Progress on CCSA FTTR related standards

Qiang Cheng

2024-07-10

中国通信标准化协会
China Communications Standards Association

China Communication Standards association（CCSA）

- CCSA is a non-profit organization in China for carrying out standardization activities in the field of Information and Communications Technology (ICT) across China.

- CCSA has more than 700 members, including Telecom/Internet vendors, operators, institutes and universities.
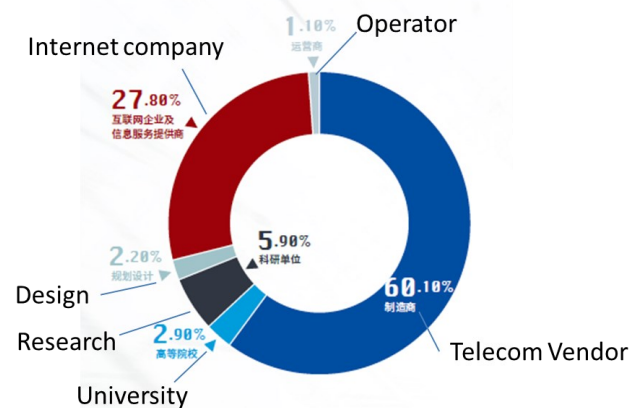
CCSA Technical Committees

TC1: Internet and applications

TC3: Network and service capability

TC4: Power supply and station working environment

TC5: Wireless communication

TC6: Transport and access network

TC7: Network management and operation

TC8: Network & data security

TC9: Electromagnetic Environment & Protection

TC10: Internet of things

TC11: Mobile internet application and terminal

TC12: Aerospace communication
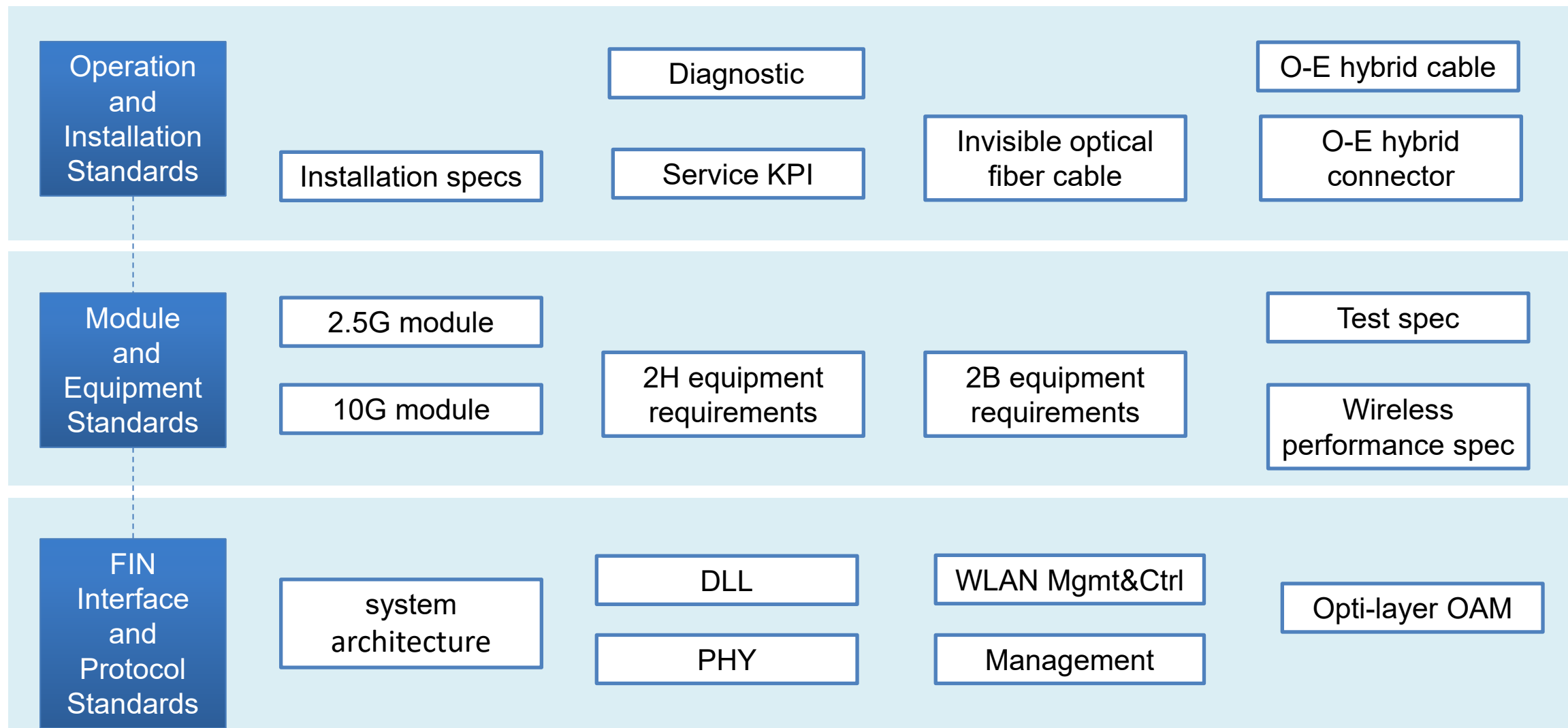
TC13: Industrial Internet

