IEEE 802.3ax Link Aggregation
IEEE 802.3ay Revision

Agenda and General Information

David Law
3Com
Agenda

• Appoint Recording Secretary
• Introductions
• Approve Agenda
• Administration
• Review task
  – Select open maintenance request
  – Review IEEE 802.3ax Maintenance #9 (Revision) draft PAR
  – Review IEEE 802.1AX Link Aggregation draft PAR

Move to accept the agenda
M: Grow   S: Carlson
Y: 6   N:0
Instructions for the WG Chair

• At Each Meeting, the Working Group Chair shall:
  • Show slides #1 and #2 of this presentation
  • Advise the WG membership that:
    – The IEEE’s patent policy is consistent with the ANSI patent policy and is described in Clause 6 of the IEEE-SA Standards Board Bylaws;
    – Early disclosure of patents which may be essential for the use of standards under development is encouraged;
    – Disclosures made of such patents may not be exhaustive of all patents that may be essential for the use of standards under development, and that neither the IEEE, the WG, nor the WG Chairman ensure the accuracy or completeness of any disclosure or whether any disclosure is of a patent that, in fact, may be essential for the use of standards under development.
  • Instruct the WG Secretary to record in the minutes of the relevant WG meeting:
    – That the foregoing advice was provided and the two slides were shown;
    – That an opportunity was provided for WG members to identify or disclose patents that the WG member believes may be essential for the use of that standard;
    – Any responses that were given, specifically the patents and patent applications that were identified (if any) and by whom.

(Not necessary to be shown) Approved by IEEE-SA Standards Board – March 2003 (Revised February 2006)
IEEE standards may include the known use of essential patents and patent applications provided the IEEE receives assurance from the patent holder or applicant with respect to patents whose infringement is, or in the case of patent applications, potential future infringement the applicant asserts will be, unavoidable in a compliant implementation of either mandatory or optional portions of the standard [essential patents]. This assurance shall be provided without coercion. The patent holder or applicant should provide this assurance as soon as reasonably feasible in the standards development process. This assurance shall be provided no later than the approval of the standard (or reaffirmation when a patent or patent application becomes known after initial approval of the standard). This assurance shall be 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 either mandatory or optional portions of the proposed IEEE standard against any person or entity complying with the standard; or

b) A statement that a license for such implementation 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 is irrevocable once submitted and accepted and shall apply, at a minimum, from the date of the standard’s approval to the date of the standard’s withdrawal.
Inappropriate Topics for IEEE WG Meetings

• Don’t discuss the validity/essentiality of patents/patent claims

• Don’t discuss the cost of specific patent use

• 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-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit http://standards.ieee.org/board/pat/index.html

This slide set is available at http://standards.ieee.org/board/pat/pat-slideset.ppt

Slide #2  Approved by IEEE-SA Standards Board – March 2003 (Revised February 2006)
Review of task

• Motion passed 16\textsuperscript{th} Nov 2006
  – Request that IEEE 802.3 authorise the IEEE 802.3 Working Group chair to work with the IEEE 802.3 Maintenance Task Force to generate and pre-submit a Revision PAR for IEEE Std 802.3 and a New Standard PAR for IEEE P 802.3.1 Link Aggregation based on the plan ‘IEEE Std 802.3 revision plan proposal – 16th November 2006’
  – Charter the IEEE 802.3 Maintenance Task Force to develop drafts based on plan ‘IEEE Std 802.3 revision plan proposal – 16th November 2006’
  – Request that IEEE 802.3 authorise the IEEE 802.3 Maintenance Task Force to pre-submit the IEEE 802.3 Revision and IEEE P802.3.1 drafts prior to the March plenary if available (making this request without a PAR is without precedent).

• One deviation
  – Link Aggregation standard now IEEE P802.1AX
    • Still IEEE 802.3 project but will be IEEE 802.1 standard
    • Done many times for IEEE Std 802.1D amendments
      – Most recent IEEE 802.17a
IEEE Std 802.3 revision plan

IEEE Std 802.3 Revision

IEEE Std 802.3-2005
Published 12/05
5 Sections

Revision request (selected at Jan interim)

IEEE P802.3REV
Consolidated edition

IEEE P802.3REV
Target approval 03/08
SB Ballot draft Nov 2007

IEEE Std 802.3 Amendments

IEEE Std 802.3-2005/
Cor 1-2006
Corrigenda 1
Published 06/06

IEEE Std 802.3aq-2006
10GBASE-LRM
Published 10/06

IEEE Std 802.3an-2006
10GBASE-T
Target publication 08/06

IEEE Std 802.3as-2006
Frame expansion
Published 11/06

IEEE P802.3ap
Backplane Ethernet
Target approval 03/07

WG ballot ‘draft’
May 2007
(IEEE P802.3ap
merged if possible)

IEEE P802.3ar
Congestion management
Target approval ??

IEEE Std 802.1AX
New Standard

IEEE P802.1AX
Link Aggregation

IEEE P802.1AX
Link Aggregation

WG ballot draft
May 2007

SB Ballot draft
Nov 2007

Transfer to IEEE 802.1 (TBD)

IEEE Std 802.1AX
Link Aggregation

IEEE P802.3av
No sponsor balloting

IEEE P802.3av
sponsor ballot

Note: Target publication date is target standards board approval plus three months.
IEEE Std 802.3 revision Timeline

- Timeline
  - Revision request selection: 17th Jan 2007
  - NesCom submittal#: 27th Jan 2007
  - EC PAR approval: 16th Mar 2007
  - PAR approval#: 22nd Mar 2007
  - Working Group Ballot: 1st Jun 2007
  - Sponsor Ballot: Nov 2007
  - RevCom submittal#: Apr 2008
  - Standards board approval#: Jun 2008

# Externally determined dates
IEEE Std 802.3 revision
Selection of maintenance request
IEEE Std 802.3 revision
IEEE Std802.3-2005/Rev (IEEE 802.3ay)
draft PAR
IEEE Std 802.3 revision
IEEE P802.1AX draft PAR
IEEE Std 802.3 revision
IEEE 802.1AX Link Aggregation

• Contents
  – Clause 43 Link Aggregation
  – Annex 43A Collection and Distribution functions
  – Annex 43C LACP standby link selection and dynamic Key management
  – Annex 30C SNMP MIB definitions for Link Aggregation
  – Clause 1 definition related only to Link Aggregation
    • For example subclause 1.4.53 ‘**Actor:** The local entity in a Link Aggregation Control Protocol exchange. (See IEEE 802.3, Clause 43.)’
  – Subclause 30.7 Management for Link Aggregation
    • And all its subclauses
  – Annex 30B content in support of 30.7

• Keep in IEEE 802.3
  – Annex 43B Requirements for support of Slow Protocols