IEEE 802.3 CSMA/CD (Ethernet) Working Group

Liaison Communication

Date: November 16, 2005

Source: IEEE 802.3 Working Group

To: Walter von Pattay; Secretary, ISO/IEC JTC 1/SC 25
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Subject: Communication to ISO/IEC SC25 WG3 regarding IEEE P802.3at Power via the MDI Enhancements

Action: Information -- Reply to Liaison Letter of 2006-10-11

Colleagues:

Thank you for the liaison letter of September 25, 2006. Alan Flatman presented a report on the letter to the IEEE 802.3 working group and to the P802.3at task force. Through your letter and Alan's report the work of your members was clearly evident and we would first like to ensure your members that we appreciate the work you have done.

The timeliness of your response was also heartening; however, if possible we would like to understand your timeline for completing your responses. We are attempting to meet a standards development schedule that currently estimates we will be balloting a working group draft in May and will require information by that circulation.

In response to our enquiries, you also made the following request:

> **SC 25/WG 3 response 9:** There was discussion about un-mating connecting hardware under load and the WG 3 experts have the following observations and requests for IEEE 802.3at:
>
> • Current products do not have un-mating under load as a requirement.

– In order to maintain the operating life of connecting hardware at higher power levels, SC 25/WG 3 urges IEEE 802.3 to include a feature that will allow the removal of power before disconnection.

– If it not possible, the component groups will need to develop a new generation of connectors with requirements for un-mating under load.

• WG3 requires clarification from IEEE on test conditions, including;

– correct R, L, C values for the powered device and power supply equipment

– correct current to use per conductor

• WG 3 requires clarification on the lowest and highest current value under which un-mating is likely to occur.

We in turn observe:

- We have no reason to believe that any test procedures for component reliability would need to change relative to currently published requirements. Our understanding is that the two basic test procedures are meant to verify reliability in two distinct operational environments; we do not believe that DTE power necessarily fits either of the existing environments.
- The P802.3at task force will investigate adding user initiated power down as part of our work; however, there can be no operational guarantee that users will consistently invoke this feature.
- Neither the IEEE 802.3 working group nor the P802.3at task force has developed any test or load for connector cycle testing. We can not therefore provide the correct R, L, C values you request.
- IEEE Std 802.3-2005 allows powered devices to draw no power for substantial periods of time; therefore, we believe that the lowest current value under which unmating could occur is zero. The maximum current that can be provided to a powered device is still subject to study and we can not therefore provide that value at this time.

Our P802.3at task force will be holding a meeting in Monterey, CA during January 16 to 18, 2007. We would like to extend an invitation to your members to join us for further discussion.

We appreciate your cooperation in our past work and look forward to receiving your answers and advice for this current project.

Sincerely,

Robert M. Grow, Chair, IEEE 802.3 Working Group