IEEE 802.3az
Energy Efficient Ethernet

Closing Plenary Report

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Energy
Efficient
Ethernet

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Reflector and Web

Task Force *private* web page URL:

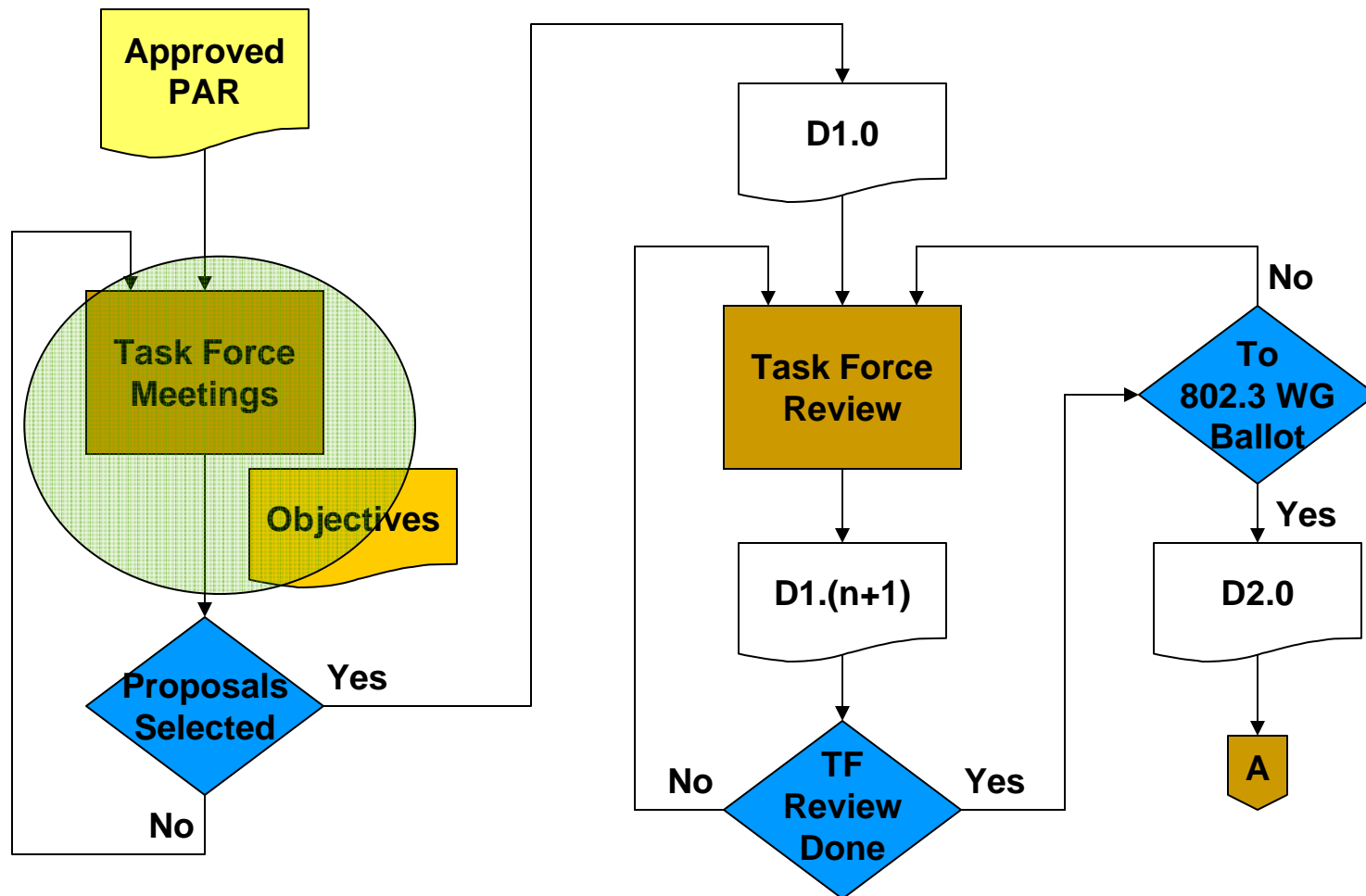**http://www.ieee802.org/3/az/private/index.html**

