



IP + Optical Big Bang Seminar
2001





“Big Bang” Cisco IP+Optical Introduction

Cisco.com

‘New Trends For New Services’

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Open message

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- **What Services will be done from Next Generation**
- **New conception for New Services**
- **Services innovation to Multi media**
- **New technology!!**

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Some Changes Conceptions

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- Over the last 12 months ...

Gigabit IP routers have become common-place

GE is common, 10GE soon to follow

Multi-purpose SONET/SDH network elements/MSPP

DPT tech for Optical IP Router

Packet SONET/SDH at OC192/STM64

DWDM and Optical Cross-Connects

Noises about OC768/STM256

MPλS coming soon ...

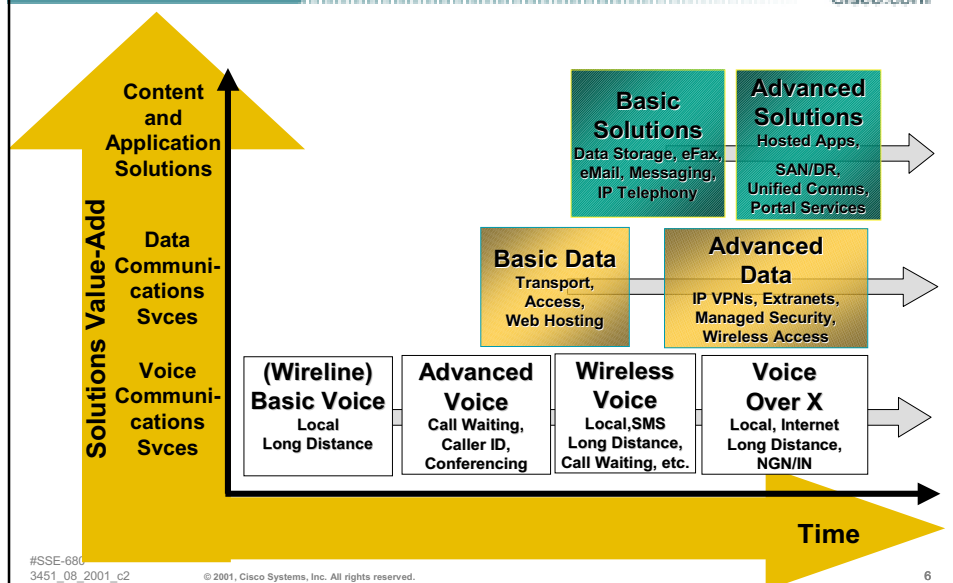
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New Services

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What are the Requirements?

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- Need scalable high-performance network infrastructure
- Must be multi-service for data, voice and video
- Must be biased towards IP
- Must be fast provisioning, simple to manage and robust/resilient

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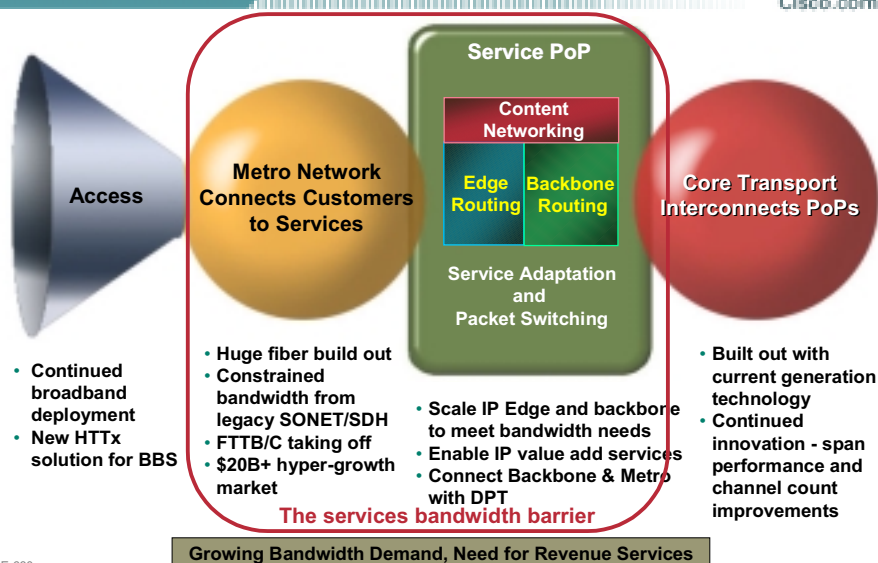
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IP+Optical Economic Drivers

