IEEE 802.3 Working Group Opening Plenary 10 November 2003

Robert M. Grow

Chair, IEEE 802.3 Working Group

Principal Architect, Intel Corporation

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Introductions & Agenda

- 802.3 Web Site – www.ieee802.org/3
- Officers
  - 802.3 Chair: Bob Grow (bob.grow@ieee.org)
  - 802.3 Vice Chair: David Law (david_law@3com.com)
  - Secretary: Steve Carlson (scarlson@esta.org)
  - P802.3ah EFM: Howard Frazier (millardo@dominetsystems.com)
  - P802.3ak 10GBASE-CX4: Dan Dove (dan.dove@hp.com)
  - 10GBASE-T: Brad Booth (bradley.booth@intel.com)
- Attendee introductions
- Approve agenda

Published Standards

- IEEE Std 802.3™-2002*

- IEEE Std 802.3ae™-2002*

- IEEE Std 802.3af™-2003

- IEEE Std 802.3aj™-2003

- IEEE Std 1802.3™-2001*

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

Book Distribution

- 2004 IEEE 802 CD-ROM distributed at registration

- Web based book distribution
  - Maintaining current contact information is a continuing problem
  - Used for 802.3ae and 802.3af
  - Eligible people must respond and provide mailing information
  - Any objection to continuing this procedure?

Current WG Documents

- P802.3ah/D2.1, EFM (7 Oct 2003), WG recirculation ballot

- P802.3ak/D5.2, 10GBASE-CX4 (15 Oct 2003), Sponsor recirculation ballot

- Interpretations and Maintenance requests posted

- 802.3 minutes posted
  - Approval of July minutes (Thursday)

Attendance

- Membership requirements (acquiring or retaining 802.3 voter status)
  - 75% attendance at 2 of last 4 plenary meetings (an interim may be substituted for one plenary)
  - Request to become member during 802.3 potential voter agenda item
  - Maintain valid contact information (on stds-802-3 reflector)
  - Participate in 2 of last 3 WG ballots
- Attendance books
  - Sign in each day, only for that day, only for yourself, and not for any other Working Group (no parallel sign-ins)
  - Two books
    - Members and observers (signed in during last year)
    - New attendees & update contact information
- Review membership lists – potential voters

802.3 Members (voters) p.1

Abaye, Ali	Bennett, Mike	Chen, Xiaopeng
Alderrou, Don	Bhatt, Vipul	Chow, Jacky
Arnold, Brian	Booth, Brad	Claessen, Guss
Aronson, Simcha	Bradshaw, Peter	Claseman, George
Artman, Doug	Braga, Al	Cobb, Terry
Atias, Ilan	Brand, Richard	Cook, Charles I
Barnea, Eyal	Brown, Benjamin	Cravens, George
Barrass, Hugh	Brown, Kevin	Cullin, Chris
Barrett, Bob	Burton, Scott	Daines, Kevin
Bartur, Meir	Busse, Robert	Dallesasse, John
Beaudoin, Denis	Cain, Jeff	Darshan, Yair
Beck, Michaël	Cam, Richard	Dawe, Piers
Beili, Edward	Carlo, James T.	De Andrea, John
Below, Randy J.	Carlson, Steve	Debbasch, Bernard O.
Bemmel, Vincent	Carnine, Dan	Di Minico, Chris

802.3 Members (voters) p.2

Diab, Wael

Dineen, Thomas

Dove, Dan

Dwelley, David

Easley, J. Craig

Eckert, Edward J.

Egan, John

Eisler, George

English, Kent

Ewen , John F.

Fanfoni, Sabina

Finch, Robert G

Flatman, Alan

Ford, Brian

Frazier, Howard

Fujimoto, Yukihiro

Gaglianello, Robert D

Gaither, Justin

George, John

Gerhardt, Floyd

Ginis, George

Goldis, Moty

Graham, Rich

Grow, Robert M.

Gummalla, Ajay

Gustafsson, Jonas

Gyurek, Russ

Haas, Steven

Haddock, Stephen

Hansen, Chris

Haran, Onn

Healey, Adam

Heckroth, Jim

Hinrichs, Henry

Hirth, Ryan

Horvat, Michael

Huynh, Thong

Jackson, Steve

Jacobsen, Krista S

Jetzt, John

Jiang, Wenbin

Jones, Chad

Jones, William W.

