IEEE 802.3 PoE Plus Market-related Criteria

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Agenda

- PoE plus Goals
- Broad Market Potential

PoE plus Proposed Goals

- To power more products in the existing PoE markets
  - Markets where part of the PD's require more than 12.95W
- To benefit more markets from Power over Ethernet
  - Markets that require more than 12.95W for PD's
- Support mission critical application by adding some management requirements
  - The proposed SG also intends to study whether features to support redundant power sourcing would be within the scope of the project.

➔ To answer customer demand ➔

Broad Market Potential

Broad Set(s) of Applications

13-20W	802.11n
	Biometric Access Control
	Thin Clients
20-30W	RFID Readers
	Video IP Phones
	PTZ IP Cameras
	802.16 Base Stations
	Thin Clients
	Industrial Sensors
30-40W	Thin Clients
	Video IP Phones
	PTZ IP Cameras
	Workgroup switches
	Point of Sales
	Information Kiosks
40-50W	Ultraportable Laptops
	Thin Clients
	Point of Sales
	Information Kiosks
50-70W	Notebook Laptops
	Thin Clients
	Point of Sales
	Information Kiosks

- By 2008
  - The potential <30W-40W market is expected to be ~80 million units
  - PoE Plus should double to triple the PoE market
- These applications do not include new Power over Ethernet and PoE Plus
  - Residential applications
  - Other applications not foreseen

Broad Set(s) of Applications (cont.)

- Current 802.3af applications evolve to require more power

  IP Phones → Video Phones

  – Current IP phones: 802.3af (<12.95W)

  – Video phones (30 FPS)

    - Wooksung TelePhoSee: 18.4W
    - Packet8 VideoPhone: 25W
    - Leadtek IP Broadband Videophone: 25W
    - WorldGate Ojo: 36W (typ.)

Broad Set(s) of Applications (cont.)

- Current 802.3af applications evolve to require more power
  - Access Points → 802.11n
    - Cisco AP-1200 with g radio: 802.3af (6.5W)
    - Cisco AP-1200 with a+g radios: 802.3af (11.6W)
    - Estimation for 802.11n: ~20W
  - Network Camera → PTZ Network Camera
    - SONY SNC-Z20N Zoom Camera: 802.3af (<12.95W)
    - SONY SNC-RZ30N Pan/Tilt/Zoom Camera: 21.6W

Multiple Vendors, Multiple Users

- Twenty-two companies backed the November 2004 PoE Plus CFI
  - Silicon Vendors: Broadcom, PowerDsine, LT, TI
  - Cabling Infrastructure: Hubbell, Leviton, Molex, Panduit, Systimax
  - System Vendors: 3COM, Avaya, Cisco, Siemens

- PoE Plus can enable
  - Powering new applications on the many existing markets
  - Powering applications on several new markets

Balance Cost - LAN vs. Attached Stations

- PoE Plus PD's receive higher power from PSE
  - All the benefits of IEEE802.3af
    - Can operate without a local power supply
    - Zero electrical installation cost
      - Refer to economical feasibility presentation for more numbers
    - Automatic backup via UPS connected to PSE
- PoE Plus PSE supplies higher power to PD's
  - May supply full power per port
  - Vast majority of PoE switches today have Power Management
  - The same 400W power supply can address
    - 24 x 15.4W ports or
    - 16 x 7.7W + 8 x 30W* ports

*30W used as an example

Summary

- There is a need to
  - power more products in the existing PoE markets
- There is opportunity to
  - To benefit more markets from Power over Ethernet
- **There is a support of multiple vendors, multiple users**

- **Balance Cost - LAN vs. Attached Stations**
  - **From economical analysis work the PoEp will reduce the overall cost compare to the alternative.**