



# DTE(Data Terminal Equipment) Power via the MDI(Media Dependent Interface)

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# PAR(Project Authorization Request)

- **Scope**

**Define methodology for the provision of power via balanced cabling to connected Data Terminal Equipment with 802.3 interfaces. The amount of power will be limited by cabling physics and regulatory consideration. Compatibility with existing equipment will be considered.**

- **Purpose**

**To provide power for a new class of devices with 802.3 interfaces enabled by progress in silicon technology. These devices are characterized by low power requirements and LAN connectivity.**

# 5 Criteria for Evaluation

- **Broad Market Potential**
- **Compatibility with IEEE Standard 802.3**
- **Distinct Identity**
- **Technical Feasibility**
- **Economic Feasibility**

# Objectives(1 of 2)

- **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**
- **Select one power distribution technique for worldwide use.**
- **Not cause damage and interoperate with compliant RJ-45 MDI Ethernet devices.**
- **Define a capability detection function that works with a powered and an unpowered device**
- **Select the voltage, minimum and maximum current and wattage to be supplied**

# Objectives(2 of 2)

- **Add appropriate management objects for power capability and status**
- **Support current standard, 4-pair, horizontal cabling infrastructure for installed Cat 3 and Cat 5 cabling**
- **Preserve the signal transmission and isolation characteristics of existing equipment and cabling**
- **Maintain normal functionality of Link Integrity Test function in legacy and new devices**
- **Consider mid-span power insertion, powering over the signal pairs, and interaction with other RJ-45 interfaces**

# Proposed Schedule

- **7/99: Study Group Formed**
- **11/99: PAR Submitted, Objectives Agreed**
- **1/00: PAR Approved**
- **3/00: First Working Group Meeting**
- **5/00: Last New Proposal**
- **7/00: First Draft**
- **11/00: Working Group Ballot (Third Draft)**
- **1/01: Last Technical Change**
- **3/01: LMSC Ballot (Fourth Draft)**
- **7/01: Standard Approved (Fifth Draft)**