Jonsson, Ulf

Jørgensen, Thomas K.

802.3 Members (voters) p.3

Kaku, Shinkyo

Kaplan, Hadriel

Karam, Roger

Kenny, John J.

Khermosh, Lior

Kim, Chan

Kim, Jin H.

Kim, Su-Hyung

Kimpe, Marc

King, Neal

Kolesar, Paul

Kramer, Glen

Lackner, Hans

Langston, Daun

Law, David

Lawrence, Eric

Le Goff, Yannick

Lee, Ying

Lehr, Amir

Leshem, Amir

LIM, Seyoun

Lynskey, Eric R.

MacLeod, Brian

Maislos, Ariel

Marris, Arthur

Martin, David W.

Mathey, Thomas

McCammon, Kent

McCormack, Michael S

McGugan, Chris

Messenger, John

Miao, Tremont

Moseley, Simon

Muir, Robert

Muller, Shimon

Murakami, Ken

Murphy, Thomas

Nadeau, Gerard

Naganuma, Ken

Naidu, Hari

Nazari, Nersi

Nedellec, Erwan

Nguyen, Trung

Nojima, Kazuhiro

Nordin, Ron

802.3 Members (voters) p.4

Noseworthy, Bob	Radcliffe, Jerry K.	Say-Otun, Sabit
Obara, Satoshi	Rado, Ted	Schindler, Fred
Oberstar, John	Raman, Naresh	Sendelbach, Lee
Oksman, Vladimir	Reed, Robert	Seto, Koichiro
O'Mahony, Barry	Reintjes, Maurice	Shah, Sunil
O'Rourke, Aidan	Remein, Duane	Sheppard, Ben
Pannell, Don	Rennie, Lawrence	Shih, Cheng-Chung
Parsons, Glenn	Rezvani, Behrooz	Shohet, Zion
Pesavento, Gerry	Rogers, Shawn	Shridhar, Avadhani
Pietilainen, Antti	Romascanu, Dan	Simon, Scott
Plunkett, Timothy R.	Ross, Floyd	Soffer, Ran
Popescu, Petre	Sala, Dolors	Song, Jaeyeon
Posthuma, Carl R.	Sambasivan, Sam	Sorbara, Massimo
Quackenbush, William	Saracino, Concita	Soto, Walt
Rabinovich, Rick	Savara, Raj	Squire, Matthew B.

802.3 Members (voters) p.5

Stuart, Richard

Swanson, Steve

Taborek, Rich

Tate, Mike

Tatum, Jim

Thaler, Pat

Thatcher, R. Jonathan

Thirion, Walter

Thompson, Geoffrey

Thorne, David

Tolley, Bruce

Tsuji, Shinji

Twu, Bor-long

Tzannes, Marcos

Vaden, Sterling A.

van Doorn, Schelto

Veerayah, Kumaran

Vergnaud, Gérard

Wang, Chiung Hung

Warren, Jeff

Wei, Dong

Weissberger, Alan

Williamson, Erica

Winterton, Darin

Yoo, Tae-Whan

Yoshihara, Osamu

Yu, Hong

Zagalsky, Nelson

Zimmerman, George

Zivny, Pavel

Zona, Bob

Members in Peril

Barrett, Bob

Burton, Scott

Carnine, Dan

Dallesasse, John

English, Kent

Finch, Robert G

Ford, Brian

Ginis, George

Haran, Onn

Hinrichs, Henry

Kaplan, Hadriel

Kim, Su-Hyung

Lehr, Amir

Leshem, Amir

MacLeod, Brian

McCammon, Kent

Moseley, Simon

Nedellec, Erwan

Plunkett, Timothy R.

Reed, Robert

Romascanu, Dan

Shah, Sunil

Shih, Cheng-Chung

Soto, Walt

Taborek, Rich

Twu, Bor-long

Wang, Chiung Hung

Potential Members (voters) p.1

AbuGhazaleh, Shadi

*Adriaennsens, Luc

Asbo, Magnus

Babanezhad, Joseph N

Bachand, Gerard E

Baumer, Howard

Blauvelt, Hank

*Bohbot, Michel

Brandner, Rudolf

Cheong, Kok-Wui

Chopra, Rahul

Cohen, Larry

Courtney, Steve

Crepin, J. Francois

Dreyer, Steve

Freedman, Martin G

Garcia, Adalfo A.

