What’s Next?

Vinod Bhardwaj, ControlNet
Tiny Area Networking

- 1394 for Peripherals, Electronics, and PCs
- Simplifying the Desktop
- Enabling New Applications
- Limiting the Need for Ethernet
1394 Philosophy

- Logic Gates Are Cheaper than Memory
- Integrated Is Cheaper than Installable
- NRE Is Cheaper than COGs
How Does 802 Play?

• 802.3 -- Long Haul UTP PHY
  – 100BASE-TX to 1000BASE-T

• 802.1 -- Switching
  – Forwarding, Address Resolution
  – Organizing Buses and Reconfiguring Topologies

• Legacy Integration
  – Ethernet to 1394
1394b PHY

Link Interface

PLL

Rx Decoder and Timer

Link Arbitration & Control Logic

Tx Encoder

Port Interface Logic

Data

Control

Lreq

Iso

Reset

PHY Clock

0:7

0:1

Reset

TP

IEEE 802 Plenary Tutorial

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Ethernet Over FireWire®

- Ethernet Over IEEE1394 PHY/LINK Interface
- 100/200/400 Mbps
- Uses Streams for Multicast Traffic

- Address Resolution
- Link Fragmentation (?)
- Unicast Multicast Broadcast
FireWire Switching

- Replace Bus
- Dedicated Bandwidth
- Extensible
  - Solves Dual PC Problem
FireWire/Ethernet Switching

- Lower Cost
- Higher Bandwidth
- Fits the Home
Peripheral Networking in the Home

- Any Digital TV in the House is a Remote PC Monitor
- Full Support of TV Video without the overhead of TCP/IP
- Full Support of Internet without the burden of TV video

TV Net
Audio Net
VideoGame Net

PC Net
Internet
Summary

• Converge Two Technologies
  – Ethernet
  – FireWire

• Partnerships
  – Standards work, development

• Customer Requirements
  – Define the value proposition