

Introduction and Overview of OIF Interoperability Activities



ECOC 2009
Vienna, Austria
20th., Sept., 2009

Hans-Martin Foisel, Deutsche Telekom
OIF Carrier WG Chair and President



On-Demand Ethernet Services Market Drivers

Market Trend/Needs

- ◆ Enterprises strive for reduced WAN costs in the face of rising bandwidth and end user expectations for on-demand services
- ◆ Carriers face growing demand for high-speed, flexible, and highly resilient transport services – regionally and globally

Carrier Challenge

- ◆ Deliver end-to-end services across multiple network domains
 - while maintaining resilience
 - meeting customer expectations (SLAs)



Carriers need interoperable networks that can support cost-effective dynamic bandwidth services - on a global scale!

On-Demand Ethernet Services The Solution

Delivering Ethernet services over intelligent optical transport networks

- ◆ Adapting Ethernet over different transport technologies allows carriers to deliver broadband services using both legacy and emerging transport networks
 - **Efficiently and cost effectively**

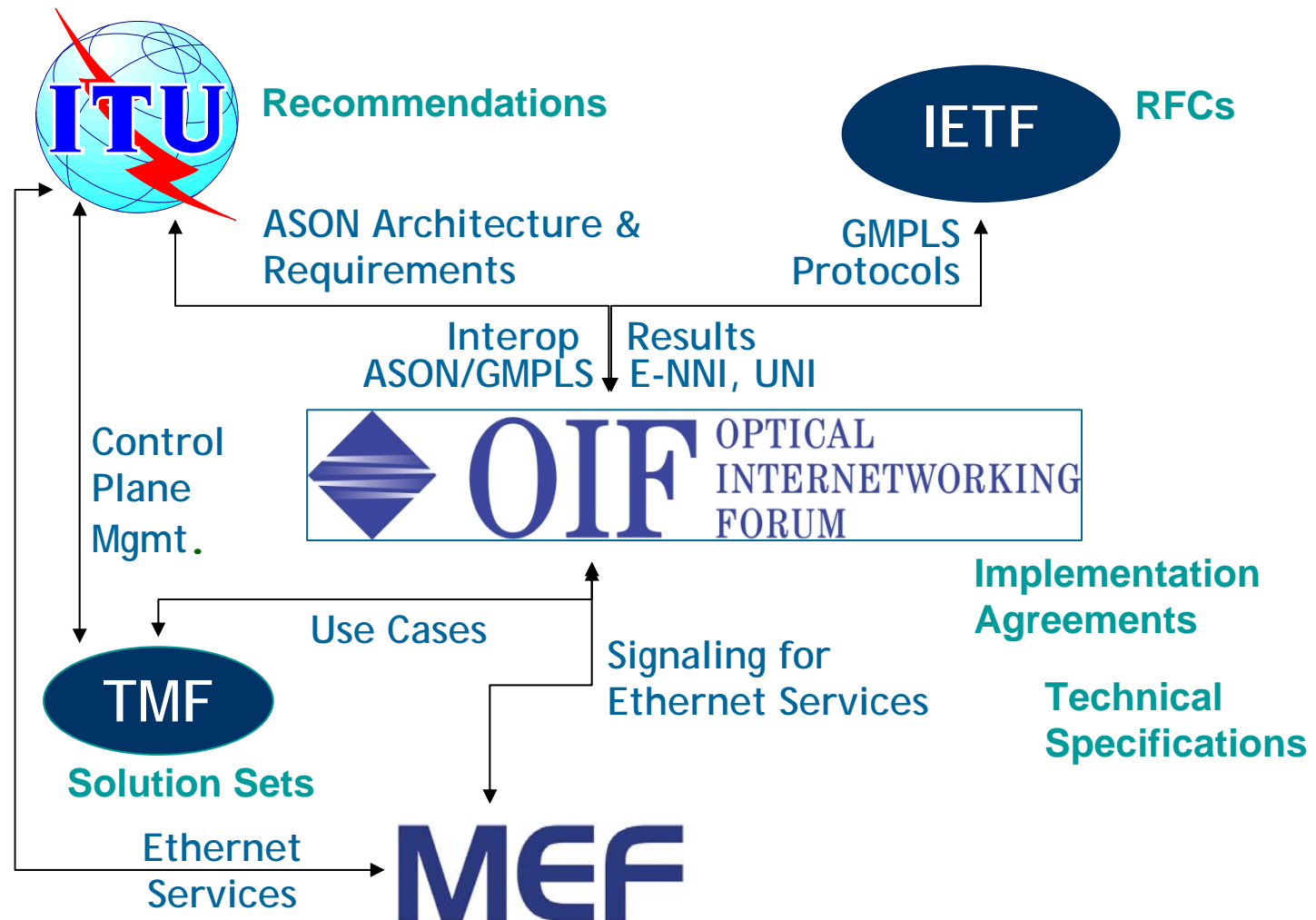


Ethernet Services Growth

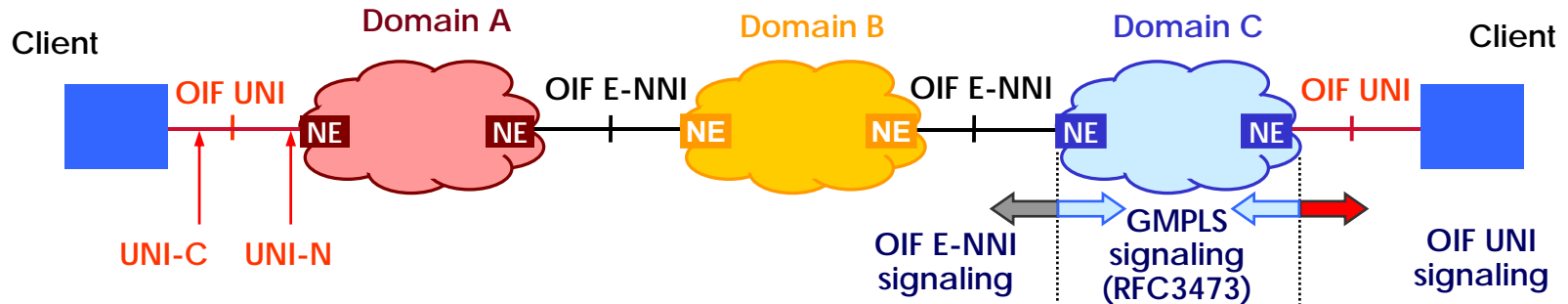
- ◆ Carrier Ethernet is a ubiquitous, standardized, carrier-class Service and Network
- ◆ Forecasts vary but analysts agree on significant growth ramp driven by enterprise needs to reduce WAN costs in face of rising bandwidth needs
 - Vertical Systems Group (3/09) : Predicts that worldwide business Ethernet services market rises to \$38.9 Billion by 2013
 - Ovum (3/09): Forecasts a 17% CAGR in global enterprise Ethernet services revenue from 2008 to 2014 with the market climbing to \$40 Billion by 2014
 - Infonetics (7/09): Ethernet services revenue at \$13.7B in 2008, up 38% from 2007, will grow to \$27.6B in 2013 for 15% CAGR

OIF and SDOs Working Together

Supporting Ethernet Services across a Global Transport Network



OIF Implementation Agreements



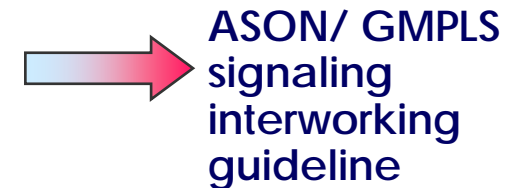
- ◆ **User-Network Interface (UNI)**: signaling interface for clients to request services from optical network



- ◆ **External Network-Network Interface (E-NNI)**: signaling and routing interface providing call/connection control and topology distribution



- ◆ **ASON/GMPLS Signaling Interworking Guidelines**: Domain edges provide interworking between Internal NNI (I-NNI) and OIF UNI-N/E-NNI protocols



The Vision – Seamless Interworking Among All

On-demand services are provisioned, based on ASON/GMPLS control plane functions, even across heterogeneous network infrastructures