Haile-Mariam, Atikem

Hemmah, Steven

Jang, Young-Kyoo

Jones, Stephen K.

Juras, Walter

Kang, Tae Kyu

Kasturia, Sanjay

Kawaguchi, Kazuho

Keh, Raymond

Khansani, Masond

Kim, Ajung

*Koenen, David J.

Kottapalli, Sreenivas

Lee, Hoon

McSweeney, Brian

Mei, Richard Y.

Michalowski, Richard

*Miyoshi, Hidekazu

Murphy, Denis

Nash, Randy

Niger, Philippe

Nishi, Hiroaki

* Requested member status

Potential Members (voters) p.2

*Nishimura, Shinji

Onishi, Kazumi

*Roth, Zeev

Savi, Olindo

Seery, Mark

Siemon, John

Sisto, John

Spagna, Fulvio

Stanley, Patrick H.

Sugawara, Mitsutoshi

Szostak, Tad

*Toyoda, Hidehiro

*Tung, Tia-Lai

*Vanderlaan, Paul Z.

Venugopal, Padmabala

Wingard, Michael L.

Wirtz, Michael

Ye, Yinghua

Yoon, Chong Ho

Yoshida, Shin

Yousuf, Farooq

* Requested member status

Interim TF & SG meetings held

- Ancona, Italy, 15-19 September 2003
  P802.3ah, 10GBASE-T

- Sacramento, CA, 25-26 September 2003
  P802.3ak

- Ottawa, ON, CA, 14-15 October 2003
  P802.3ak

803.3 project ballots since July

- Sponsor Ballots:
  - P802.3ak/D5.0 – Initial Sponsor ballot
  - P802.3ak/D5.1 – 1st Sponsor recirculation
  - P802.3ak/D5.2 – 2nd Sponsor recirculation
- Working Group Ballots:
  - P802.3ah/D2.0 – Initial WG ballot
  - P802.3ak/D2.1 – 1st WG recirculation

September Standards Board

- P802.3aj approved by RevCom/SB
- ProCom changes requiring revision of a standard
- P1394c approved by NesCom/SB
  - Concerns raised by Chair of 802.3
  - PAR modified in response
  - Project descriptions continue to cause concern

LMSC EC Report p.1

- Get 802 will be considered for full use
- Draft posting for sale needs improvement
- Rules Changes
  - Precedence of Rules
  - Financial Operation (WG treasuries)
  - Long list of issues, attempt total rewrite
- 802 News bulletin to be mandatory?
- 802 Handoff ECSG recommends new WG
- Co-existence TAG Chair position open

LMSC EC Report p.2

- Reorganization of IEEE 802
  - Meeting logistical problems, disjoint financial models, diversity of projects and technology
  - Options include split into wired/wireless, 802 SCC with autonomous WGs

- Network services contract into IEEE for approval

- IEEE 802.20
  - Appeal – remanded to LMSC EC
  - A number of EC members left the room because of indemnification concerns
  - Chair and Vice Chairs of 802.20 confirmed

LMSC EC Report p.3

- Officer elections in March per LMSC P&P

- WG finances
  - Remedial actions mostly completed

LMSC Chair's Meetings

- Tues
  - 10:00-12:00 802 Reorganization (Ench. A)
  - 3:00-4:00   802 Task Force
  - 5:00-6:00   Get IEEE 802
- Thurs
  - 12:00-3:00   Financial operation rules
  - 6:00-8:00   RAC meeting

Tutorials (ABQCC Ballroom A)

- Monday Evening
  - 5:30 WG/TAG Financial Workshop (Hyatt – Enchantment)
  - 6:30 10GBASE-T
  - 8:00 Education, Mentoring & Support

- Tuesday Evening
  - 6:30 Use of Millimeter Waves for Broadband WLANs suitable for Enterprise Applications
  - 7:30 The Principles and Benefits of Chirp Spread Spectrum Modulation
  - 9:00 Deploying the Worlds Largest Campus 802.11b Network

IEEE 802.3 CFIs (ABQCC San Miguel)

- Tuesday evening
- 6:30 10Gbps on FDDI grade MM fiber
- 7:30 Backplane Ethernet
- 8:30 2.5 Gb/s

10Gbps on FDDI grade MM fiber

Low-cost solutions for 10 Gb/s Ethernet that reach 300 meters on installed, legacy MM fiber are not currently shipping. It is time to gather the experts and initiate a IEEE 802.3 study group. Enterprise customers are requesting cost-effective 10 GbE solutions for their installed MM fiber (160/500MHz*km 62.5 micron MM fiber).

