Minutes of the IEEE 802.3af task force meeting in LaJolla CA, July 11-12, 2000

Tuesday, July 11, 2000,
Robert D. Love volunteered to be Recording Secretary for this meeting

Opening and introductions – about 30% are at 802.3af for first time. About 15% are at an 802 meeting for the first time

Opening remarks – Steve Carlson (Slides available)
The 802.3af attendance list is circulated and posted.

- See Objectives for this Meeting chart.
- 1st draft of 802.3af document is now available. Look at document structure. Content to be fleshed out later.
- Two lists are being maintained, a decision list and a requirements list.
- Instructions for access to the protected sight: www.ieee802.org/3/af/private/index.html
  Username ******
  Password ******

After Steve's opening remarks we went right to the presentations for the meeting. Note that all presentations are or will be on the 802.3af web site

Presentations:

- Lisa Leo, Tyco Electronics: "Safety Considerations: Power Fault Protection"
- Rick Brooks (presenter) and Larry Miller Nortel Networks "Coupled Diode Discovery Protocols and Prototypes" – and a demonstration of working hardware, including a live test on Mike McCormack's Ethernet PCMCIA card in his laptop.
- G. Vergnaud / R. Gass / R. Jaeger – Alcatel "DTE Power via MDI Discovery Process"
- John Austerman CMS Technologies "Power, Detection and Discovery over the Existing Ethernet Wiring" Presentation and demonstration
- Robert Leonowich, Lucent Technologies: "IEEE 802.3af DTE Power via MDI Resistive Signature and Detection Protocol Follow-up"

Lunch Break

Afternoon Session:
Instructions for sending documents to the webmaster for posting

1. Send it in PDF format
2. Make sure the document information is filled out correctly
3. Be explicit as to where the document is to be posted

More Presentations:

- Amir Lehr, Power Dsine: "PowerDsine Follow-On"
- Robert D. Love, LAN Connect Consultants, "Mid-Span Issues"
  Following his presentation Robert volunteered to head up an ad-Hoc to address the issues associated with Mid-Span powering on the unused pairs, and develop test and test limit recommendations. Members, R. Love, Michel Bohbot, Sterling Vaden, Dan Dove, Larry Miller, Chris DiMinico, Mike McCormick
- Michel Bohbot, Nordx/CDT, Roger Karam, Cisco, Moty Goldis, Lucent, "Power DTE Mid-Span Cabling Implementation"
- Chris Cullen, Cisco: "Power over Signal Pairs – Why is Cisco Pursuing?"
- Karl Nakamura, Cisco: "Economic Feasibility of Power Over the Signal Pairs"
- Roger Karam, Cisco: "Technical Feasibility of Providing Power Over the Signal Pairs "
  The task force expressed its gratitude to Roger Karam for the prodigious amount of research and testing he presented to the group.

- Larry Miller (Nortel) volunteered to take a theoretical look at some of the critical performance parameters based on the massive data presented.
- Kevin Brown (Presenting), G. Hanna, Broadcom "Midspan Power Insertion and 1000 BASE-T Test Results "

Wednesday, July 11, 2000

Housekeeping:
If there are votes without overwhelming consensus, then each side will be given about a minute to present the two views to the 802.3 plenary.

Mike McCormack will be updating the draft based on 802.3 approval of decisions, rather than based on 802.3af decisions.

Presentations continue
- Mike McCormack, 3Com "Hard Choices for Voltage"

| **Straw poll #1** | | | |
|---|---|---|---|
| Is 14 watts maximum power level delivered to the DTE acceptable? | | | |
| By Mike McCormack | | 2nd Don Pannell | |
| Technical – 75% | | | |
| | YES | NO | Abstain |
| All Voting | 51 | 0 | No Vote |

Motion Carries

(The 14 watts number was based on being able to deliver that power with a 48-volt supply)

| **Motion #1** | | | |
|---|---|---|---|
| Move that the maximum continuous current draw at the PD end be no more than 350 ma. | | | |
| By Mike McCormack | | 2nd Don Pannell | |
| Technical – 75% | | | |
| | YES | NO | Abstain |
| All Voting | 58 | 0 | 5 |
| 802.3 Voters | 31 | 0 | 1 |

Motion Carries

Presentations:
- Arlan Anderson, Nortel Networks; "Powered Device Limits"
- Henry Heinrichs, Pulse, "Transformer Characteristics when Used in Mid-Span Applications"

Break and AdHoc meeting on Mid-Span Power issues

Voting Rights – reviewed

Presentation:
- Karl Nakamura, Cisco: "Discovery Method Evaluations"
  Discussion to have all parties come forward with evaluations.
  Request for straw poll to see if any of the schemes should be eliminated.

| **STRAW POLL #2** (Chicago Voting Rules) All voting - Acceptability of proposals as a candidate | | | |
|---|---|---|---|
| | YES | NO | Abstain |
| Resistor Detection proposed by Lucent | 39 | 2 | 17 |

| | | | |
|---|---|---|---|
| Diode/Capacitor Detection (Nortel) | 42 | 0 | 18 |
| Big Capacitor (Alcatel) | 18 | 15 | 27 |
| Serial Data Detection (CMS) | 7 | 30 | 23 |
| Big Capacitor (Power Dsine) | 24 | 0 | 34 |

4 of the 5 move forward. The CMS design does not progress to the next round.

