IEEE 802.3 Working Group
July Plenary Week

Robert M. Grow

Chair, IEEE 802.3 Working Group

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Web site: www.ieee802.org/3

Current IEEE 802.3 activities

Approved ~~P802.3an, 10GBASE-T~~

- P802.3ap, Backplane Ethernet

- P802.3aq, 10GBASE-LRM

- P802.3ar, Congestion Management

- P802.3as, Frame Format Extensions

- P802.3at, DTE Power Enhancements

Published ~~P802.3-2005/Cor1, Isolation corrigendum~~

New • Study Group, 10 Gb/s EPON

P802.3an 10GBASE-T

- Extends Ethernet capabilities at 10 Gb/s
  - Operation over horizontal twisted pair (augmented Cat 6 or better)
  - New physical layer to run under 802.3ae specified XGMII
- Approved by IEEE-SA Standards Board
  - Approved 8 June 2006
  - In publication preparation

P802.3ap Backplane Ethernet

- Define Ethernet operation over electrical backplanes
  - 1Gb/s serial
  - 10Gb/s serial
  - 10Gb/s XAUI-based 4-lane
  - Autonegotiation
- In working group ballot
- Meeting plan
  - Complete resolution of comments on P802.3ap/D2.5, 5th recirculation working group ballot
  - Request advancement to Sponsor ballot

P802.3aq 10GBASE-LRM

- Extends Ethernet capabilities at 10 Gb/s
  - New physical layer to run under 802.3ae specified XGMII
  - Extends Ethernet capabilities at 10 Gb/s
  - Operation over FDDI-grade multi-mode fiber
- In Sponsor ballot
- Meeting plan
  - Resolve comments (if any) on P802.3aq/D4.0

P802.3ar Congestion Management

- Consider modified PAR reducing the scope of the previous PAR (with a new title

- Current draft defines enhancements for rate control

- Meeting plan
  - Technical presentations
  - Review P802.3ar/D1.3
  - Seek approval of modified PAR and Five Criteria
  - Request advancement to working group ballot

P802.3as Frame Format Extensions

- Increase the maximum Ethernet frame size for protocol header/trailer additions
  - Initiated at the request of 802.1 in support of protocols like MACSec and Provider Bridging
  - Preserve basic 1500 byte payload capacity, and increases maximum frame from 1522 bytes to 2000 bytes for protocol envelopes
- In Sponsor ballot
- Meeting plan
  - Resolve comments on P802.3as/D3.2, 2nd recirculation Sponsor ballot
  - Request approval to submit to RevCom

P802.3at DTE Power Enhancements

- Increase the amount of power delivered over twisted pair copper from that specified by IEEE Std 802.3af-2003
  - At least 30 watts
  - Maintain compatibility with 802.3af
- Working on draft development
- Meeting plan
  - Technical presentations
  - Select core proposals

802.3au, IEEE Std 802.3-2005/Cor1

- Corrigendum on isolation of twisted pair interfaces
- Approved by IEEE-SA Standards Board
  - Approved, 8 June 2006
  - Published, 26 June 2006

10 Gb/s EPON Study Group

- Determine need for higher speed Ethernet passive optical networks
  - Considering symmetrical and asymmetrical (10 Gb/s downstream, 1 Gb/s upstream)
- Meeting plan
  - Seek IEEE 802.3 and EC approval for P802.3av PAR submittal to NesCom
  - Technical presentations
  - Refine objectives

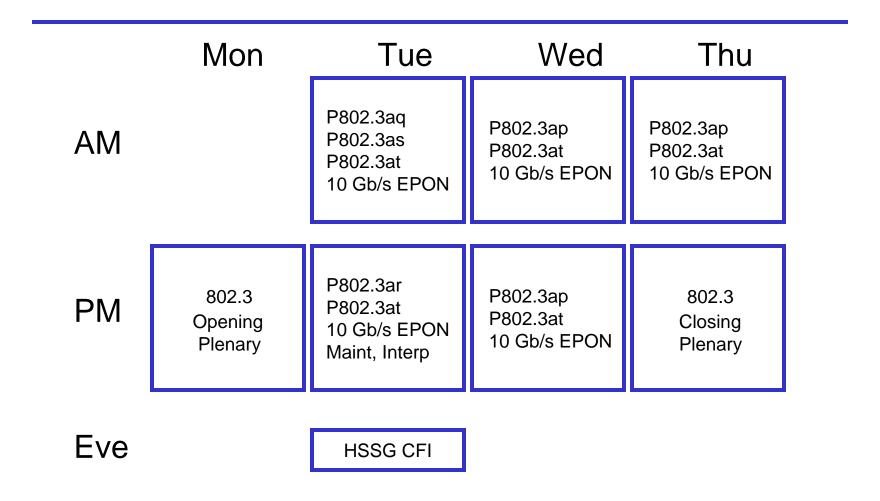# Higher speed (Ethernet) study group call for interest

- Abstract:

  Rising volumes of data are causing congestion to occur at various aggregation points, such as within internet exchanges, data centers, cluster computing, and the enterprise. 10 Gigabit Ethernet links in combination with 802.3ad Link Aggregation are being deployed at these aggregation points; however, projected bandwidth requirements indicate that in the future this will be insufficient. It is the time to study the effort, scope the task, and start towards the development of a standards-based solution to bring relief to these congestion points. This CFI is to request the formation of an 802.3 HSSG to begin this task.

- Contact:
  John D'Ambrosia [jdambrosia@force10networks.com]

- Tuesday, 6:00 pm

Officers

- 802.3 Chair: Bob Grow (bob.grow@ieee.org)
- 802.3 Vice Chair: David Law (david_law@3com.com)
- 802.3 Exec. Secretary: Steve Carlson (scarlson@esta.org)
- 802.3 Recording Secretary: Wael Diab (wdiab@cisco.com)
- P802.3ap Backplane Ethernet: Adam Healey (ahealey@agere.com)
- P802.3aq 10GMMF: David Cunningham (david_cunningham@agilent.com)
- P802.3ar Congestion Mgt: Kevin Daines (kevin.daines@wwp.com)
- P802.3as Frame Expansion SG: Kevin Daines (kevin.daines@wwp.com)
- P802.3at DTE Power via the MDI Enhancements: Mike McCormack (mike_mccormack@ti.com)
- Study Group, 10 Gb/s EPON (glen.kramer@technovis.com)

Preliminary Meeting Plan

	Mon	Tue	Wed	Thu
AM		P802.3aq P802.3as P802.3at 10 Gb/s EPON	P802.3ap P802.3at 10 Gb/s EPON	P802.3ap P802.3at 10 Gb/s EPON
PM	802.3 Opening Plenary	P802.3ar P802.3at 10 Gb/s EPON Maint, Interp	P802.3ap P802.3at 10 Gb/s EPON	802.3 Closing Plenary
Eve		HSSG CFI		

Current Standard

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Published Standards

- IEEE Std 802.3^{TM}-2005 (12 Dec 2005)*
  - IEEE Std 802.3-2005/Cor 1-2006 (26 June 2006)
  - IEEE Std 802.3an-2006
    (target publication Aug 2006)

- IEEE Std 1802.3Rev-2001*

 * Available through Get IEEE 802
    http://standards.ieee.org/getieee802/802.3.html

Current project drafts

- P802.3ap/D2.5 (Backplane Ethernet)
- P802.3aq/D4.0 (10GBASE-LRM)
- P802.3ar/D1.3 (Congestion Management)
- P802.3as/D3.2 (Frame Format Extensions)