IEEE 802.3az
Energy Efficient Ethernet

Closing Plenary Report

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- 802.3az web page URL:
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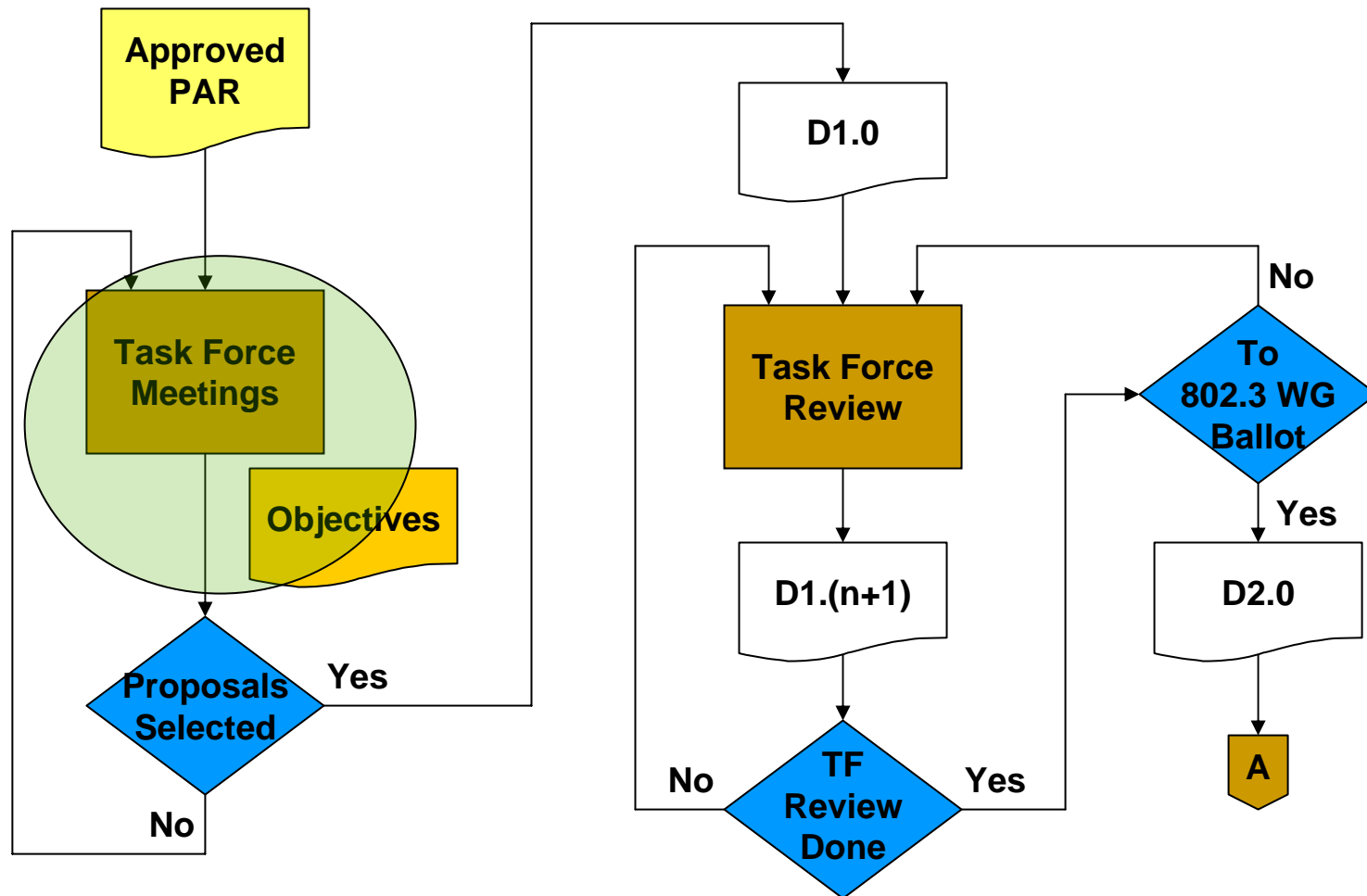
Overview of IEEE 802.3 Standards Process (2/5) Task Force Comment Phase

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

- Identify the challenges for this project
  - Document structure
  - Architecture

- Start hearing proposals

- Lay the ground work for the next meeting

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- **11 presentations**
  - IEEE 802.3az Energy Efficient Ethernet: Open Questions for the Task Force - Bennett
  - The Path to Working Group Ballot - Frazier
  - IEEE 802.3: Clause 30 management, MIB, registers and function – Law
  - EEE control protocol proposal - Barrass
  - ANOTHER PIECE OF EEE: An additional requirement for Energy Efficient Ethernet - Thompson
  - Speed Switching without Communication Interruption – Barnette, et. al

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- **11 presentations**
  - ❑ Reducing network energy consumption via sleeping and rate-adaptation - Ratnasamy, et. al
  - ❑ Active/Idle Toggling with 0BASE-x for Energy Efficient Ethernet – Hays, et. al
  - ❑ Conditions for Backplane PHY EEE Transitions - Koenen
  - ❑ A Gigabit "Subset PHY" Approach for 10GBASE-T Energy Efficient Ethernet – Powell, et. al
  - ❑ Active Idle Concept for PHYs - Zimmerman

Future Meetings

- January 2008 Interim
  - ❑ Tuesday, January 22 and Wednesday, January 23
  - ❑ Marriot (Waterfront)
  - ❑ Portland, OR
  - ❑ Watch http://ieee802.org/3/interims/index.html for updates

- March 2008 Plenary
  - ❑ Week of March 16-21
  - ❑ Caribe Royale Orlando
  - ❑ Orlando, Florida

- Future meeting information at:
  - ❑ http://www.ieee802.org/meeting/index.html

Thank You!