There have been companies announcing or demonstrating equalization and other techniques that could enable the development of a PMD to transmit 10 Gb/s Ethernet over installed, FDDI-grade MM fiber cabling. Now is he time to investigate the level of interest in starting a study group, to scope the task, and to move quickly towards the development of a standards-based solution.

Backplane Ethernet

The relentless progress in silicon technology enables greater concentration of functionality in smaller spaces. What previously was an equipment rack filled with multiple chassis is with increasing frequency being collapsed into a single chassis. This is occurring in both telecommunications and data processing. Ethernet should be the ubiquitous interface for interconnection of equipment whether distributed over large geographic areas, within an enterprise, within a data center, or between blades across a backplane. IEEE 802.3 is currently addressing all of these interconnections except that over a backplane. Without an 802.3 standard, the number of incompatible standards and proprietary interfaces will multiply. An 802.3 standard for backplane Ethernet will be applicable to blade servers, telecommunications equipment and many other functions that will be collapsed into a single chassis.

2.5Gb/s

The worldwide cable installed base is estimated to be nearly 900M nodes by he end of 2005, over 95% of which is expected to be Category 5/5e/6 UTP cable. There is currently no project in 802.3, which offers speeds greater than 1000Mb/s to this growing installed base of 100m structured horizontal ISO/IEC 11802 UTP. A 2.5Gb/s standard would be the only solution with greater speeds than 1000Mb/s that addresses the full population of installed, and forecast to be installed, cable base. Presentations made to the 10GBase-T study group have shown that 2.5Gb/s is feasible on this cable plant at costs fractionally more than 1000Base-T, enabling usage in servers, workstations, desktop PCs, wiring closet and desktop switches. Additionally fiber-optic transceivers are available that work at 3.125Gbps in support of an 8B/10B encoded version of 2.5Gbps over MMF or SMF cable. 2.5Gbps SerDes will be able to re-use existing I/O Cells and SerDes blocks from XAUI implementations. This is a call for interest to form a study group to explore MAC, PHY, layer management, and auto-negotiation specifications in order to define operation at 2.5Gb/s .

IEEE-SA Standards Board Bylaws on Patents in Standards

6. Patents

IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard. This assurance shall be provided without coercion and prior to approval of the standard (or reaffirmation when a patent becomes known after initial approval of the standard). This assurance shall be a letter that is in the form of either

a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement the proposed IEEE standard against any person or entity using the patent(s) to comply with the standard or

b) A statement that a license will be made available without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination

This assurance shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal and is irrevocable during that period.

Inappropriate Topics for IEEE WG Meetings

- Don't discuss licensing terms or conditions

- Don't discuss product pricing, territorial restrictions or market share

- Don't discuss ongoing litigation or threatened litigation

- Don't be silent if inappropriate topics are discussed… do formally object.

  If you have questions:
  contact the IEEE Patent Committee
  Administrator at patcom@ieee.org

IEEE

Project Authorization Requests

- Handoff EC Study Group
  - 802.21 "Media Independent Handover"
  - Targeted for NesCom January early consideration
- IEEE 802.3
  - 802.3al "10GBASE-T"
  - Targeted for NesCom January early consideration
- IEEE 802.1
  - 802.1af "Authenticated Key Agreement for Media Access Control (MAC) Security"
  - Submitted for December NesCom consideration

Continuing Agenda

- Liaison Reports
- 802 State of the Standard (Mr. Law)
- 802.3 Operating Rules (Mr. Law)
- Task Force & Study Group Reports
  - Interpretations (Mr. Law)
  - 802.3 Maintenance (Mr. Law)
  - Revision of IEEE Std 802.3 (Mr.Thompson)
  - 802.3ah Ethernet in the First Mile (Mr. Frazier)
  - 802.3ak 10GBASE-CX4 (Mr. Dove)
  - 10GBASE-T SG (Mr. Booth)
- Plan for the Week (Mr. Law)