NORTEL NETWORKS

System Considerations for DTE Power

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DTE Powering Assumptions

- There is no such thing as idle, spare or unused pairs.
- 10/100BASE-T Data transmission is on Pairs 1 & 2.
- The powering and discovery means must be identical for all 10/100/1000 BASE-T systems.
- It must not require re-engineering the specifications for 100BASE-TX data transmission (noise, CMRR, …).
- Discovery does not interfere with, and can operate independently from, the data interface and normal link beat indication.
- Powering and discovery for all systems will be on Pairs 3 & 4.

Implications

- **Use of pairs 3 & 4 for powering enables a simple and cost-effective capability for providing DTE power through mid-span insertion.**
- **Mid-span insertion facilitates introduction of DTE powering into the installed base.**
- **This provides easier deployment for powered DTE devices and an attendant larger market opportunity.**
- **An integrated discovery and powering mechanism would minimize safety and liability issues.**
- **The way to a standard would be more expedient improving interoperation and systems integration.**