

## DTE Power Via MDI – 5 Criteria

### 1) Broad Market Potential

- Broad set(s) of applications:

The following areas have been identified as potentially benefiting from power over MDI:

- IP Telephony
- Web Cameras
- Wireless Access Points
- Industrial Automation
- Home Automation
- Security Access Control and Monitoring Systems
- Point of Sale Terminals
- Lighting Control
- Gaming and Entertainment Equipment
- Building Management

- Multiple vendors, multiple users.

At the Call for Interest, 44 individuals from 34 companies supported this initiative, and 20 organizations stated an intention to work on the development of such a standard. Support for power via MDI has been requested by TIA/EIA TR-41.3.4 and TR-41.4. IEEE 802.11 has expressed interest in such a standard. There are existing proprietary and other potentially conflicting standard solutions (e.g. I.430) in the market. The goal of the standard is to reduce the issue of interoperability in the powered LAN market.

- Balanced cost, LAN vs. attached stations.

For some markets the cost of providing AC power is a barrier to the use of a LAN solution. Having a standard MDI power source brings a balance of cost in providing power to a level consistent with the silicon and applications.

### 2) Compatibility with IEEE Standard 802.3

- Conformance with CSMA/CD MAC, PLS.

It is our intention to be compatible with 10BASE-T and 100BASE-TX UTP, and do no harm to 1000BASE-T, with no changes to the existing MAC.

- Conformance with 802.2.

There will be no changes to the current MAC client interface.

- Conformance with 802 Functional Requirements.

The proposed standard will conform to the 802 Functional Requirements.

### 3) Distinct Identity

- Substantially different from other 802.3 specifications/ solutions.

No existing 802 standard or project addresses power.

- Unique solution for problem (not two alternatives per problem).

Only a single powering technique will be standardized. There will not be multiple alternatives.

- Easy for document reader to select relevant spec.

The specification will be added to the 802.3 standard as a new clause.

#### 4) Technical Feasibility

- Demonstrated feasibility, reports - - working models.

A draft for P802.9f proposed methodologies that would address powering via an MDI. There are existing proprietary solutions in the market; however, they may not meet all of the objectives of this proposed project.

- Proven technology; reasonable testing.

This will be addressed as part of the project.

- Confidence in reliability.

This will be addressed as part of the project.

#### 5) Economic Feasibility

- Cost factors known, reliable data.

This will be addressed as part of the project. Power supply and distribution are mature technologies and the cost factors well understood.

- Reasonable cost for performance expected.

The objective is to lower the total cost of ownership. This will be an enabler to numerous new classes of "network appliances."

- Total installation cost considered.

An objective is to lower the total cost of installation.