The Metro Ethernet Forum

Helping Define the Next Generation of Service and Transport Standards

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Agenda

• The Case for Metro Ethernet
• The Benefits of Standards
• MEF Overview
The Case for Metro Ethernet
The Case for Metro Ethernet

Ethernet in the Metro

• The number of sites demanding high speed access and flexible data services is growing fast

• Ethernet is a mature, predictable and well-standardized data networking technology

• Metro Ethernet significantly lowers Total Cost of Ownership, which benefits carriers and their customers
Optical Ethernet
Simplifying the Network

The Case for Metro Ethernet

Traditional Telco Network
Voice-oriented connectivity

Optical IP Network
Optical Gigabit Ethernet throughput

Customer's Ethernet LAN
Copper Serial Input
CSU/DSCs
Telco Central Office
ATM
Sonet ADM
Telco Central Office
ATM
Sonet ADM
Copper Local Loop
CSU/DSCs
Customer's Ethernet LAN
Routers

Customer's Ethernet LAN
Managed Switch
Metro Fiber Ring
GB WAN Router
Long Haul Fiber
GB WAN Router
Metro Fiber Ring
Managed Switch located in building telco closet
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The Case for Ethernet Services

Advantages for End-Users

- **Flexible services and scalability**
  - Eliminate over-provisioning
  - Networks readily satisfy growing bandwidth demand
  - 1 Mbps – 1 Gbps

- **Lower start-up costs**
  - CPE costs reduced by mass scale of Ethernet market

- **Lower engineering and operational support**
  - Simple Ethernet technology

- **Faster service delivery**
  - Point & Click provisioning, no 3-month delays
The Case for Ethernet Transport

Advantages for Service Providers

• People
  – Reduced engineering and support cost
  – Simplified fault isolation and diagnostics
  – Dynamic, point & click service provisioning

• Pipes
  – Efficient data transport
  – Economical scalability

• Ports
  – Cost-effective network build-outs
Market for Metro Ethernet

- Metro Ethernet is a key growth area for RBOCs, with significant deployments in 2003 (Solomon Smith Barney, RBC, Yankee)
- $4 billion in annual metro Ethernet service revenue by 2006 in North America (RHK)
- Strong demand for metro Ethernet in APAC and Europe (RBC Capital Market)
Metro Ethernet
Has Benefited Greatly from Standards
Ethernet Speeds Outpace Moore’s Law

3x Moore’s Law since 1995

- Standard for 100 Base-T
- 10 Gbps equipment begins shipping in 2002

Ethernet IEEE standard

Moore’s Law*

Ethernet

Law of IP

The Benefits of Standards
Ethernet Port Costs are Plummeting

Source: Dell’Oro Group
Metro Ethernet Forum

Overview
What is the MEF?

The Metro Ethernet Forum is a non-profit organization dedicated to accelerating the adoption of optical Ethernet as the technology of choice in metro networks worldwide.
Who is the MEF?

MEF members are:

– Leading service providers
– Major incumbent local exchange carriers
– Top network equipment vendors
– Other prominent networking companies that share an interest in metro Ethernet
65 Members and growing
Key Objectives

• **Build consensus and unite** service providers, equipment vendors, and end customers **behind optical Ethernet services and transport**

• **Facilitate implementation** of optical Ethernet standards to accelerate delivery of Ethernet services and make Ethernet-based metro transport networks carrier-class

• **Enhance worldwide awareness** of the benefits of optical Ethernet services and Ethernet-based metro transport networks
Priorities

The *primary* priorities of the MEF are to define:

- *Ethernet Services for metro transport networks*
- *Carrier-class Ethernet-based metro transport technologies by specifying architecture, protocols and management systems*

The *secondary* priorities of the MEF are to define:

- *Work to be done by other organizations on other transport technologies (liaison activity)*
- *Non-Ethernet interfaces, if not defined by others*
Focus of Work

• MEF is working to fill the gaps between existing standards needed to standardize complete metro Ethernet networks

• Technical work is focused on
  – Ethernet service specifications
  – Transport network features for protection, QoS and NNIs
  – End-to-end management, OAM&P
  – User interface definition
Learn more and join the MEF

Complete a membership application at:

www.MetroEthernetForum.org
Optical Ethernet for the Metro Market

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