WT-500 Project

Work area

Physical Layer Transmission

Project stream

Projects

Title

MoCA Access Performance Test Plan

Editor

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Purpose

MoCA Access™ technology can be used to deliver gigabit and multi-gigabit services to the end-user in the scope of Fiber Extension (FTTep). It has been defined as one of the the available technologies in TR-419.

MoCA Access™ has been defined by the **M**ultimedia **o**ver **C**oax **A**lliance (https://mocalliance.org).

As in the name, MoCA supports broadband data transmission over in-premises wiring coaxial cable. MoCA Access enhances the technology to be used in the access environment - including large apartment, fiber extension and office buildings (the MDU environment).

This project specifies a performance test plan including performance requirements for application of MoCA Access technology in coaxial access scenarios. The focus is on the Physical layer and Traffic testing similar to how TR-380 (G.fast) and TR-476 (G.hn access) performance test plans are defined. This performance test plan will include test setup information, equipment configuration requirements, test procedures, and performance requirements for each test case. Traffic tests show the throughput and delay for various packet sizes and mixes for the various use cases. This mix is called FASTMIX and has a predefined mix of IP packet sizes.

Frame Size (bytes)	Probability
1566	0.050
1500	0.673
1024	0.088
256	0.014
70	0.175
Note: All Ethernet frame sizes being on the first byte of the Destination MAC Address and end on the last byte of the Frame Check Sequence (FCS).	

Table 1: FASTMIX Frame Size Distribution within Ethernet Traffic

The performance test use cases are based on four predefined frequency plans as used by MoCA. These frequency plans are:

1. Two bonded MoCA Phy layers (band A-A 400-1675 MHz)
2. Terrestrial TV overlay (band A-B 800-1675 MHz)
3. Mobile services overlay (band A-C 1025-16775MHz)
4. CATV+ DOCSIS 3.0 overlay (band A-D 1125-1675MHz)

The top level architecture and traffic configuration of the test platform covers both point-to-point (P2P) and point-to-multipoint (P2MP) test scenarios. In the P2MP scenario both the star and tap network are addressed.

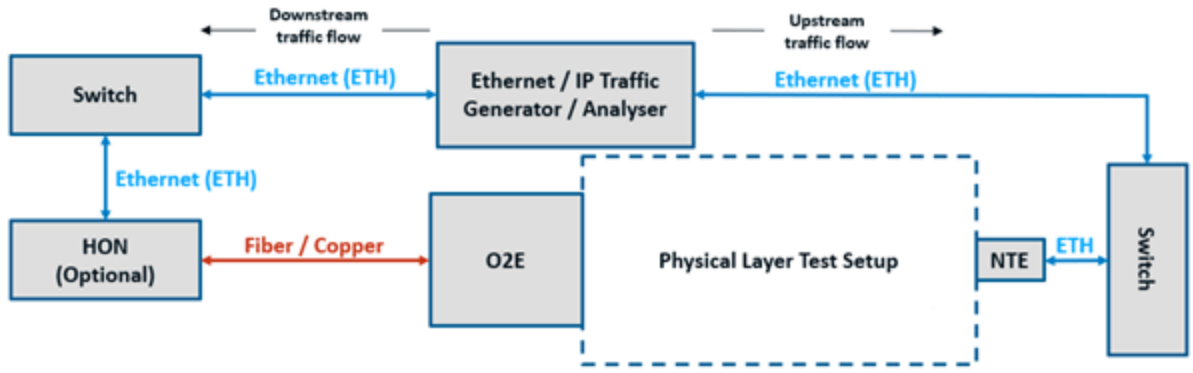

Figure 1: P2P test setup

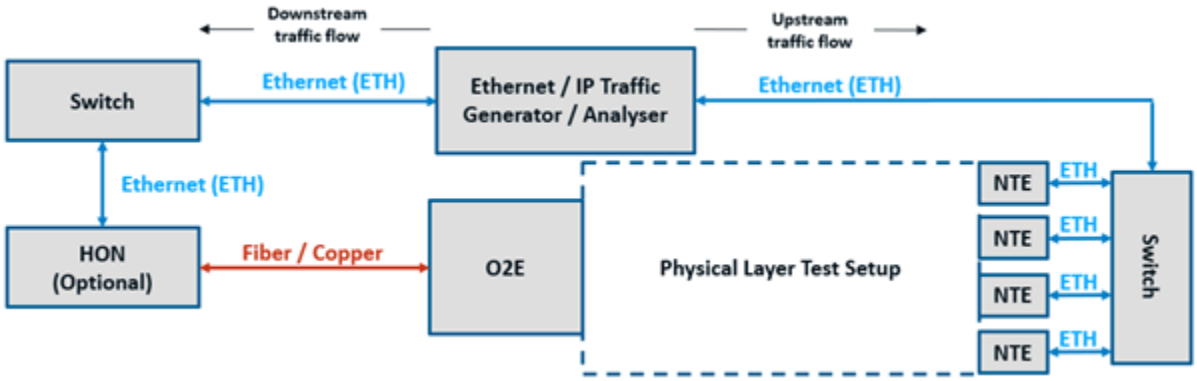

Figure 2: P2MP test setup

The 'Physical Layer Test Setup' contains the coaxial cables, attenuators to adjust signal levels, taps and splitters to distribute the signal to the end-point(s).

This Test Plan, created by the PHYtx Work Area, provides guidance to the expected performance and Quality of Service for operators planning to deploy FTTep using MoCA in their networks.

Useful links

- WT-500

⚠ CONTRIB-23800 - Jira project doesn't exist or you don't have permission to view it.

- IL

> ⚠ CONTRIB-23794 - Jira project doesn't exist or you don't have permission to view it.

Other