



Network Connectivity Group



# ETTX & Metro Ethernet

# Opening up new revenue opportunities

**“80% of  
Multinational  
Corporations in  
Europe said adding  
bandwidth would  
be a key priority  
in the next two  
years”**

**Source: Yankee Group**

## What are ETTx and Metro Ethernet?

Ethernet To The 'x' is an access network technology designed to enable the provision of scalable, practically unlimited bandwidth directly to the building via fibre. The delivery of affordable data, voice and video services is especially cost effective when deployed in high-density business and residential areas – this particular aspect of an ETTx network is called Metro Ethernet.

Convergence of such exciting, premium services onto one flexible, all-capable network now makes power provision, cabling infrastructure and network resiliency mission critical success factors, because this network is the key to opening up new revenue channels and reducing OPEX costs.

## How will Metro Ethernet change your business?

### Service Providers:

- Can increase Average Revenue Per User by bundling new, bandwidth-intensive business enabling services to high revenue-generating enterprise customers while connecting residences with true broadband services at marginal extra cost.
- Large enterprises especially will be able to obtain flexible bandwidth on demand, at lower cost, using trusted Ethernet technology – the most widely known networking protocol in the world.
- Having a single, integrated IP network will also reduce OPEX costs both by minimising equipment spend and simplifying network management.

### Utilities:

- Can leverage assets such as existing rights of way and dark fibre to deliver rich voice, video and data services to homes and businesses, providing new revenue streams.
- Partnerships with municipal government can enable Utilities to compete directly with Service Providers.
- Equally, partnerships with Service Providers can reap rewards in the form of selling bandwidth or even outsourcing to them, as part of the Utility's own branded service package.

Metro Ethernet allows for improved, flexible scalability offering access rates from 10Mbps to 1Gbps in 1Mbps increments or less without the need for extra infrastructure build-out each time bandwidth demand increases.

# Are you ready to take advantage of Metro Ethernet?

***“For each added service a customer takes from the same provider, annual likelihood of defection typically drops by 30% or higher”***

**Source: Gartner Report 2001**

***“Ethernet switching costs will continue to decrease approximately 30% year over year.”***

**Source: Yankee Group**

## **How can you get ROI?**

In addition to the cost and business agility benefits of managing only one integrated network, Metro Ethernet's virtually unlimited headroom creates new, more profitable revenue streams by enabling Service Providers to bundle combinations of integrated voice, video and data services into packages with market appeal, such as:

### **Large Enterprises**

- IP Telephony
- Content Networking
- Flexible Bandwidth provision demand e.g for time-driven promotions
- Video Conferencing
- Storage Area Networking
- LAN Interconnect

### **Small to Medium Enterprises**

- IP Telephony
- Content Networking
- LAN Interconnect
- Video Conferencing
- Storage Area Networking
- Always on 10/100Mbps Internet Access

### **Residential**

- Video on Demand
- IP Enabled Appliances e.g. Fridges, Ovens, Security Systems
- Games on Demand
- Enhanced Broadcast TV
- Always on 10/100Mbps Internet Access

The development of technologically advanced living spaces will also command higher market prices for both owners and property developers.

## **What are the Critical Drivers?**

- Government pledges to provide high bandwidth connectivity
- Utility companies re-laying infrastructure
- Local loop barriers creating need for alternative carrier
- Availability of dark fibre in existing Utility infrastructures
- Increased property values associated with technologically advanced living spaces
- Low cost installation plus easy, scalable upgrade potential

# Unified Network

Cisco Systems, Panduit and APC have teamed up in PACT, an initiative designed to deliver 'best of breed' interoperable solutions. This initiative increases performance and reliability across several layers of the network.



## Integrated Fault Management from the Physical Layer

Panduit reduces OPEX costs with Remote Physical Layer Administration for Metro Ethernet networks. PANVIEW™, Panduit's Physical Layer Management system monitors every link, provides instant notification of connectivity changes at any point in the network and enables real-time fault management. PANVIEW™ minimises downtime and ensures uninterrupted performance – meaning reduced SLA Penalties.

## Cabling Infrastructure

Cisco Systems integrated network installations run over Panduit's Cat 5e cabling infrastructure. Their compatibility has been pre-tested and such interoperability allows faster deployment, as well as business continuity. Competition from alternative Service Providers means the performance of the delivery network will be mission critical to your survival. Panduit solutions provide a secure foundation for maximum reliability.