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Overview of IEEE 802.3 Standards Process (2/5)
Task Force Meeting Phase

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 8 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

Progress

- **At the meeting we adopted the following proposals into our baseline set:**
    - ❑ 10GBASE-KX4
    - ❑ 10GBASE-KR
    - ❑ 1000BASE-KX
- **Clause 25 (TP-PMD)**
    - ❑ Continue to edit the clause as though we will not bring TP-PMD into the clause
        - Reconsider it when the first pass conversion is finished

Progress – joint meetings

- ## 802.1
  - ❑ Received feedback from AVB that they want to be able to know the state of a PHY using Low Power Idle

- ## 802.3av
  - ❑ Discussion on whether or not there was interest in using Low Power Idle to reduce energy use
    - ■ There was interest in reducing energy use but there was a lack of consensus regarding the use of LPI to achieve it

- ## 802.3ba
  - ❑ Good questions
    - ■ Questions on LPI period and impact of repetitive quiet/refresh cycle

Progress – motions from the meeting

Motion #1

P802.3az Task Force adopt the 1000BASE-T LPI timing parameters presented on slide #5 of grimwood_02_0708.pdf for inclusion into the next draft revision of IEEE 802.3az

Moved: Robert Hays ; Second: Mandeep Chadha

Technical; >75% required to pass

Y: 18 N: 0 A: 1

Motion passes

Progress – motions from the meeting

Motion #2

Adopt the LPI Timing parameters of LPI 100BASE-TX presented on slide #12 of chou_02_0708.pdf for inclusion into the next draft revision of IEEE 802.3az.

Moved: Joseph Chou ; **Second: Michael Grimwood**

Technical; >75% required to pass

Y: 18 N: 0 A: 1

Motion passes

Progress – motions from the meeting

Motion #3

P802.3az Task Force adopt the Backplane Ethernet Low-Power Idle proposal in koenen_02_0708.pdf as part of the baseline solution for 10GBASE-KR, 10GBASE-KX4 and 1000BASE-KX Energy Efficient Ethernet

Moved: Velu Pillai; Second: David Koenen

Technical; >75% required to pass

Y: 18 N: 0 A: 3

Motion passes

Progress – 10GBASE-T ad hoc formed

- **There are a lot of open items for 10GBASE-T Low Power Idle**
  - ❑ Ad hoc requested and formed
  - ❑ Gavin Parnaby is chair of the ad hoc
  - ❑ Charter is for 10GBASE-T experts to work together to close the open items by the September interim

Progress – editor's meeting

- Editors met to plan the work ahead of them
  - Agreed on nomenclature
  - Agreed on a schedule
- D0.9 will be available prior to September Interim
  - Goal is to begin circulation August 25th
  - Comments should be submitted prior to Sept 1st
  - Proposed responses will be posted a week prior to the interim meeting
  - Comment should be submitted via comment tool
- Goal is to combine D0.9 with resolved comments at the September interim to generate D1.0

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- ## Motion from the May 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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Motion

IEEE 802.3 Working Group approve the addition of 1000BASE-KX to the list of supported PHYs in the IEEE 802.3az Task Force Objectives

M: M. Bennett on behalf of the TF

Technical; >75% required to pass

Y: 68 N: 0 A: 13

Motion passes

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**

Future Meetings

- **Sept 2008 Interim**
  - Hosted by LG/Nortel
  - Week of Sept 15 (Tuesday (16) – Thursday (18))
  - Seoul, South Korea
- **Nov 2008 Plenary**
  - Nov 9 – 14
  - Hyatt Regency Dallas at Reunion
  - Dallas, Tx, USA

- **Future meeting information at:**
  - http://ieee802.org/3/interims/index.html

Thank You!