- ◆ Multi-domain
- ◆ Multi-layer
- ◆ Multi-technology

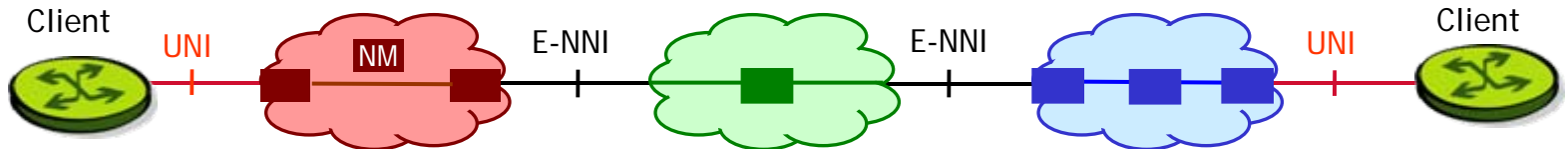


Domain A

Domain B

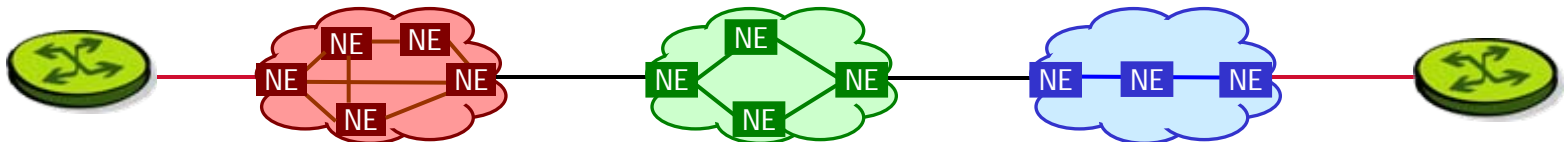
Domain C

Control plane



- Domains can use either management or control plane internally
- Control plane topology can differ from transport plane topology

