

802.3 Working Group

Call for Interest DTE Power via MDI July 1999

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Power Over Ethernet: Mitel's View

What we have learned...

- AC adapter is used to power some digital phones today - existing customers are more tolerant of adapter on IP phones
- Existing Mitel customers are less tolerant of additional adapter because our digital phones don't require it today

What we have learned...

- Spare pair centralized power is troublesome for many users
 - no defined standards
 - many users are adopting wait and see attitude
 - fear of losing CAT 5 certification on wiring/cable installation
- Phantom power

Market Needs: What are the Problems We Need to Solve for IP Phones?

- Clean up the desktop
 - 2 (1 too many) cables hanging from phone
 - difficulty in moving phone on desktop
- Remove Fear/Uncertainty/Doubt on Power Over Ethernet
 - Power hub adds cost
 - Spare pair power from closet gets messy from wiring perspective
 - Don't assume all pairs are connected in closet
 - Potential to damage NICs at desktop
- The phone must always work!!
 - Battery backup at desktop or central UPS mandatory

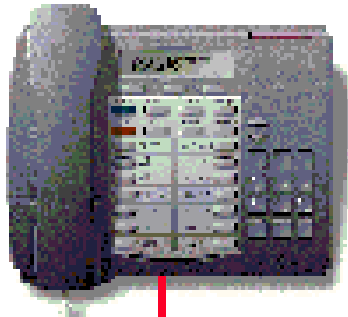


Powering Options for Mitel IP Phones

Option 1: AC Adaptor/Battery Backup

Desktop

Wiring Closet



Cat 5 cable



**Battery Backup
module for desktop**

Issues:
•Cumbersome desktop

Option 2: Centralized power using spare pair (7/8)

Desktop

Wiring Closet



Cat 5 cable

Power is provided across
spare 7/8 pair of Cat 5 cable



External Power Hub

Issues:

- Concern about power over Ethernet
- Adds cost with power hub

Option 3: Commercial Powered Hub

Desktop

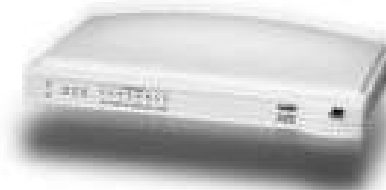
Power across 7/8 spare pair
or phantom power



Cat 5 cable

Wiring Closet

**Powered
Ethernet Hub**



Issues:

- Availability from Hub vendors
- Will take time to penetrate market



Market Requirements for Power Over the LAN

The marketplace requires that ...

- Power over the LAN must
 - be acceptable to the LAN wiring installation industry
 - preserve CAT 5 certification
 - be compatible with increasing LAN speeds and evolving wiring standards
 - be cost effective