



IEEE 802.3az Energy Efficient Ethernet

Opening Plenary Report

Denver, CO
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- Task Force web page URL:

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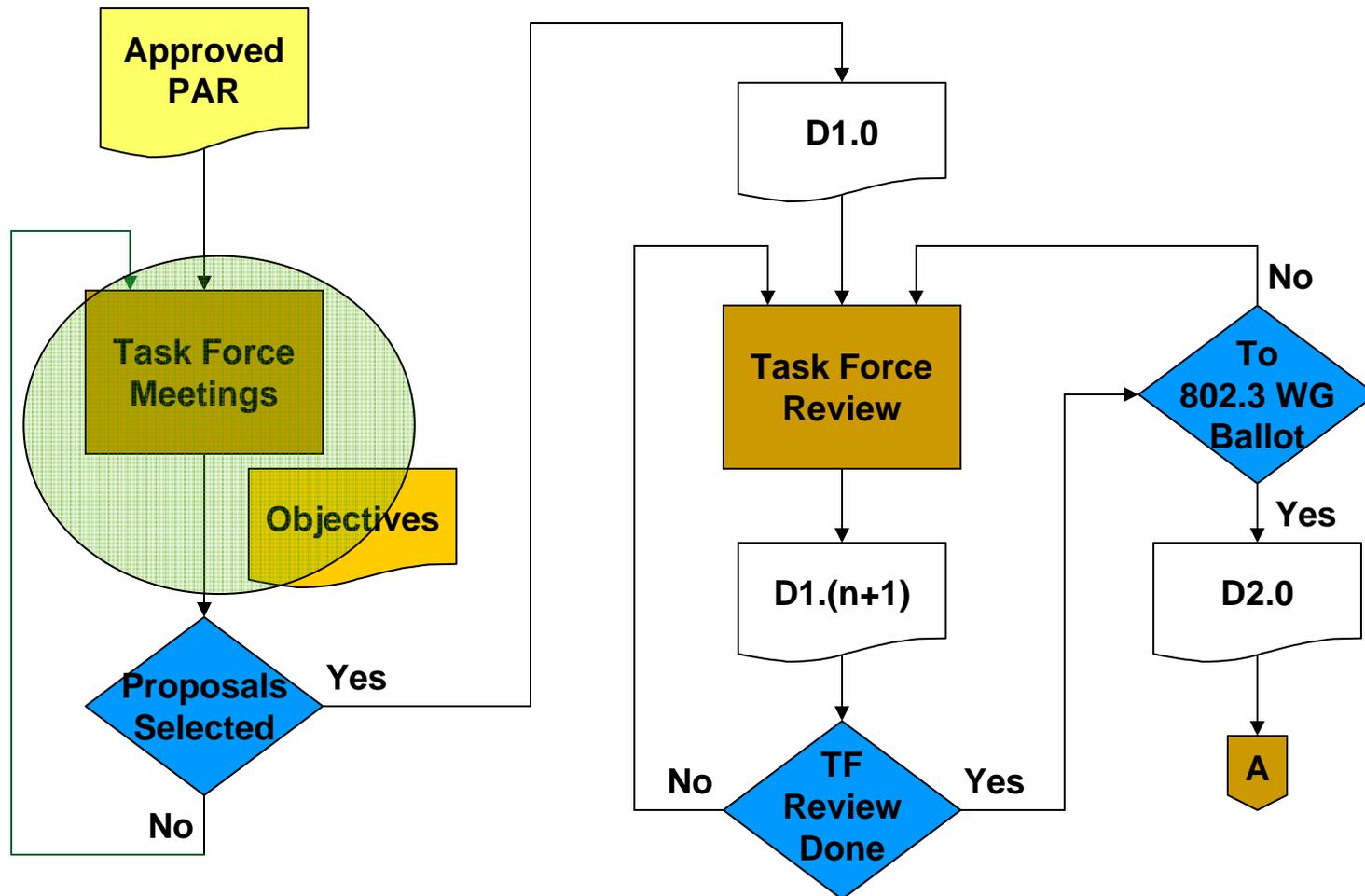
Reflector and Web

- We have an editor's draft, D0.1, aka the “very preliminary” draft
- Task Force *private* web page URL:

<http://www.ieee802.org/3/az/private/index.html>

Overview of IEEE 802.3 Standards Process (2/5)

Task Force Meeting Phase



802.3az Task Force Report

- We had an interim meeting
- May 13-14, 2008 – Munich, Germany
 - Hosted by Linear Technologies
 - Great location, great weather, great bier – Thank you!
 - Especially thanks to Dave Dwelling for his hard work in making the meeting a success!
- Attendance: 30-40 people
- 13 presentations covering
 - Document structure, clauses and editors
 - Technical topics related to our objectives

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■ Progress

- At the meeting we adopted the following proposals into our baseline set:
 - 10BASE-T reduced amplitude
 - 10GBASE-T
 - Auto-negotiation
 - A protocol to communicate parameters after auto-negotiation
- We also would like to add an objective for 1000BASE-KX
- We are planning a service to humanity – clause 25 (TP-PMD)

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■ Progress (cont.)

