IEEE 802.3 Working Group November 2006 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

- P802.3ap, Backplane Ethernet
- ~~P802.3aq, 10GBASE-LRM~~ *Published*
- P802.3ar, Congestion Management
- ~~P802.3as, Frame Format Extensions~~ *Approved*
- P802.3at, DTE Power Enhancements
- P802.3av, 10 Gb/s EPON
- Higher Speed Study Group *New*

P802.3ap Backplane Ethernet

- Define Ethernet operation over electrical backplanes
  - 1Gb/s serial
  - 10Gb/s serial
  - 10Gb/s XAUI-based 4-lane
  - Autonegotiation
- In Sponsor ballot
- Meeting plan
  - Complete resolution of comments on P802.3ap/D3.1, 1st recirculation Sponsor ballot
  - Possibly request conditional approval for submittal to RevCom

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
- Approved by Standards Board at September meeting
- Published 16 October 2006
- No meeting
  - Final report to 802.3

P802.3ar Congestion Management

- Proposed modified project documents failed to gain consensus support in July
- Motion to withdraw the project was postponed to this meeting
- Current draft advancement to WG ballot was not considered in July
- Meeting plan
  - Determine future of the project
  - Reevaluate support/need for the intended functions

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
- Approved at September Standards Board meeting
  - Publication scheduled for 13 Nov 2006
- No meeting
  - Final report to 802.3

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

P802.3av 10 Gb/s EPON

- Define higher speed Ethernet passive optical network operation
  - Considering symmetrical and asymmetrical (10 Gb/s downstream, 1 Gb/s upstream)
- PAR approved at September Standards Board meeting
  - Task Force organized at September interim
- Meeting plan
  - Technical presentations
  - Refine objectives
  - Prepare for development of a draft

Higher speed (Ethernet) study group

- Evaluate definition of greater than 10 Gb/s MAC data rate and related PHY capability in IEEE Std 802.3
- The Study Group may recommend one or more PARs
- Meeting plan
  - Technical and market potential presentations focused on Five Criteria
  - Consider possible project objectives
  - Consider possible PAR(s) scope and purpose

Energy Efficient Ethernet study group call for interest

- Abstract:

  This call for interest will request forming a study group to examine ways to increase energy efficiency in Ethernet by reducing power consumption during periods of low link utilization. The CFI will cover the market factors requiring improved energy consumption characteristics and will also include description of a Rapid PHY Selection protocol as one possible method for improving Ethernet energy efficiency.

- Contact:

  Mike Bennett [mjbennett@lbl.gov]

- Tuesday, 6:30 pm

Officers

- 802.3 Chair: Bob Grow (bob.grow@ieee.org)
- 802.3 Vice Chair: David Law (david_law@3com.com)
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- P802.3ar Congestion Mgt: Kevin Daines (kevin.daines@wwp.com)
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- P802.3av 10 Gb/s EPON (glen.kramer@technovis.com)
- Higher Speed Ethernet SG (jdambrosia@force10networks.com)

Preliminary Meeting Plan

	Mon	Tue	Wed	Thu
AM		P802.3ap P802.3ar P802.3at P802.3av HSSG	P802.3ap P802.3at P802.3av HSSG	P802.3ap P802.3at P802.3av HSSG
PM	802.3 Opening Plenary	P802.3ap P802.3at P802.3av HSSG Maint, Interp	P802.3ap P802.3at P802.3av HSSG	802.3 Closing Plenary
Eve		EEESG CFI		

Published Standards

- IEEE Std 802.3^{TM}-2005 *
  - IEEE Std 802.3-2005/Cor 1-2006
  - IEEE Std 802.3an-2006
  - IEEE Std 802.3aq-2006
  - IEEE Std 802.3as-2006
    (target publication 13 Nov 2006)
- IEEE Std 1802.3Rev-2001 *

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

Current project drafts

- P802.3ap/D3.1 (Backplane Ethernet)
- P802.3ar/D1.3 (Congestion Management)