Welcome

to the
March 2001
Plenary Meeting
of the

802.3af DTE Power via MDI Task Force

Hilton Head Island, SC

Steve Carlson, TF Chair

Agenda

- Welcome and Introductions
- Select Recording Secretary
- Review / Approve Agenda
- Document Distribution
- E-mail Reflector, Web Site, and Miscellaneous Information
- Objectives for This Week -Tuesday
  - Reports from ad hocs for draft input
  - Breakout for discovery ad hoc
  - Power supply, HLSM, managment ad hocs
- Objectives for This Week - Wednesday
  - Presentations from ad hocs
  - Review of draft status
  - Prepare for TF Ballot in May, WG Ballot in July
- Call for Patents

Agenda

- Presentations related to Objectives
- Motions related to Objectives
- New Business
- Plans for May Interim Meeting
- Approve Minutes of Irvine Meeting
- Review New Action Items
- Adjourn

Task Force Status

- PAR approved by NesCom (1/30/2000)

P802.3af (C/LM) Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local & Metropolitan Area Networks - Specific Requirements - Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications - Data Terminal Equipment (DTE) Power via Media Dependent Interface (MDI)

E-mail Reflector

The IEEE has set up a reflector for this study group:

stds-802-3-pwrviamdi@mail.ieee.org

The reflector can be used for announcements, comments, discussions, or dissemination of information related to the work of this study group

The reflector should not be used for recruiting, advertising, soliciting, flaming, whining, subscribing, or unsubscribing

To be added to the reflector, send an E- mail containing the following line:

subscribe stds-802-3-pwrviamdi <your email address>

to

majordomo@ mail.ieee.org

To send a message to the DTE Power reflector use the email address:

stds-802-3-pwrviamdi @ieee.org

Subscriptions are on an individual basis only

No proxy requests or reflectors will be subscribed

IEEE Web Site

Typical Plenary Meeting Plan (DTE Power via MDI will meet during "Task Force"slots):

http://grouper.ieee.org/groups/802/3/plenary.html

802.3af 5 Criteria:

http://grouper.ieee.org/groups/802/3/power_study/public/nov99/802.3af_5criteria.pdf

802.3af PAR:

http://grouper.ieee.org/groups/802/3/power_study /public/nov99/802.3af_PAR.pdf

802.3 Voting Rules

http://grouper.ieee.org/groups/802/3/rules/member.html

802.3 Patent Policy

http://grouper.ieee.org/groups/802/3/patent.html

IEEE 802.3 Requirements for Working Group Voting Membership

If you wish to vote on 802.3 standards at the Working Group Ballot stage you need to become a Voting Member of Working Group 802.3.
Membership is by individual, not company.

To become a voter:

Attend and sign the attendance book at least 75% of the sessions of two Working Group 802.3 Plenary meetings (within the last four).

Full attendance at a two day or more duly constituted Working Group 802.3 Interim Meeting can be substituted for attendance at one plenary.

Have complete and current contact information recorded in the Working Group 802.3 database.

Request to become a voter during a Working Group 802.3 Opening or Closing plenary meeting when additions to the voter list are solicited by the Chair from the "Potential Voter" list.

To remain a voter you must:

Maintain current contact information in the Working Group 802.3 database.

Have 75% attendance during at least two of the last four plenaries (Attendance at an interim can substitute for attendance at no more than 1 plenary).

Participate in Working Group ballots. You can be dropped for not returning or abstaining in two of the last three ballots.

The Attendance Books

SIGN "THE BOOK" EVERY DAY
KEEP IT MOVING
IF YOU ARE NEW, SIGN THE NEW-BEES BOOK
Put business card in back or fill out address...
Sign this book every day; no forward signing;
do NOT sign for someone else!

DO NOT REMOVE THE BOOK FROM THE ROOM;
DO NOT COPY THE BOOK

Future Meetings

Interim Meeting - May 21 - 25, 2001 - St. Louis, MO
(802.3af meets May 23 – 25, starting at noon on the 23rd.)
Plenary Meeting - July 9 - 13, Marriott, Portland, OR

Other plenary meetings can be found in:
http://grouper.ieee.org/groups/802/meeting/future.pdf

Objectives for this Meeting

- Consensus on discovery text
- Closure on power supply specification
- Review status of draft
- Charter editor for new draft
- Plan for TF Ballot in May

Presentation Guidelines

- Requests for presentation time should be scheduled with the chair one week prior to the meeting
- Presentations should be supplied via e-mail as a PDF file one week before the meeting
- Avoid fussy backgrounds or other decorative graphics
- No animations, video clips, etc.
- Goal: to keep the PDF small enough to fit on a single floppy disk
- You must attend one meeting prior to presenting

DTE Power Objectives

November 10, 1999 as approved by DTE Power via MDI SG.