□ Motions from the Interim

Motion #1

802.3az Task Force adopt EEE Capability Negotiation proposal in hayes_02_0508.pdf as part of the baseline solution for Energy Efficient Ethernet.

Moved: M. Traeber; Second: H. Barrass

Technical; >75% required to pass

Y: 21 N: 0 A: 0

Motion passes

802.3az Task Force Report

■ Progress (cont.)

□ Motions from the Interim

Motion #2

802.3az Task Force adopt 10GBASE-T proposal in taich_02_0508.pdf as part of the baseline solution for Energy Efficient Ethernet

Moved: R. Hays; Second: H. Barrass

Technical; >75% required to pass

Y: 20 N: 0 A: 1

Motion passes

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■ Progress (cont.)

□ Motions from the Interim

Motion #3

802.3az Task Force adopt proposal in chadha_02_0508 to reduce transmit amplitude for a EEE 10BASE-T PHY to 1.75Vp and the associated Twisted Pair Model for a Class D (Category 5) or better cable as the baseline for the EEE objective to define an energy efficient 10 megabit PHY

**Moved: M. Chadha; Second: H. Barrass
Technical; >75% required to pass**

Y: 22 N: 0 A: 0

Motion passes

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■ Progress (cont.)

□ Motions from the Interim

Motion #4

**Adopt EEE compatible xMII Interface proposal in
chou_03_0508.pdf as part of the baseline solution for
Energy Efficient Ethernet**

Moved: M. Traeber; Second: M. Chadha

Technical; >75% required to pass

Y: 21 N: 0 A: 1

Motion passes

802.3az Task Force Report

■ Progress (cont.)

□ Motions from the Interim

Motion #5

Move that the IEEE 802.3az TF add 1000BASE-KX to the list of supported PHYs in its Objectives

**Moved: D. Koenen; Second: B. Booth
Technical; >75% required to pass**

Y: 22 N: 0 A: 0

Motion passes

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■ Progress (cont.)

□ Motions from the Interim

Motion #6

Request that the 802.3az editor create a draft based on adopted baseline proposals for circulation prior to the July 2008 plenary meeting

Moved: R. Grow; Second: G. Zimmerman

Procedural; >50% required to pass

Y: 23 N: 0 A: 0

Motion passes

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- Progress (cont.)
 - Motions from the Interim
- Motion #7**

802.3az Task Force adopt dove_02_05_08.pdf - Energy Efficient Ethernet Switching Perspective and dove_04_05_08.pdf - Energy Efficient Ethernet xxMII Clarifications as baseline proposals for an initial draft document

**Moved: D. Dove; Second: H. Barrass
Technical; >75% required to pass**

Y: 21 N: 0 A: 0

Motion passes

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- Progress (cont.)

- Straw poll

- "Which approach do you prefer for 100BASE-TX, EEE specification?"

- A: Edit Clause 25 in the same style as the current standard to add EEE function. : prefer – 0 : dislike - 15

- B: “Soup to nuts” rewrite of Clause 25, bring in the content of TP-PMD and include EEE functions alongside legacy behavior. : prefer – 15 : dislike - 0

- C: Make an entirely new clause that integrates the content of TP-PMD but describes only EEE behavior. : prefer – 7 : dislike - 3

Objectives

Define a mechanism to reduce power consumption during periods of low link utilization for the following PHYs

- 100BASE-TX (Full Duplex)**
- 1000BASE-T (Full Duplex)**
- 10GBASE-T**
- 10GBASE-KR**
- 10GBASE-KX4**

- Define a protocol to coordinate transitions to or from a lower level of power consumption**
- The link status should not change as a result of the transition**
- No frames in transit shall be dropped or corrupted during the transition to and from the lower level of power consumption**
- The transition time to and from the lower level of power consumption should be transparent to upper layer protocols and applications**

Objectives

- **Define a 10 megabit PHY with a reduced transmit amplitude requirement such that it shall be fully interoperable with legacy 10BASE-T PHYs over 100 m of Class D (Category 5) or better cabling to enable reduced power implementations.**
- **Any new twisted-pair and/or backplane PHY for EEE shall include legacy compatible auto negotiation**

Goals for this Meeting

- Continue hearing proposals
 - Add to (and hopefully finish) the baseline set of proposals
 - Still need proposals for
 - 10GBASE-KR
 - 10GBASE-KX4
 - 1000BASE-KX
- Joint meetings Wednesday providing updates to
 - 802.1 at 10 AM
 - 802.3av at 2PM
 - 802.3ba at 4PM
- Continue discussions
 - document structure
 - What we are going to do about clause 25 and TP-PMD
- Review the Editor's Draft
- Lay the ground work for the next meeting



Thank You!

