

Industry Ecosystem Over FTTR

2021.6

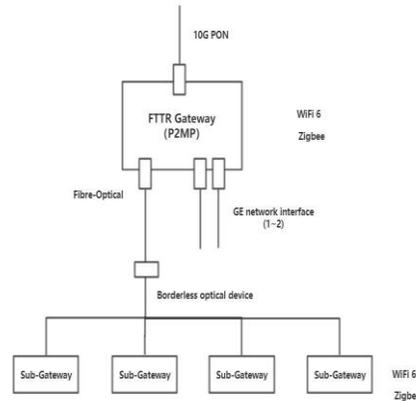
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I .Two solutions of FTTR in China Telecom

P2MP

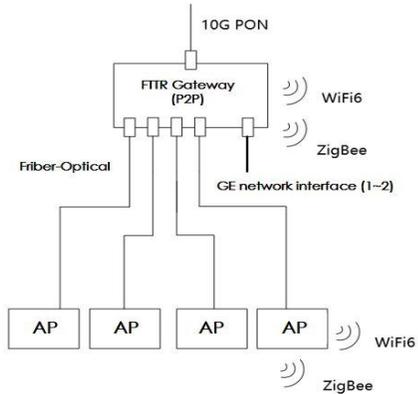
With the main gateway as the core, the home optical fiber network is constructed based on the splitter and single-core bidirectional optical fiber.



- **Roaming delay:** handover delay is 10-30ms
- **Equipment management:** from gateway to manufacturer management platform
- **Power consumption:** main gateway $\leq 20W$; sub-gateway $\leq 12W$

P2P

Upward through 10G EPON connects to OLT, and provides multiple optical fiber interfaces to connect to optical routers.



- **Roaming delay:** handover delay around 30ms
- **Equipment management:** from gateway to manufacturer management platform
- **Power consumption:** main gateway $\leq 25W$; sub-gateway $\leq 15W$

