#### Third annual ITU IMT-2020/5G Workshop and Demo Day – 2018

# **China Mobile 5G network slicing exploration**

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# Agenda

- Motivation, Concepts and of 5G Network Slicing
- 5G Network Slice: a Basic Service of Serving for Vertical Industry
- 5G End-to-End Network Slicing Technology View
- China Mobile' s Slicing Case/Template Exploration
- Summary







# Motivation

- Traditional network design mode cannot meet the requirements of diverse and isolated 5G scenarios
- 5G network slicing technology is an innovative technology in the 5G era. Based on a common infrastructure, it flexibly provides low-cost, differentiated, customized, and isolated end-to-end networking capabilities to meet the vertical industry's differentiation and customization requirements.









#### **Concepts and Characteristics of 5G Network Slicing**

5G network slicing can provide logically isolated, quality assurance and end-to-end networks/network slice instances with a set of customized network capabilities, including access network, transmission network and core network.



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#### Network Slice as a Service/Product: Basic service for verticals



Network slicing as a service: Industry customers can order 5G network slicing from operators according to service type, service coverage, performance index requirements, and special function feature requirements.

- Basic communication connection service: Provides dedicated network connection services to meet the most fundamental communication requirements of the vertical industry
- Customized value-added services: provide customizable value-added services, provide enhanced service or resource capabilities, and promote business development of the vertical industry
  - Network business services: including high-definition audio and video communications, cache distribution and other services
  - Network resource services: provide resources for deploying industry applications, such as for MEC applications
  - Management services: provide the status of the network, such as capacity, etc.







#### End to end network slicing architecture



China mobile actively promotes the technical standards in 3GPP, ITU-T, NGMN, etc.

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#### The way to create a network slice

- Industry customers order network slices from operators and provide the network requirements, including network slice type, capacity, performance, and related coverage. Operators generate network slices according to their needs.
- Industry customers obtain management information of ordered slices through open interfaces (such as number of access users, etc.)









#### **China Mobile Explores 5G Network slicing Applications**



- China mobile actively promotes the industry application of slicing in GSMA, 5GSA.
  - As one of founding members, china mobile initiates the 5GSA(5G slicing association) in Barcelona MWC 2018







#### **5G Network Slicing Application-Power Grid**









#### **5G Slicing Template- Power Grid Industry**



Note: TIC is telecom integrated cloud







#### **5G Network Slicing Application-VR Live Broadcast**









#### **5G Slicing Template- VR live broadcast**



Note: TIC is telecom integrated cloud







#### **5G Network Slicing Application-AR Game**









#### 5G Slicing Template- Mobile AR Gaming



Note: TIC is telecom integrated cloud







# Summary

- From technical aspects, 5G network slicing, one of key 5G features, is an end-to-end network technology which needs to be promoted from the aspects of standards, technologies and industries.
- From business aspects, 5G network slice is a basic service or product for industry verticals.
- Different from traditional mobile service for public users, industry verticals have their customized requirement with service guarantee, which need deep cooperation between operators and verticals.
  - Exploring key use cases and customers is more important and urgent in the present situation(5GSA, GSMA, etc.)







# Thanks!





