IEEE 802.3
Energy Efficient Ethernet
Study Group

Closing Report

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Reflector and Web

Energy Efficient Ethernet

- We have a reflector set-up:
- To subscribe to the EEESG reflector, send your request to:
  ListServ@ieee.org

  with the following in the body of the message (do not include "<>"):
  subscribe stds-802-3-eeesg <yourfirstname> <yourlastname>
  end
- Send EEESG reflector messages to:
  stds-802-3-eeesg@listserv.ieee.org
- For complete instructions on reflector usage, subscription, and unsubscription:
  http://www.ieee802.org/3/eeesg/reflector.html
- EEESG web page URL:
  http://www.ieee802.org/3/eeesg/

EEE Study Group Report

- Met for two and a half days with more than 14 engineers from more than 10 companies representing IC vendors, system vendors, and end users.
- Heard 11 presentations
  - an emulation of Rapid PHY Selection
  - Considerations for technical feasibility of EEE with 10GBASE-T
  - a look at server bandwidth utilization
  - A 10GBASE-T power budget summary

EEE Study Group Report

Energy Efficient Ethernet

- Presentations
  - A system developer's view of new PHY proposals
  - A Tutorial on Power Management in Computer Systems
  - End-Station System Requirements and a proposal for EEE Objectives
  - EEE for backplane PHYs in Blade Server Environment
  - Observations and thoughts on rate switching
  - An update to the "open questions" document

EEE Study Group Report

Energy Efficient Ethernet

- Defined terms (from January):

  Preparation time: the time between the first request to change speeds and the time the data transmission is stopped

  Transition time: the time that data transmission is stopped until the time data transmission starts

  Settling time: time between end of transition time and achieving specified BER

EEE Study Group Report

Energy Efficient Ethernet

- Adopted the following project objectives:
  - Define a mechanism to change between 10GBASE-T and 1000BASE-T operation more rapidly than auto-negotiation without loss of higher layer connection
  - Define a mechanism to change between 100BASE-TX and 1000BASE-T operation more rapidly than auto-negotiation without loss of higher layer connection
  - Define one communications mechanism to negotiate and control rapid speed change for an EEE capable point-to-point network

EEE Study Group Report

- Adopted the following project objectives:
  - Define a mechanism to change between 10GBASE-KR & 1000BASE-KX more rapidly than auto-negotiation without loss of higher layer connection
  - Define a mechanism to change between 10GBASE-KX4 and 1000BASE-KX more rapidly than auto-negotiation without loss of higher layer connection
  - Any new twisted-pair and/or backplane PHY for EEE shall include legacy compatible auto negotiation

EEE Study Group Report

- Adopted the following project scope components

Define a protocol to allow symmetric request of change of link speed.
- Changes within the capabilities of the PHY devices.
- Ability to request decrease and demand increase.
- Protocol will be PHY type independent

Define the ability to exchange transition time information.
- This may be more than one parameter

Define transition times for the following PHY types.
- 10BASE-T, 100BASE-TX, 1000BASE-T, 10GBASE-T, 10GBASE-KX4, 10GBASE-KR, 1000BASE-KX

Additions as necessary to their start up state machines to define appropriate entry points determined by parameter durability (e.g. canceller coefficients).

EEE Study Group Report

Energy Efficient Ethernet

- Straw Poll:
- EEESG should consider:

What is necessary to support wake up from a system standby state (almost no power)

Yes 11 No 0 Abstain 2

EEE Study Group Report

- Motion
- The 802.3 working group extend the Energy Efficient Ethernet Study Group

  M:Geoff Thompson

  S: Hugh Barrass

  Yes: unanimous No Abstain

  Passed by voice

Motion

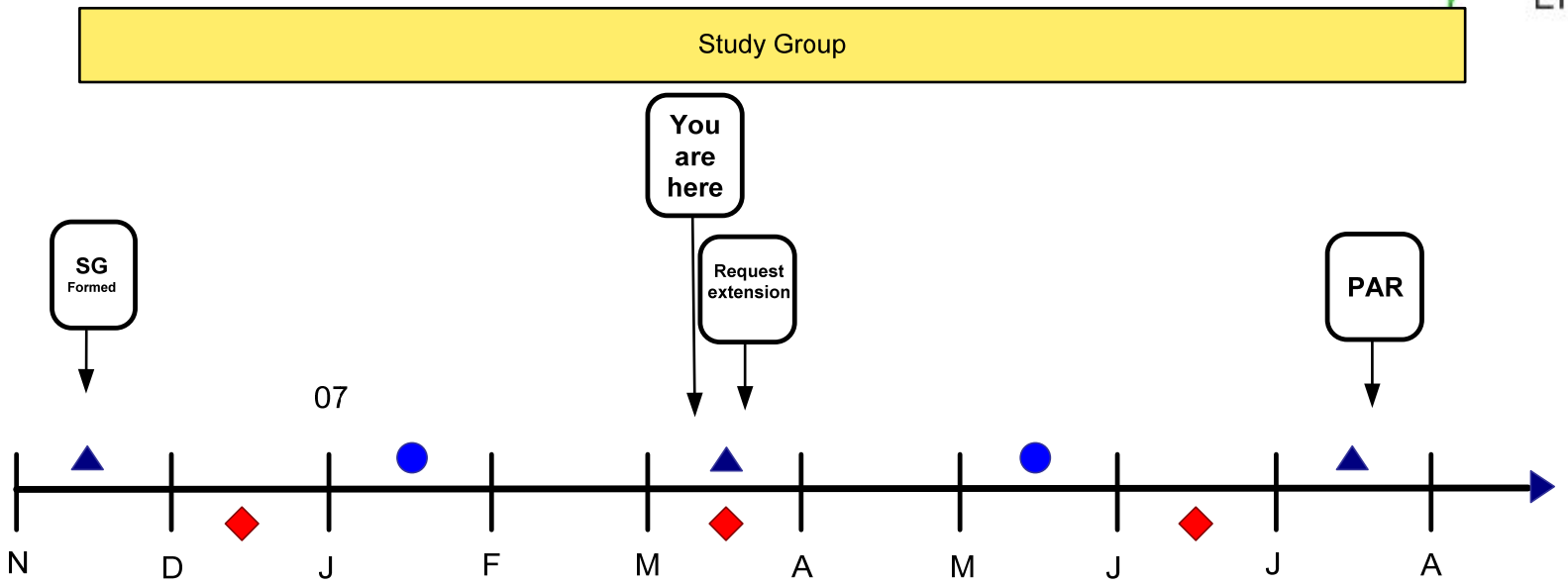
- The 802.3 Working Group extend the Energy Efficient Ethernet Study Group

M: Mike Bennett – on behalf of the EEESG

Yes 62 No 0 Abstain 3

One Possible Timeline to PAR

Energy Efficient Ethernet



Legend

- IEEE 802 Plenary
- IEEE 802 Interim
- IEEE-SA Standards Board

Future Meetings

Energy Efficient Ethernet

- April 2007 Interim (If we can get permission to co-locate)
  - Week of April 16
  - Crowne Plaza Hotel
  - Ottawa, ON
- May 2007 Interim
  - Week of May 28
  - ITU
  - Geneva, Switzerland
    - For more info: http://www.ieee802.org/1/files/public/docs2006/meetings-may07-interim+workshop-1106.pdf
- July 2007 Plenary
  - Week of July 16
  - Hyatt Regency
  - San Francisco, CA
- Future meeting information at:
  - http://www.ieee802.org/meeting/index.html

Thank You!