

DTE Powering Working Group Minutes
Arlan Anderson, Secretary

Tuesday 9-11-99:

Steve Carlson opened the meeting with a round of introductions and the Agenda was presented.

The Agenda was motioned for approval by Bill Quackenbush and seconded by Scott Burton.
The agenda was approved by unanimous acclamation.

Steve gave an overview of the DTE Powering via MDI e-mail reflector its goals, its rules and a request for professional decorum in its use. Announcements were made on membership, voting rules, and attendance.

The immediate tasks for the group to complete the Objectives and the PAR was identified. So far Geoff Thompson reported that we have received no comments from the Executive Committee, and indicated that the window for comments closes at 5:00 Tuesday, that being today. If any comments are received we must respond within 24 hours. The second major task for these meetings are to discuss constraints and possible solutions.

The schedule for the project was discussed. Geoff T. indicated that with our PAR being completed in November, we could have executive approval at their meeting in Singapore in January. The long term schedule was presented with a target of an approved standard by July 2001. This was underscored by the need for the group to be expedient so as to reduce the proliferation of proprietary solutions.

Other business was solicited and is to be entertained as part of this agenda

An e-mail letter from TR-41.3.4 was presented. It included their suggestions in response to their review of our objectives:

Suggestion A: Change Objective 1 to read "preclude 1000 BASE-T"

Moved to leave Objective 1 as it stands.

By: Mike McCormack Seconded: Paul Moore

Technical 75% Yes 23 No 6 Abstain 4

Suggestion B: Provide an additional Objective to recognize the powering of intermediate devices.

It was pointed out that our scope is limited to a single point to point MDI – MDI.

Moved to send our thanks to TR-41.3.4 to respectfully decline their suggestion to add an objective to recognize the powering of intermediate devices.

By: Bill Quackenbush Seconded: Mike McCormack

Technical 75% Yes 30 No 0 Abstain 2

Suggestion C: Motion to include in the language of the letter to the TR41.3.4 committee is our intention to develop a standard that will meet the requirements of all applicable international safety standards. We solicit the support of TR-41.3.4 to help us to identify these requirements.

By: Mike McCormack Seconded: Nick Stapleton

Technical 75% Yes 27 No 0 Abstain 1

The discussion on including explicit reference to point to point aspects of link restriction to our objectives. A real time edit was done to Objective 1

It was motioned to accept the language of the so revised Objective 1 of the Objectives of September 31st.

By: Bill Quackenbush Seconded: Steve Adams

Technical 75% Yes 24 No 1 Abstain 1

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By: Bill Quackenbush Seconded: Steve Adams
Technical 75% Yes 24 No 1 Abstain 1

A motion to accept a modified version of the revised Objective 1 was raised.

By: Ralph Andersson Seconded: Larry Miller
Technical 75% Yes 28 No 4 Abstain 0

Discussion on Objective 9 to include Firewire IEEE 1394 who has a draft specification using RJ-45 as one of the systems to be considered for potential interference.

A motion was raised to do the following:

- 1). To include IEEE 1394 and IEC/ISO 11801 Annex G as part of Objective 9;
- 2). IEEE 1394 to be added to the Liaison List in the PAR;
- 3). The DTE Power SG Chair be chartered to write a liaison letter informing them of our work.

By: David Law Seconded: Larry Miller
Technical 75% Yes 34 No 0 Abstain 0

A motion was raised to include the following additional item to the Objectives List:

“(10) Maintain normal functionality of the Link Integrity Test Function in both legacy and new devices.”

By: Geoff Thompson Seconded: Amir Lehr
Technical 75% Yes 29 No 1 Abstain 2

A motion to go to lunch was moved by Mike McCormack approved by unanimous acclamation.

A motion was raised accept the Objectives List with the editorial change of the title to remove “as of 9/NOV/99” and reserve for the chair the right to re-number items as he chooses.

By: Mike McCormack Seconded: Larry Miller
Technical 75% Yes 31 No 0 Abstain 1

Technical presentations were the next item on the agenda:

“A Proposal for Power Signaling and Detection” Michael McCormack, 3Com

“LAN Magnetics Operating Under DC Bias Conditions” Henry Hinrichs, Pulse Inc.

“Single and Multi-Port Modular Jack Assemblies” Ed Cady, FCI

Action: All connector issues and questions are to be forwarded to the reflector within the next two weeks. He will collect and consolidate these questions and forward them to the vendors represent for their coordinated response. All requests and responses will be posted on the e-mail reflector.

“Transformer Concerns” Steve Ellsworth, Bel

Action: As in the action item above, all transformer and magnetics questions are to be forwarded to the reflector, who will handle them in the same manner for soliciting responses.