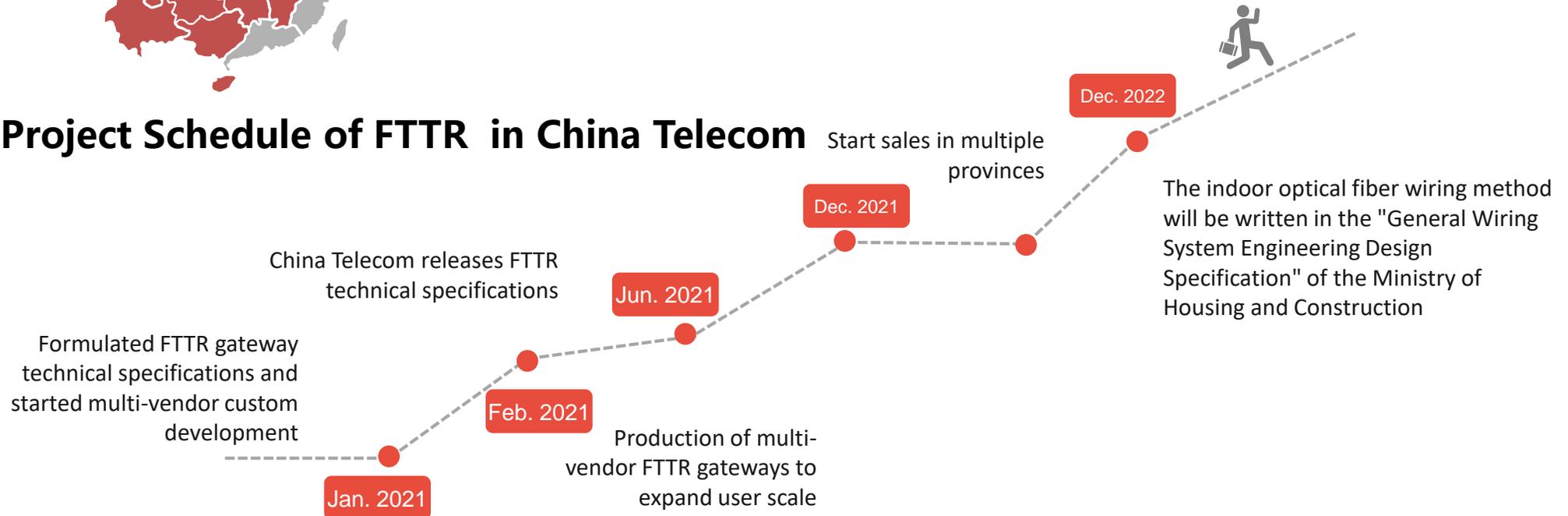
The Status of FTTR in China Telecom

II. Development of FTTR in China



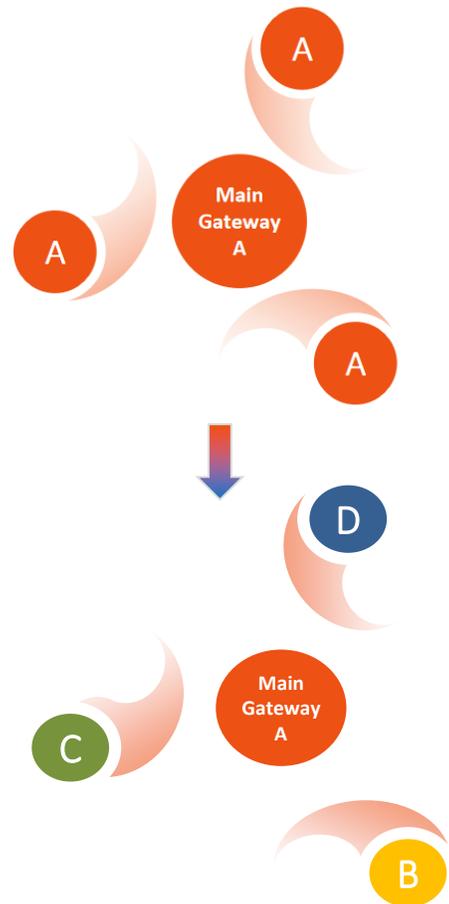
FTTR has been piloted in 20 provinces, including Shanghai, Jiangsu, Zhejiang, Anhui, Jiangxi, Hunan, Guangxi, Hainan, Sichuan, Shanxi, Ningxia, Xinjiang, Hubei, Chongqing, Gansu, Yunnan, Hebei, Henan, Shandong and Heilongjiang.

III. The Project Schedule of FTTR in China Telecom



Decoupling Between Gateways

Decoupling between gateways of different brands is an important process for the development of FTTR



1

Statements

China Telecom statements the FTTR gateway customized to use the same general protocol to avoid entrainment of private protocols in actual applications, which is a prerequisite for ensuring inter-vendor FTTR gateways to achieve interoperability;

2

Release Specification

China Telecom formulated the terminal technology white paper, clarified the FTTR product specifications, optical interface parameters and other requirements, and clarified that the PON protocol can be used to achieve interoperability;

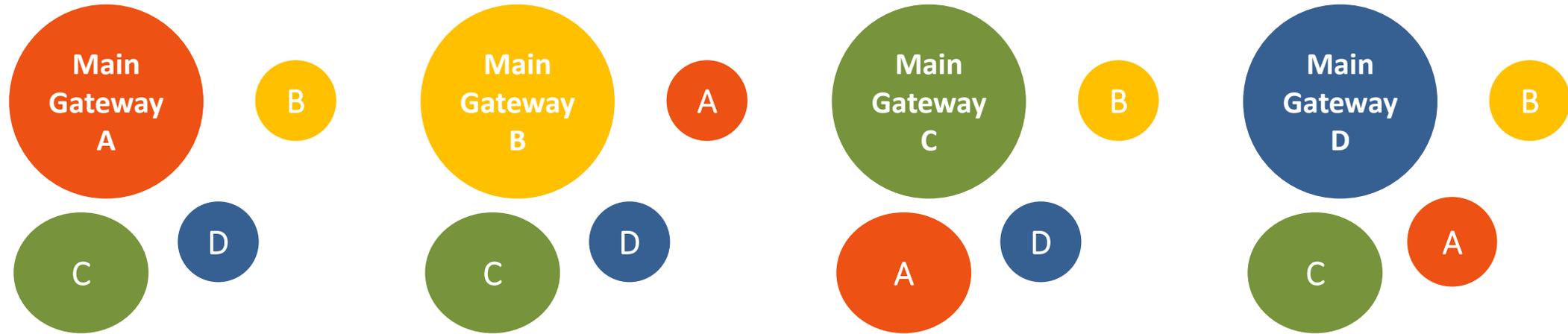
3

Cooperation

At the same time, China Telecom is currently conducting joint development and verification of equipment with a number of major domestic terminal companies.

Interoperability Verification

Verify the interoperability of gateways from different vendors



In the second phase, China Telecom will conduct decoupling verification. The main verification methods are shown in the figure above.

The first set of tests: Brand A is used as the main gateway, and brands B, C, and D are used as sub-gateways.
The second set of tests: Brand B is used as the main gateway, and brands A, C, and D are used as sub-gateways.

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This phase is mainly to eliminate ambiguity in the protocol. Ensure the feasibility of FTTR interoperability

Smart Home Business in FTTR Gateway

Integrate the eos system and support smart home functions



Smart Appliances

The smart camera can upload surveillance video remotely, and the user can see the situation in another place.
The smart gateway can remotely monitor the quality of the gateway and analyze the network situation



Smart TV

HD Smart Network TV
With telecom broadband as the transmission medium, 4K high-definition programs can realize interaction, fitness, video chat, and games on TV.



Whole house WiFi

All rooms are covered with WiFi, It is a service-oriented product provided by China Telecom for home customers, including home network evaluation, personalized customized networking solutions, and gateway installation.



Home cloud storage

Storage capacity can reach T unit, family shared album, multi-screen display storage content, and high-speed transmission content.



Thank You!