Transport plane

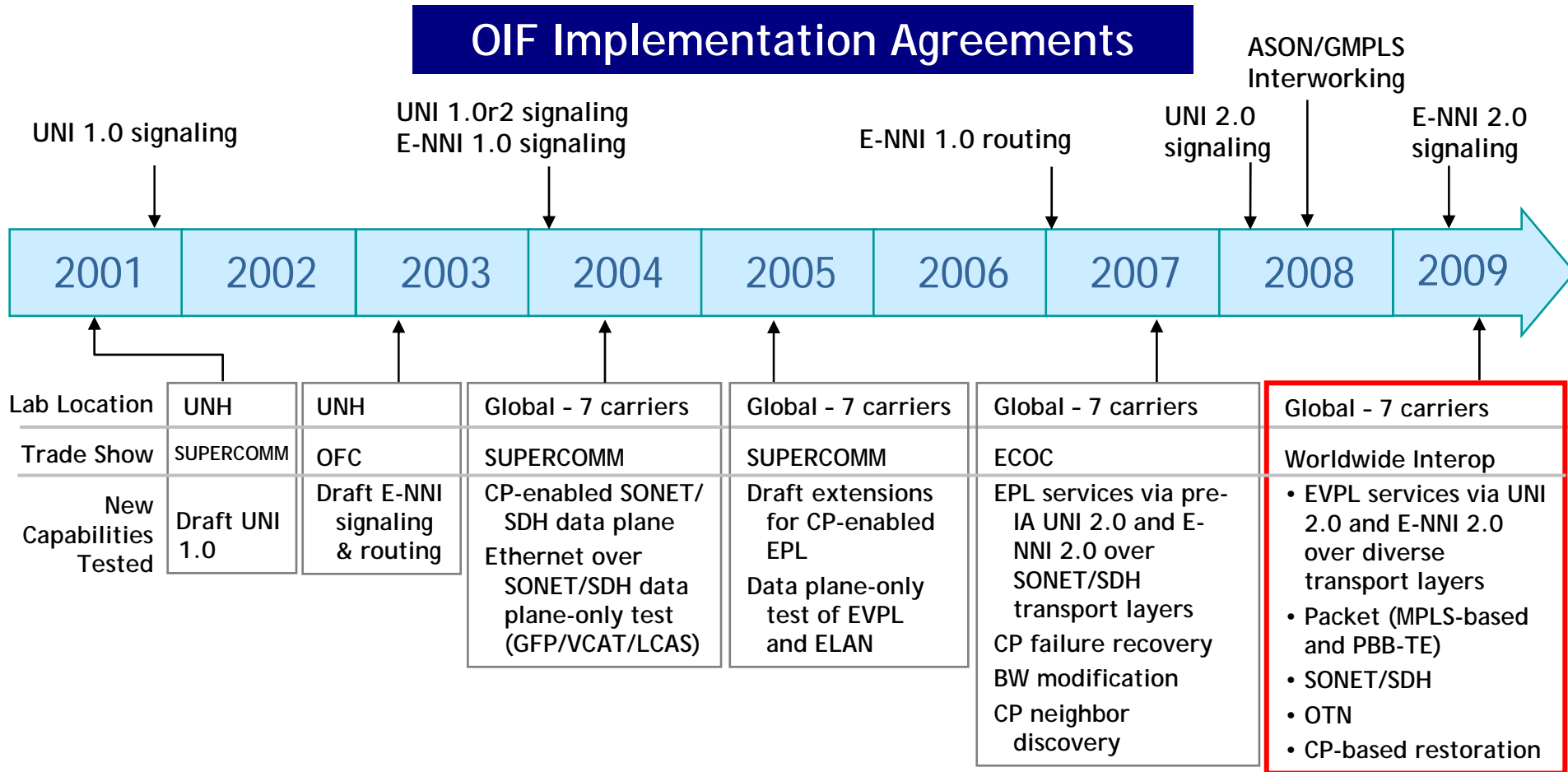


- Transport technology and topology can differ in each domain

Putting the Pieces Together

OIF Implementation Agreements and Interoperability Demos

OIF Implementation Agreements



