Meeting minutes

NGEPON ad hoc committee

Tue. Jan 21, 2014
9:40 AM

Meeting was opened and introductions were made.

David Law confirmed he has appointed Howard Frazier as Chair of the ad hoc.
The chair noted the email reflector and web page (see opening presentation by Howard), reviewed decorum, ad hoc ground rules, the reasons for formation of the ad hoc under ICCOM, project goals, current status, and plan for the week.

Presentations

Title Author(s) Affiliation
URL
Description

Perspective From Bright House Networks Marek Hajduczenia Bright House Networks
BHN access networks using 1G-EPON are typically bandwidth constrained rather than power budget limited and BHN and is looking to upgrade to 10G-EPON. In response to a question it was stated that PON is more cost effective than P2P with CWDM. At least one other provider validated this statement. In some cases there are fiber limitations also.
Several requirements were noted; ODN compatibility, 1G-EPON ONU retention, and compatibility with existing OTDRs. Several "like to's" (see presentation) were also noted. Delay, packet loss and peak throughput are becoming more important than raw bandwidth. There is a growing commercial need for large (>4k) frames.

Four Candidate NG-EPON Solutions Duane Remein Huawei Technologies
This presentation gave a high level summary of four potential technologies for NGEPON; TDM PON (higher serial rate), TWDM PON (multiple 10G PONs), pure WDM PON and OFDM PON.

Optical Wavelength Considerations for NG EPON Bill Powell Alcatel Lucent
This presentation summarized wavelengths in use for EPON and other access network technologies. It also briefly discussed TWDM as being standardized in ITU-T Q2.

NGEPON: Requirements and Architecture Considerations
Eugene Dai Cox Communications
This presentation addressed goals and requirements for NG-EPON. The goals include low cost, more bandwidth and more users. Drivers behind increasing bandwidth were summarized by the presentation and looked at total cost of ownership, and longer reach options.

After this presentation a request was made for a presentation on FSAN investigations and decisions which might be reused in NGEPON for the next meeting.

A request was also made for a presentation on optical tunable transceiver technology for the next meeting.

Taxonomy of PON Glen Kramer Broadcom

This presentation covered the state of optical technology in terms of components and architectures. Generational coexistence was also covered.

Resource Sharing or Designing Access Network For Low Cost

Glen Kramer Broadcom

This presentation discussed bandwidth drivers and specific issues with classic traffic management (shaping & policing) especially with respect to video traffic. The presentation also gave experimental results showing significant benefits from shared capacity systems such as TDM PONs.

There was a comment that for coexistence, RF overlay may be a regulatory requirement going into the future.

The importance of component commonality with NGPON2 was also pointed out.

Open Discussion

There was an open discussion on items for next meeting; the following request for presentations was captured:

Operator requirements
Optical tunable transceiver technology
Outline of Report
FSAN & ITU-T activities
Fiber characteristics in the ODN
Energy Efficiency
OFDM in optical domain

The Chair took a straw poll on Beijing meeting attendance.

5:00 PM
The meeting was adjourned.