Bob Leonowich revisiting charts from the Monday evening tutorial's Comparative Cost Matrix"

**STRAW POLL** on preference for which proposal

| **STRAW POLL #3**All voting – Choosing a candidate – Choose 1 | |
|---|---|
| | YES |
| Resistor Detection proposed by Lucent | 19 |
| Diode/Capacitor Detection (Nortel) | 23 |
| Big Capacitor (Alcatel) | 3 |
| Big Capacitor (Power Dsine) | 4 |

This Straw poll is for the benefit of those that need to prepare the material for the task force. No contenders eliminated as a result.

Request made by RD Love to use the reflector more. Steve agreed and reminded all that there are to be no attachments made to the reflector notes. Instead, postings for the web site should be sent to the webmaster.

Arlan Anderson, Nortel re-presenting "Powered Device Limits" with some change in numbers.
The corrected version will be posted.

Discussion of Economic Feasibility for powering over the Signal pairs.
Are there any issues:

Dan – automatic polarity correction – do we want it.

| **Straw Poll #4** | | | |
|---|---|---|---|
| Has Economic viability for power over signal pairs been demonstrated? | | | |
| | YES | NO | Abstain |
| All Voting | 47 | 0 | 8 |
| 802.3 Voters | 26 | 0 | 3 |

Passes, Economic Feasibility has been shown for powering the signal pairs

Technical feasibility for power over the signal pairs.
Presentation:

- Dan Dove on Technical Viability Issues: "Signal Pair Analysis, What needs to be done?"

Geoff Thompson provided a definition of technical feasibility. - Geoff stated that technical feasibility is established when we go to ballot is a much higher standard than at PAR time. Continuous evaluation throughout development with established worst case basis relevant to the stage of the product we are in.

Straw Poll on Technical Feasibility for powering the signal pairs:

| **Straw Poll #5** | | | |
|---|---|---|---|
| Has Technical feasibility for power over signal pairs been demonstrated? | | | |
| | YES | NO | Abstain |
| All Voting | 51 | 2 | 6 |
| 802.3 Voters | 24 | 2 | 4 |

Passes, Technical Feasibility has been shown for powering the signal pairs

Agreed that we need a list of requirements for powering the unused pairs: If the work is not done, then powering the spare pairs drop off the list.

Larry's 3-finger list. Focus on impairments. Ad Hoc will try to drive the issues on MidSpan powering of the unused pairs.

| **Motion** | | | |
|---|---|---|---|
| Move that polarity inversion shall be supported at the PD. | | | |
| By Dan Dove | | 2nd Hank Heinrichs | |
| Technical - 75% | | | |
| | YES | NO | Abstain |
| All Voting | | | |
| 802.3 Voters | | | |

Withdrawn:

| **Motion** | | | |
|---|---|---|---|
| Move that the minimum output voltage at the PSE end shall be 46.0Vdc | | | |
| By Mike McCormack | | 2nd Arlan Anderson | |
| Technical - 75% | | | |
| | YES | NO | Abstain |
| All Voting | | | |
| 802.3 Voters | | | |

Motion Withdrawn. – Don't forget the work must be done.

| **Motion #2** | | | |
|---|---|---|---|
| Move that 802.3af Task Force hold an interim meeting in the second week in September in Boston. | | | |
| By Robert Love | | 2nd Karl Nakamura | |
| Procedural - 50% | | | |
| | YES | NO | Abstain |
| 802.3 Voters | 28 | 0 | 0 |

Motion Passes

Editors Report:

The private area will be in the draft. Additional information to be provided by the ADHOC

Summary of AdHoc's initiated this meeting:

Alan Flatman chaired to develop a liaison statement to SC25/WG3 regarding LCTL and ILD

Arlan Anderson is chairing the Power Supply Ad Hoc

Mike McCormack is chairing the High Level State Machine Ad Hoc

Robert Love is chairing the Mid-Span Powering AdHoc.

| **Motion 3** | | | |
|---|---|---|---|
| Accept the Ottawa Interim Meeting Minutes | | | |
| By Don Pannell | | 2nd Roger Karam | |
| Procedural - 50% | | | |
| | YES | NO | Abstain |
| All | All - Voice Vote | 0 | 0 |

Motion passes

Move to close the meeting at 4:43pm Approved by voice vote