(1) Economically provide power over a twisted- pair link segment to a single Ethernet device. To be included:

10BASE- T,

100BASE- TX.

To be considered:

1000BASE- T.

(2) Select one power distribution technique for world- wide use

(3) Not cause damage and interoperate with compliant RJ- 45 MDI Ethernet devices including:

a. Switch- to- switch connections (both supplying power)

b. Cross- over cables

c. Common mode termination implementations

d. Shorted conductors, pairs or loop- back plug

(4) Define a capability detection function that works with a powered and an unpowered device

DTE Power Objectives

(5) Select the voltage, minimum and maximum current and wattage to be supplied
(6) Add appropriate management objects for power capability and status
(7) Support current standard, 4- pair, horizontal cabling infrastructure for installed
Cat 3 and Cat 5 cabling
(8) Preserve the signal transmission and isolation characteristics of existing equipment and cabling
(9) Maintain normal functionality of Link Integrity Test function in legacy and new devices
(10) Consider mid- span power insertion, powering over the signal pairs, and interaction with other RJ- 45 interfaces: Token Ring, ATM, FDDI TP- PMD, 1000BASE- T, ISDN, networking test equipment, PBX, IEEE 1394, devices listed in ISO/ IEC 11801 : 1995 Annex G

802.3af Requirements

- Without specifying the two and only two pairs to be utilized for DTE power, DTE power shall utilize two pair powering where each wire in the pair is at the same nominal potential and the power supply potential is between the two pairs selected. - January 2000 Interim
- Regardless of the detection scheme adopted and the power feed scheme adopted, the power detection and power feed shall operate on the same set of pairs. - January 2000 Interim
- Regardless of the final voltage selected, the DTE power max voltage shall not exceed the limits of SELV per IEC 950. - January 2000 Interim
- In order to progress we accept that there are two isolation requirements of 802.3, environment A and B per 802.3 section 27.5.3 et al, and that for the purposes of this committee we will treat as a priority for consideration environment B without precluding environment A. - March 2000 Plenary

802.3af Requirements

- For DC systems the minimum output voltage of the source equipment power supply shall be at least 40VDC. - March 2000 Plenary
- For DC systems, the source device shall be capable of supplying a minimum current of at least 300mA per port. - March 2000 Plenary
- The solution for DTE Powering shall support mid-span insertion of the power source. - March 2000 Plenary
- 802.3af systems shall distribute DC Power - May 2000 Interim
- If both pair sets may be used for powering, midspan shall supply power on 45,78 - Supplying power on pins 12,36 from the midspan is for a later revision of the standard. - May 2000 Interim
- 802.3af proceed with the development of a low frequency, low energy common mode detection method. - May 2000 Interim
- That it be an objective of the 802.3af task force to determine the optimal method to apply power at the "mid-span" and "DCE end" to minimize data-path impairments at a reasonable cost. -May 2000 Interim

802.3af Requirements

- 802.3af systems shall distribute DC Power - May 2000 Interim
- If both pair sets may be used for powering, midspan shall supply power on 45,78 - Supplying power on pins 12,36 from the midspan is for a later revision of the standard. - May 2000 Interim
- 802.3af proceed with the development of a low frequency, low energy common mode detection method. - May 2000 Interim
- That it be an objective of the 802.3af task force to determine the optimal method to apply power at the "mid-span" and "DCE end" to minimize data-path impairments at a reasonable cost. -May 2000 Interim
- We accept the powering of the DTE via either sets of wire pairs (1-2, 3-6 and 4-5, 7-8), in anticipation the detailed technical and economic feasibility of each having been shown prior to the Working Group Ballot. - May 2000 Interim

Presentations

" System Considerations – System Modeling," Yair Darshan, PowerDsine

"System Considerations – PD Detection," Yair Darshan, PowerDsine

"System Considerations – PSE – PD Issues," Yair Darshan, PowerDsine

"Power Turn-On," Dieter Knollman, Avaya

"PSE Power Dissipation," Bruce Inn, Micrel

"Draft 2 – DTE Power Electrical and Environmental Specifications," Terry Cobb, Lucent – input to draft

Presentations

"Discovery Ad-Hoc Report," Don Stewart - Chair, Avaya

- Input to draft
- Behavioral description of resistive detection

" Power Supply Ad-Hoc Report," Karl Nakamura - Chair , Cisco

- Input to draft
- Specification for PSE and PD power supplies

Other Business

- New Business
- Plans for May Interim
- Approve Minutes of January Meeting
- Review New Action Items
- Adjourn