**Together,  
Panduit, APC  
and  
Cisco Systems  
provide an  
Interoperable  
Solution for  
Metro Ethernet,  
helping  
customers to  
streamline  
business  
procedures  
and improve  
productivity**

# Network Infrastructure

## Simpler, More Powerful Switching

Cisco Systems Metro Ethernet platform is an extension of their strength as the worldwide leader in both networking for the Internet and provision of Ethernet ports. The Cisco Systems Metro Ethernet portfolio offers a wide selection of cost-effective and powerful switches, plus enhancements for easing Ethernet deployment in city networks. In addition to capabilities such as integrated resilience, improved security and increased service scalability, Cisco Systems switches can also facilitate Ethernet over existing SONET/SDH infrastructures. No other networking company has more successful providers delivering Metro Ethernet services than Cisco Systems.

## Power Infrastructure Solutions

APC end-to-end power protection solutions increase the reliability, availability and manageability of the Metro Ethernet environment from Service Provider to Customer Premises Equipment.

- Clean, continuous power increases network availability
- Scalable power solutions allow for future growth
- Modular UPS components increase solution reliability
- Runtime options provide extended power back-up
- Software solutions enable instant notification of critical power or UPS issues
- Management solutions deliver the ability to remotely re-boot hung switches
- Environmental solutions ensure optimal temperature and humidity

APC's PowerNet Management software V1.0 is verified for interoperability with CiscoWorks2000.

