802.3af Requirements

1. Overview

At the May 2000 802.3af Task Force interim meeting, it was decided that a living document would be maintained by the editor to compile technical decisions made by the committee and passed as technical motions. This document is that compendium and is current subject to the following revision dates:

Table 1—Revisions

Date	Change descriptions
June 7, 2000	Created and up to date through the May 2000 803.3af Task Force Interim
July 11,2000	Updated to bring the document in line with IEEE copyright rules
November 13, 2000	Updated with September 2000 Interim and November 200 Plenary motions

Motions have not been reworded from the motions as recorded in the meeting minutes with the possible exception of the omission of "Moved:" or "Moved that ..." This "Overview" is not part of the requirements.

2. Requirements

1) 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

2) 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

3) Regardless of the final voltage selected, the DTE power max voltage shall not exceed the limits of SELV per IEC 950. - January 2000 Interim

4) 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

5) For DC systems the minimum output voltage of the source equipment power supply shall be at least 40VDC. - March 2000 Plenary

6) For DC systems, the source device shall be capable of supplying a minimum current of at least 300mA per port. - March 2000 Plenary

7) The solution for DTE Powering shall support mid-span insertion of the power source. - March 2000 Plenary

8) 802.3af systems shall distribute DC Power - May 2000 Interim

9) 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

10) 802.3af proceed with the development of a low frequency, low energy common mode detection method. - May 2000 Interim

11) 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

12) We accept the powering of the DTE via either sets of wire pairs (1-2, 3-6 and 4-5, 7-8), in anticipation of the detailed technical and economic feasibility of each having been shown prior to the Working Group Ballot. - May 2000 Interim

13) The maximum continuous current draw at the PD end be no more than 350mA. - July 2000 Plenary

14) The 802.3af task force affirms that the technical and economic feasibility of delivering power from the mid-span has been established. - September 2000 Interim

15) The 802.3af task force affirms that the technical and economic feasibility of delivering power over the wire pair sets 1-2, 3-6 has been established, and that the technical and economic feasibility of delivering power over the wire pair sets 4-5, 7-8 has also been established. - September 2000 Interim

16) Move that 802.3af select the "resistor" discovery technique. - November 2000 Plenary

17) Move to accept the two requirements as stated (slide 5, cobb_1_1100 presentation with figure on slide 4) into the draft. - November 2000 Plenary

18) Move the PSE output voltage shall be within the range 44VDC to 57VDC. - November 2000 Plenary