OIF Networking Interoperability Demonstrations

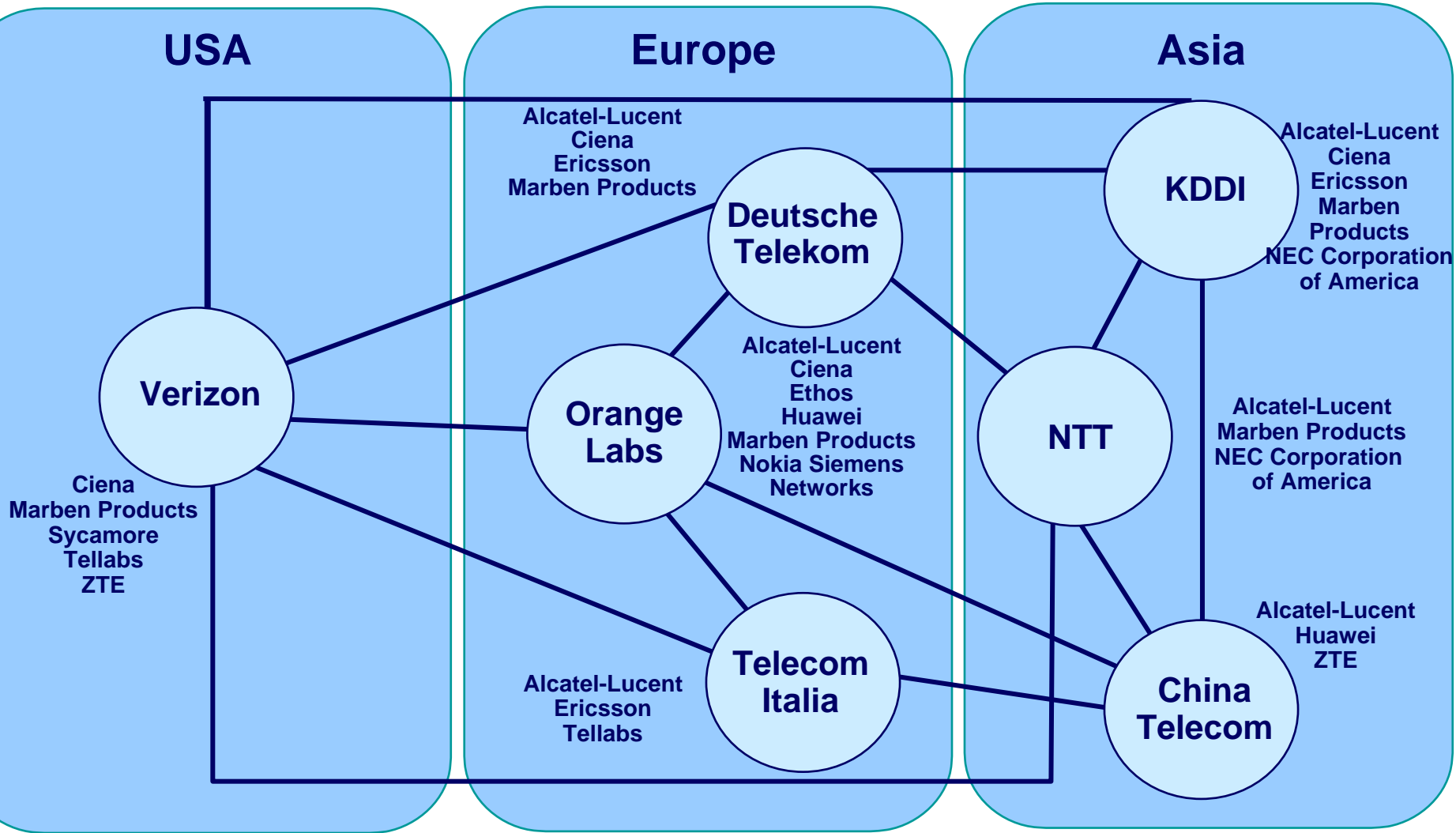
OIF Interoperability Demonstration 2009



www.oiforum.com



OIF Global Network Topology 2009



Presentations and further information

www.oiforum.com