**APC**<sup>®</sup>  
Legendary Reliability™

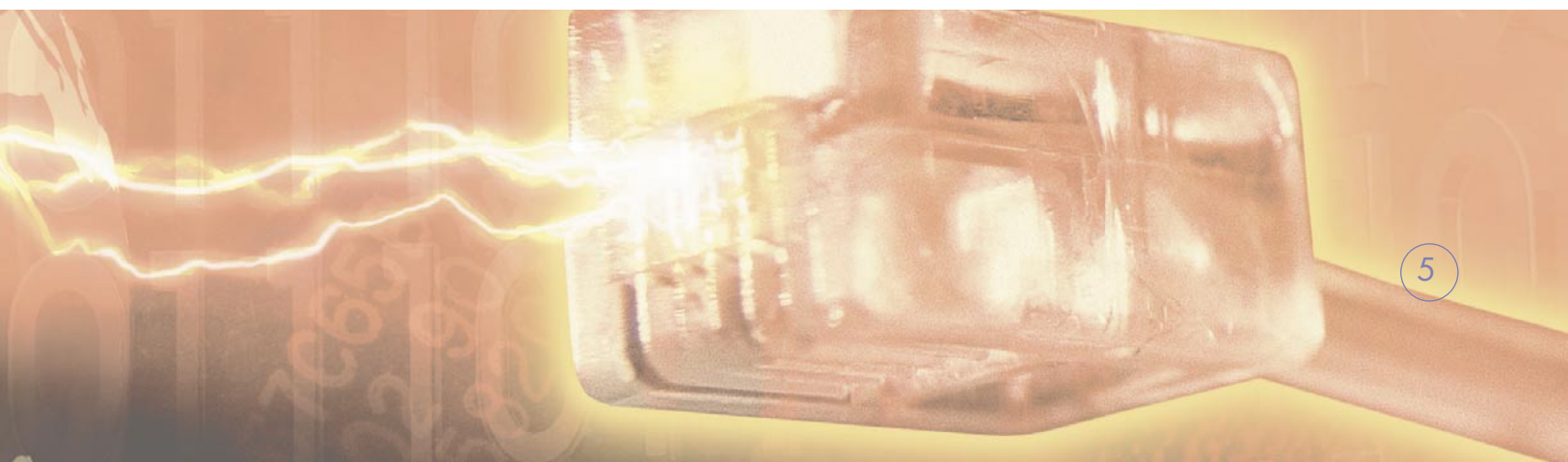
CISCO SYSTEMS



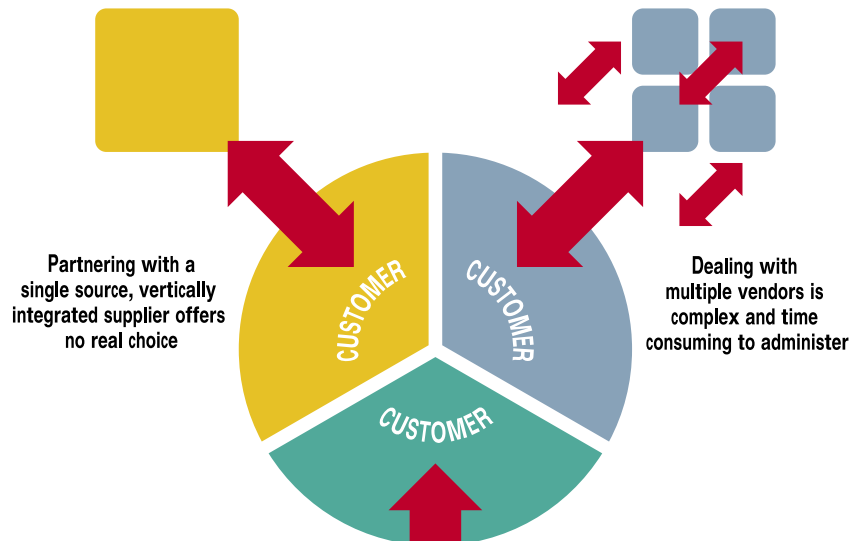
Service Provider  
Solution Partner

***“Broadband  
is the ultimate  
strategy for  
sustainable  
economic  
growth and  
productivity”***

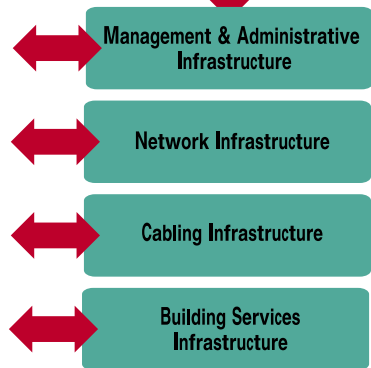
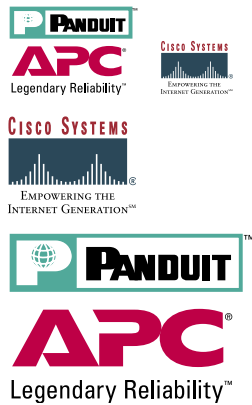
**John Chambers  
CEO Cisco Systems**



# Unified Network Infrastructure



Be Future Ready





# Be Future Ready

***For more information about each aspect of  
Metro Ethernet contact your local  
Panduit representative***

**[info@panduit.com](mailto:info@panduit.com)**





Network Connectivity Group

[info@panduit.com](mailto:info@panduit.com)  
[www.panduit.com/emea](http://www.panduit.com/emea)



**Panduit Europe Ltd (EMEA HQ)**

West World, Westgate  
London W5 1XP  
United Kingdom

Tel.: +44 (0) 208 601 7200  
Fax: +44 (0) 208 601 7319



**Panduit Corp. (Worldwide HQ)**

Tinley Park, 17301 Ridgeland Avenue  
Illinois 60477-3091  
USA

Tel.: +1 708 532 1800  
Fax: +1 708 532 1811

**Panduit Italy**

Tel.: +39 02 931 731  
Fax: +39 02 935 70333

**Panduit Belgium**

Tel.: +32 (0) 2 466 8660  
Fax: +32 (0) 2 466 8836

**Panduit France**

Tel.: +33 (0) 1 48 98 22 22  
Fax: +33 (0) 1 48 98 04 99

**Panduit Germany**

Tel.: +49 (0) 6171 6232 0  
Fax: +49 (0) 6171 6232 20

**Panduit United Kingdom**

Tel.: +44 (0) 208 601 7328  
Fax: +44 (0) 208 601 7338

**Panduit Portugal**

Tel.: +351 2172 433  
Fax: +351 2172 434

**Panduit Spain**

Tel.: +34 (0) 91 658 7620  
Fax: +34 (0) 91 653 9723

The Cisco Systems Cisco Compatible logo signifies that the Panduit product has been designed to be interoperable with the products of Cisco Systems, Inc. The Panduit product has undergone rigorous testing by Panduit together with Cisco and /or a third party test-house based on standards as specified by Cisco. Panduit is solely responsible for the support and warranty of this product. Cisco does not provide any warranties, express or implied with respect to any Panduit products or their interoperation with the listed Cisco products, and disclaims any implied warranties of merchantability or fitness for a particular use. Panduit's Cat5e solution has been tested for interoperability with the integrated network installations of Cisco Systems, Inc. Please refer to the Cisco Systems Website at [www.cisco.com](http://www.cisco.com) for the most recent version(s) of Panduit products that have been tested as interoperable with Cisco products.

PANDUIT NETWORK CONNECTIVITY. The information contained in this literature is based on our experience to date and is believed to be reliable. It is intended as a guide for use by persons having technical skill at their own discretion and risk. We do not guarantee favorable results or assume any liability in connection with its use. Dimensions contained herein are for reference purposes only. For specific dimensional requirements, consult the factory. This publication is not to be taken as a license to operate under, or a recommendation to infringe any existing patents. This supersedes and voids all previous literature, etc.