“4 Major areas re: DTE Power over MDI” Geoff Thompson, Nortel Networks

“DTE Power via MDI: System Requirements” Arlan Anderson, Nortel Networks

“DTE Power via MDI” Vafa Rakshani, Broadcom

“DTE power over MDI DTE Discovery Process Proposal” Robert Muir, Level One

"DTE power over MDI Power Feeding Alternatives" Amir Lehr, PowerDsine and Ron Vilozny, 3Com

A motion to adjourn was raised by Larry Rubin, seconded by Steve Adams, and was approved by unanimous acclamation.

Wednesday 9-11-99:

The meeting was called to order and opened with a re-cap. of the four quadrants of our solution space, and a call for any information having to do with laboratory experience having to do with phantom power feed currents effecting the transmission quality of the LAN. Robert Muir gave a verbal response indicating that some testing had been done and no detrimental effects seen.

Geoff Thompson reported that there had been no further comments received on our Objectives and PAR, other than the one we had received previously. Paul Nikolich, the author of the comments on our PAR will be available for our discussion later in the day, and this item was shelved until that time.

The next order of business was for us to bound the solution space by capturing aspects of the proposals seen to date. This started with a matrix capturing the four current options for Discovery and evaluating their respective interference issues. Mike McCormack acted as the scribe collecting the data in real time to be distributed via our website.

Paul Nikolich joined the group and the discussion on the three comments he submitted on our PAR resumed. The conclusion was to decline the first suggestion of changing the word "methodology" to "parameters" in item 6. On the second and third suggestions it was determined that it was well advised to include of the wording "with 802.3 interfaces" into both items 6 and 7 of the PAR.

A motion was made to accept the PAR with these two changes.

By: Mike McCormack Seconded: Larry Miller
Technical 75% Yes 29 No 1 Abstain 4

Following the finalization of the PAR we returned to the discussion on the discovery mechanism matrix. It was noted that further information was required on several potential interference cases resulting in the following actions.

Action: LAN test equipment must be studied further as some of them may operate outside of the current 802.3 standard. Again, within the next two weeks members were exhorted to send in to the reflector names LAN test equipment companies the known of, and they will be solicited for information by the chair.

Action: Proprietary digital phone interfaces on PBX equipment must be studied further, and the members were solicited for information on the interface details of their respective company's product offerings and that a general solicitation would be made to the 802.3 WG.

Action: Henry Hinrichs is to speak with Bob Love of 802.5 to determine the Token Ring interface characteristics.

A break for lunch was taken.

At the resumption of the meeting, Arlan Anderson presented "Further Powering System Considerations" another means of supplying power using a "pseudo phantom" feed (common mode without using transformers) on the idle pairs. It was received with a gratifying amount of contention, most notably in its requirement to have four pairs. Arlan responded that cable plant

engineering rules are needed for any system, and that there would likely be some market restriction for installing this system into a two pair plant.

A question raised as to any hard market data available on the market split between a 2 and 4 pair installed base, met with a resounding lack of response. David Law pointed out that there had already been two successful standards having a four pair requirement. So the precedent is well set, and it would not be an issue for our system to require four pairs. He also said that this issue was studied as part of the 100 BASE-T project.

Action: David Law will provide us with the cable plant study data from the 100 BASE-T project.

As the next order of business we returned to bounding the solution space by capturing the powering options by developing a matrix covering their system and performance issues. In addition to the three proposals presented this week, the group filled out the powering means to a total of six, which covered all of the possible cases. As before Mike McCormack acted as the scribe collecting the data in real time for distribution via our website.

Ralph Anderson, TDK Semiconductor gave a presentation "DTE Power via MDI: Discovery Process Proposal" another alternative for a discovery mechanism, soliciting our help in completing his analysis. His presentation was well received with no significant issues identified.

Steve Carlson reviewed the agenda and our short term and long term schedule status. The reflector was identified as an important tool for our progress, and it was agreed to that the subject line of all e-mails to the reflector will start with "DTE Power . . ." so as to facilitate sorting.

The next discussion was on the plans for the next working group meeting. This highlighted the need for more hard data, which led to a review of our previous action items, and the following new actions were raised:

Action: Arlan Anderson and Mike McCormack will independently pursue with their company's compliance groups, the up to date international regulatory standards for maximum voltage.

Action: Henry Hinrichs will provide us with real numbers on the physical limitations and characteristics of magnetics.

Action: Larry Miller is to work up a SPICE model of the interface and is welcoming input from the members for model for specific components.

Bill Quackenbush made a motion to approve the minutes of the York Working Group meeting by acclamation, which was seconded by Steve Ellsworth. The motion passed with no dissent.

A motion to adjourn was made by Arlan Anderson and it was seconded by Mike McCormack. It was passed by unanimous acclamation.

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