WG1: Transport network

WG2: Access and home network

WG3: Optical fiber and cable

WG4: Optical devices

Standardization of FTTR system is in the scope of TC6

Operator

Internet company

27.80%
互联网企业及
信息服务提供商

1.10%
运营商

5.90%
科研单位

2.20%
规划设计

60.10%
制造商

Design

Research

2.90%
高等院校

University

Telecom Vendor

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Overview of FTTR related standard layout in CCSA

Operation and Installation Standards

Diagnostic

O-E hybrid cable

Installation specs

Service KPI

Invisible optical fiber cable

O-E hybrid connector

Module and Equipment Standards

2.5G module

Test spec

10G module

2H equipment requirements

2B equipment requirements

Wireless performance spec

FIN Interface and Protocol Standards

system architecture

DLL

WLAN Mgmt&Ctrl

Opti-layer OAM

PHY

Management

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CCSA FTTR standards - optical related

- For optical part, CCSA standards correspond to G.fin serial recommendations of ITU-T, and make expand for asymmetry rate.

- Dual rate (asymmetry and symmetry) co-existance is an important feature for M-FTR

| Downstream	2.5Gbit/s		10Gbit/s	
Upstream	1.25Gbit/s	2.5Gbit/s	2.5Gbit/s	10Gbit/s
PHY- class Ra	Yes	Yes	FFS	FFS
PHY- class Rb	Yes	Yes	Yes	Yes
DLL	GEM based		XGEM based	

CCSA FTTR standard roadmap – optical related
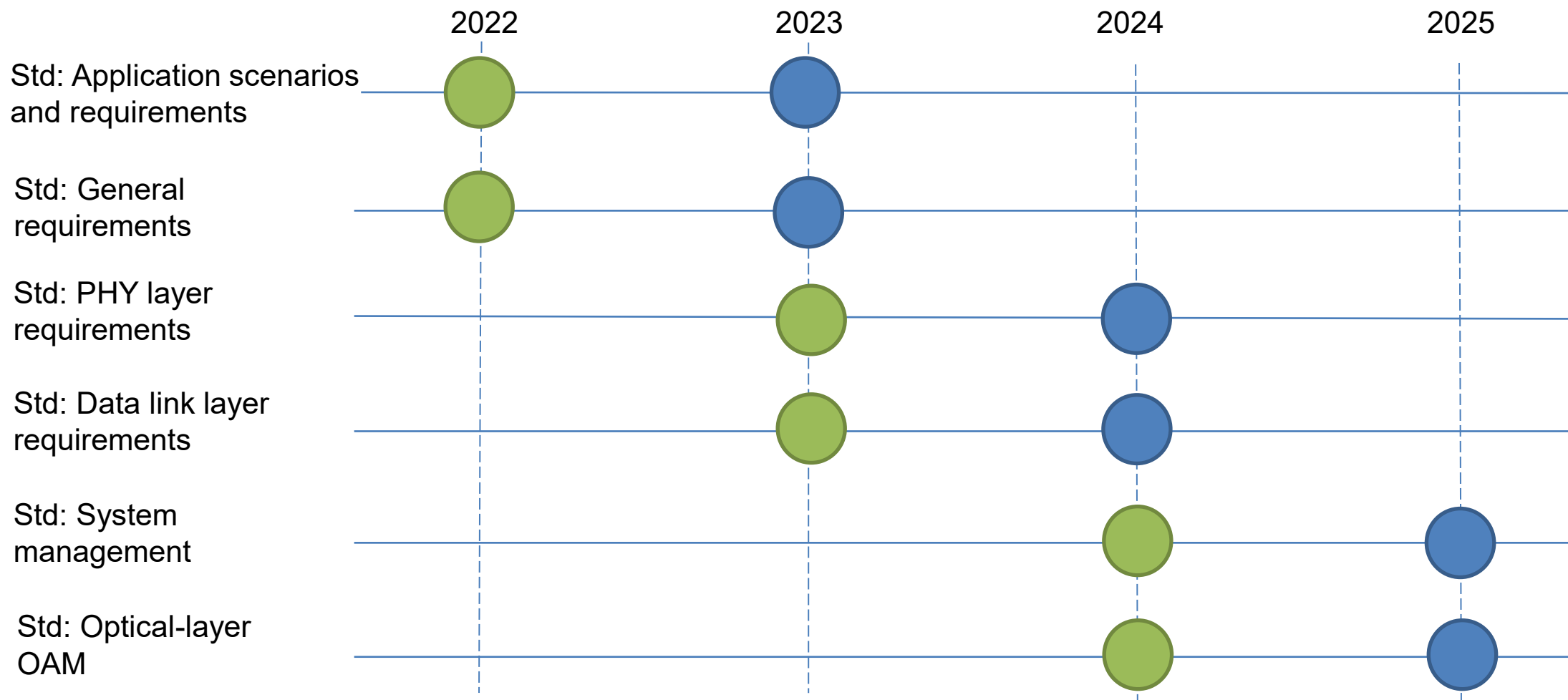
CCSA FTTR standards - wireless related

