Agenda and General Information

IEEE 802.3
Next Generation EPON (NG-EPON)
Industry Connections Ad-Hoc

Marek Hajduczenia, Acting Chair

Bright House Networks

Atlanta, GA, USA, 01/11/2015

Agenda

- Appointment of Recording Secretary
- Welcome and Introductions
- Approve Agenda
- Approve Minutes from November 2014
- Reflector and Web
- Ground Rules
- Current Status
- Draft R09 Report – Review & Discussion on Comments
- Presentations
- Review of Action Items for February 2015 Meeting
- Motions and Closing Business
- Future Meetings

Meeting Decorum

- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (December 2013 IEEE-SA Standards Board Ops Manual 5.3.3.5)
- Photography or recording by permission only (December 2013 IEEE-SA Standards Board Ops Manual 5.3.3.4)
- Cell phone ringers off
- Wear your badges at all times in meeting areas
  - Help the hotel security staff improve the general security of the meeting rooms
  - **PCs HAVE BEEN STOLEN** at previous meetings
  - **DO NOT** assume that meeting areas are secure
- Please observe proper decorum in meetings

Reflector and Web

- To subscribe to the NG-EPON IC Ad-Hoc reflector, send an email to:
  ListServ@ieee.org

  with the following in the body of the message (do not include "<>"):
    subscribe stds-802-3-ngepon <yourfirstname> <yourlastname>

    end

- Send NG-EPON IC Ad-hoc reflector messages to:
  stds-802-3-ngepon@listserv.ieee.org

- NG-EPON IC Ad-hoc reflector archive:
  http://www.ieee802.org/3/ad_hoc/ngepon/email/thrd1.html

- NG-EPON IC Ad-hoc home page URL:
  http://www.ieee802.org/3/ad_hoc/ngepon/

NG-EPON IC Private Area

- URL: www.ieee802.org/3/ad_hoc/ngepon/private/
  - Username: **NGEPON**
  - Password: *************
- Write it down, password will not be posted online!
- Private area contains report drafts, copyrighted publications and other materials for preview of IC ad-hoc members only
- The content is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights.

Ground Rules

- Based upon IEEE 802.3 Rules
  - Foundation based upon Robert's Rules of Order
  - Anyone in the room may speak
  - Anyone in the room may vote
- **RESPECT**… give it, get it
- NO product pitches
- NO corporate pitches
- NO prices!!!
  - This includes costs, ASPs, etc. no matter what the currency
- NO restrictive notices

NG-EPON IC project goals

- Create a venue for interested individuals to discuss the requirements and technical options for the next generation of Ethernet Passive Optical Networks
- Operate under and report to the IEEE 802.3 Ethernet Working Group
- Explore operators' requirements
- Explore market potential
- Explore technological and economic tradeoffs.
- Explore the state of the art of optical technology for subscriber access networks
- Produce a report of the group's findings

Current Status

- This is the 7th meeting of the NG-EPON IC

- Draft report version R09 was distributed and comments received

- 22 presentations received (including post-deadline and corrections)

- Main focus on completion of the NG-EPON IC report to start WG approval in March 2015

NG-EPON IC Draft Report

- Review of <u>D0.9 with proposed responses</u>
- Analysis of gaps in the report so far
  - Assign individual to provide missing materials
- Draft R1.0 to be generated after the meeting by incorporating approved responses and accepted contributions
  - Draft D2.0 ready out of February 2015 to start WG review out of March 2015 plenary

Standalone Presentations

File name	Title	Presentation time
ngepon_0115_harstead_02.pdf	The story of the NG-PON2 TWDM PON wavelength plan	30
ngepon_0115_harstead_03a.pdf	Proposed NG-EPON wavelength plan decision flow	20
ngepon_0115_cloonan_01.pdf	Maximum Permitted Bandwidth	10
ngepon_0115_hajduczenia_07.pdf	Contribution on Bandwidth Consumption – Operator Data	20
ngepon_0115_harstead_01.doc	Proposed text for TR 4.3: Forecasting offered bandwidth	15
ngepon_0115_hajduczenia_06.pdf	Contribution to subclause 5.15 System Cost and 5.16 Expected Availability Timeframe	10
ngepon_0115_tao_01a.pdf	Orthogonal Frequency Division Multiplexing	20
ngepon_0115_houtsma_01.pdf	PAM-4 vs. duobinary modulation @25 Gb/s	20
ngepon_0115_dai_01.pdf	Impacts of Chromatic Dispersion and PMD on 40Gbit/s EPON with PAM Modulation	20
ngepon_0115_harstead_04.doc	Proposed text for TR 6.3.4: duobinary, PAM-4 comparison	15
ngepon_0115_hajduczenia_11.pdf	Contribution to Conclusions	10

Times listed are subject to change and are best estimates based on presenter's request.
Contributions associated with specific comments are not included in the list

Plans for next meetings

- Two day meeting at February 2015 interim meeting in Louisville, CO, USA, hosted by Cable Labs
  - Meeting co-located with IEEE 1904 and FSAN
- Half a day meeting at March 2015 plenary
  - Start 802.3 WG review cycle on draft D2.0
- Editorial plan
  - Editors to produce R1.0 and post in .pdf
  - Reviewers to provide comments using 802.3 commenting tool.
    - Preparation for 802.3 WG review cycle
  - Editors consolidate comments and post proposed responses

Identified gaps

- Section on PAM-4 modulation (Ed)
- Analysis of FEXT/NEXT in case of upstream/downstream wavelength not overlapping but not having guard band (Frank to propose text)
  - Assumptions on wavelength blocking filters and isolation between upstream and downstream channels
- Need business side requirements for NG-EPON: demand for bandwidth in business applications served with EPON
  - Project when 10G-EPON would run out of bandwidth in business application (Curtis, Kevin & Ed M.)
- Need contributions to address all editorial comments on missing content, e.g., text on APDs/PINs.
- Need to add recommendations into Conclusions (Duane + Kevin)
  - Summarize the case for NG-EPON – point that we need SG to explore this problem in more detail, form SG and then TF
  - Summarize the findings for NG-EPON: lots of different options, nothing that suggests that we cannot get NG-EPON to work, just need to hash out options
- Terminology alignment:
  - bit/s versus Baud
  - TDM-PON and NRZ encoding

Future Meetings

- See: http://www.ieee802.org/3/interims/index.html

- Interim meeting:
  February 2/3, 2015
  Denver, CO, USA

- Plenary meeting:
  March 9th through March 12th, 2015
  Berlin, Germany

- Interim meeting:
  week of May 18, 2015
  Pittsburgh, PA, USA

- Plenary meeting:
  July 13th through July 16th, 2015
  Waikoloa, HI, USA

- Anyone interested in hosting a interim meeting contact me or the IEEE 802.3 Executive Secretary Steve Carlson.

Thank You!