황을 재조명하고, 이를 통해 얻은 Insight 를 공유한다. 또한, SK 텔레콤이 추진하는 5GX Hyper-Connected Network 기술의 특징 및 세부 내용을 살펴보고, 이러한 5G Network 기반에서 AR/VR 및 MEC 기술을 결합한 5G 서비스를 소개하며, SK 텔레콤이 추구하는 5G Vision을 공유한다.

[발표자 약력]

연세대학교 전자공학과 공학사 (1999)
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SK 텔레콤 Network 기술원 매니저 (2010-2018)
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관심분야 : 이동통신, 5G, 무선망, B5G/6G, Network 가상화/지능화, 통신신호처리 등

World's First 5G Commercialization & Beyond

Takki Yu (류탁기)
Head of Access Network Development Team
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SK Telecom's 5G Journey



Galaxy S10 5G



LG V50 ThinQ



Galaxy Note10



Galaxy Fold



Galaxy S20



Galaxy A Quantum



Galaxy Note20

More 5G smartphones with various form factor (Z Flip, Z Fold2, WING, iPhone and B2B Data Devices ready to launch in 2020 H2

SA & 28GHz for B2B Use Cases



2018

2019 H1

2019 H2

2020 H1

2020 H2

Oct. 2018 ★
5G First Call

★ Dec. 2018
World First 5G Commercialization

★ Apr. 2019
World First 5G Smart Phone Launching

★ Jan. 2020

5G SA E2E Field Trial in Commercial Network

28GHz Field Trial in Smart Factory



AI-Machine Vision w/ MEC
Myunghwa Factory



SKT 5GX
Launching Showcase



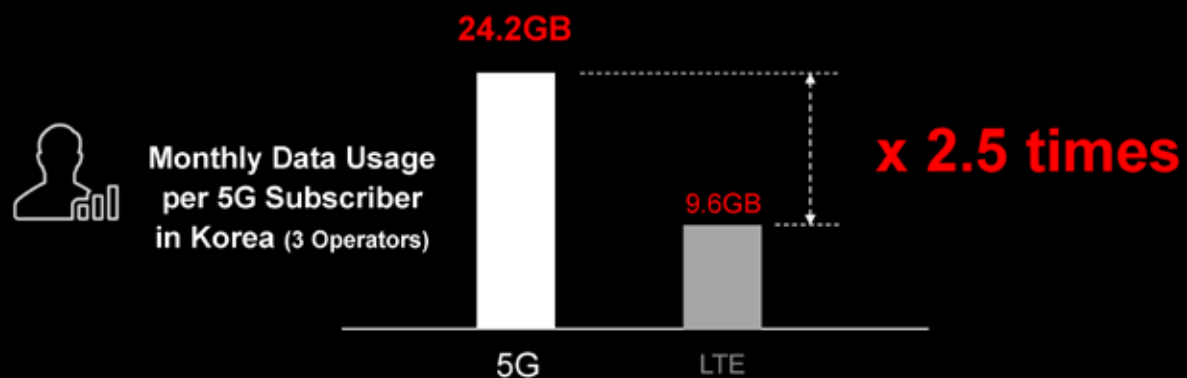
4M+ subscribers
Nation-wide main areas

- Seoul Metropolitan Area + Major Cities
- 5G Clusters (Services, Commercial Districts, Seasonal Spots, B2B)

5G users consumes more traffic than 4G



5G monthly data usage is more than twofold for 5G subscribers in Korea (June 2020)





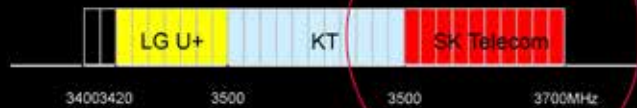
Differentiated Technologies

Enhanced speed

SKT 5G frequency : 100MHz @ 3.5GHz and 800MHz @ 28GHz
+ 5G/LTE Aggregation Technology



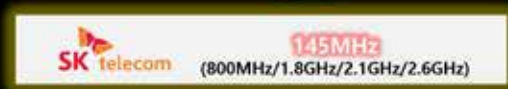
5G NR (3.5GHz)



5G NR (28GHz)



LTE



D/L Peak Data Rate : 2.7Gbps

(Mobile > 1Gbps, Static > 2 Gbps in Commercial Field)

Intelligent stability

Network operation with AI and data analytics



5G TANGO

Powered by AI, Big Data

Data Collection & Preprocessing



Unified Network Monitoring



Analytics w/ ML



Next Best Action



Reliable system



Just-In-Time
N/W Mgmt.



Zero-Touch
Operation

Enhanced customer experience



Traffic Prediction by
Big-data Analysis



Real-time Traffic
Control by AI



Differentiated Services

5GX Boost Park



Ultra high speed of the SKT 5GX in the clusters provides 5G based fun and benefits for 5G customers



Service
Cluster



5G LoL Park,
5G Stadium, AR Zoo

5G xCloud (Cloud Game)



Over high speed and stable 5G networks with mobile edge,
users can enjoy high-end games anytime/anywhere with any devices



Concluding... SK Telecom's 5GX "Leading towards a brighter future"



<https://www.youtube.com/watch?v=2A2qVS20hto>