- Wireless performance is a key index when evaluate the FTTR technology

- Four standards related in CCSA:

  - WMCI: define the WLAN management and control interface between MFU and SFUs. It's equivalent to G.wmci in Q3

  - Wi-Fi 6 gateway WLAN performance and test method. Already published

  - Wi-Fi 7 gateway WLAN performance and test method

  - FTTR network WLAN performance, including Multi-AP throughput and roaming handover time etc. This standard depends on the first three standards

CCSA FTTR specification roadmap – wireless related
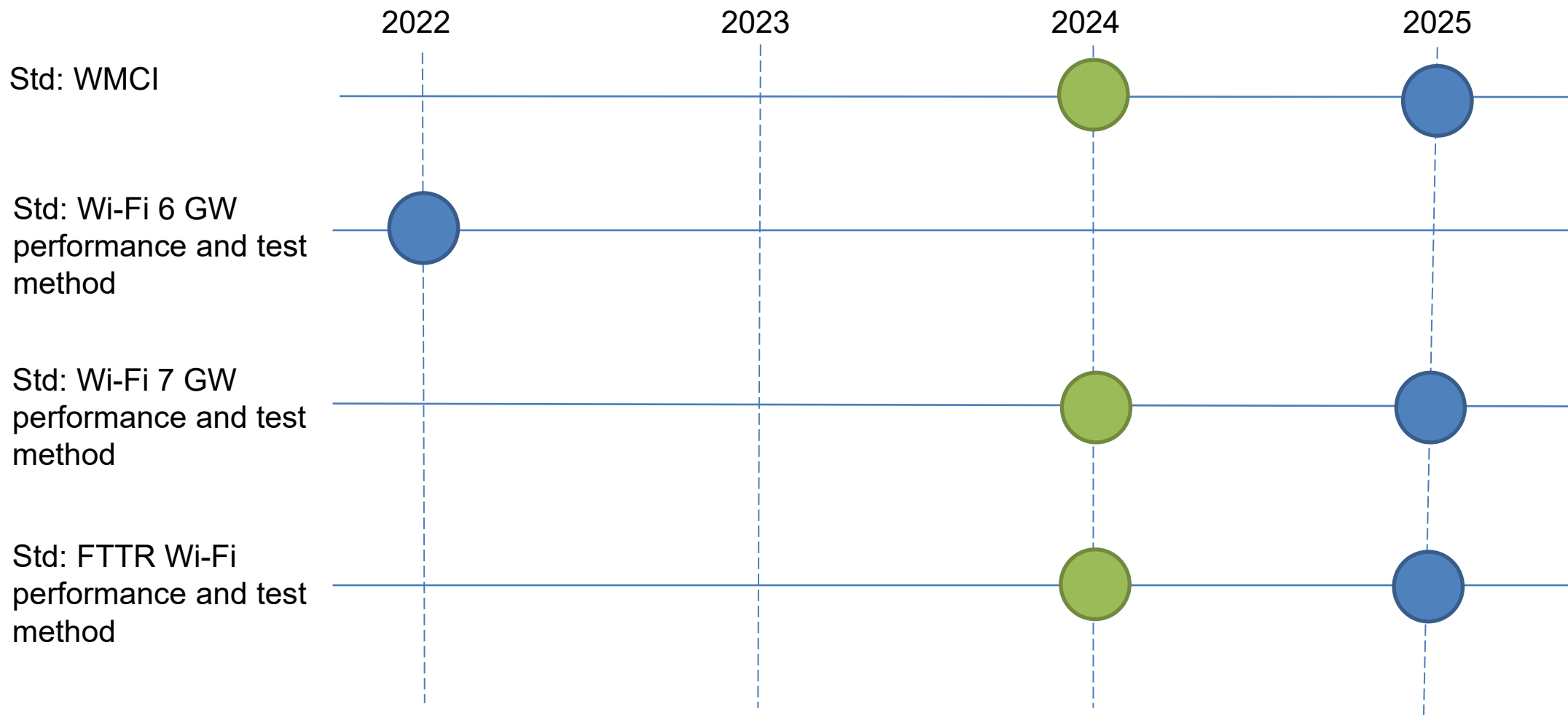
Summary

- CCSA has made the whole layout of FTTR standards, covering technical requirements for interfaces, devices, modules, equipment, test methods and deployment.

- FTTR is a new and complicated system. Standards need some time to mature. Perhaps it will take several generations of evolving like xDSL or xPON

- But currently, the progress of FTTR standard seems fall behind the needs. It's good to finalize initial versions ASAP

Thanks