Growing Bandwidth Demand, Ever-Expanding Service Mix

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Service Provider Requirements and Benefits

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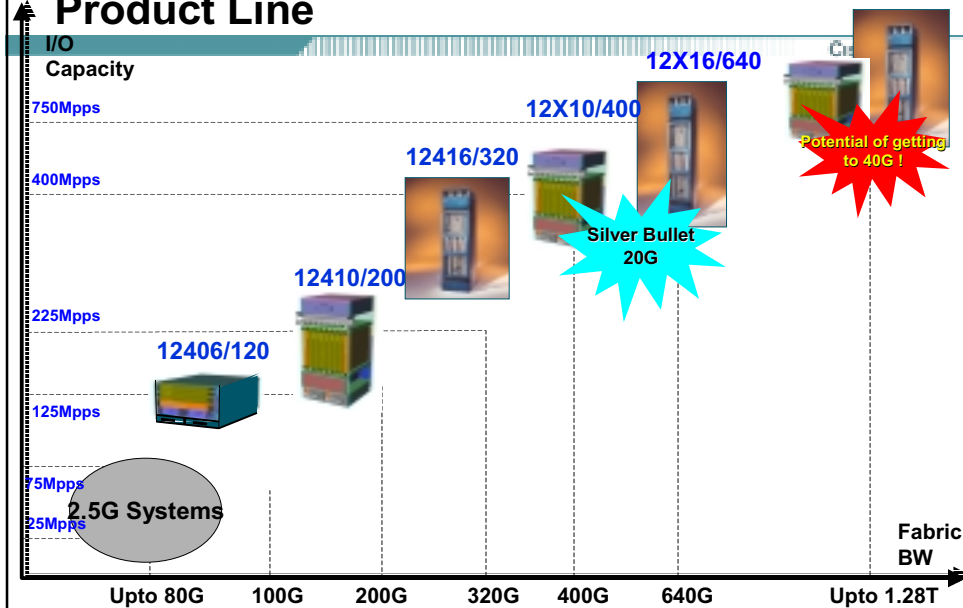
- **Scalability and Performance**
 - ✓ Service scalability
 - ✓ Port density
 - ✓ Line rate performance
 - ✓ Line rate QoS
 - ✓ Over-subscription on uplinks
- **Service Enablers**
 - ✓ New services = new profits
 - ✓ Service differentiation
 - ✓ Security
 - ✓ IPv6, Multicast
 - ✓ Flexible Accounting infrastructure
- **Operational Efficiencies**
 - ✓ Lower cost = higher profit
 - ✓ Volumetric efficiency
 - ✓ Simplified operations
 - ✓ Faster time to market
 - ✓ Investment protection
 - ✓ Accounting/Billing flexibility
- **High Availability**
 - ✓ Improved SLAs
 - ✓ No revenue interruption
 - ✓ Expands addressable market
 - ✓ Differentiation

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Cisco 12000 Series Internet Router Product Line



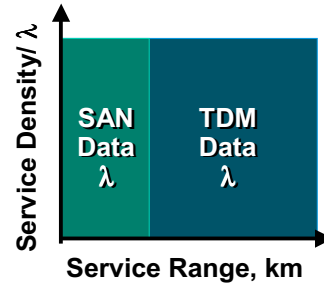
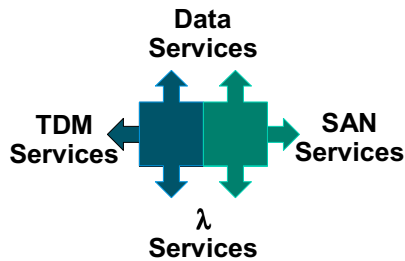
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15xxx DWDM Service Fit

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Best Fit for Top 7 Revenue Service Interfaces in Metro Space

OC12	100 Mb	GbE	OC48	OC192	10 GE	SAN
MSPP 15454/152xx	METRO 15540/15530	POP NGIR	CORE 15808			

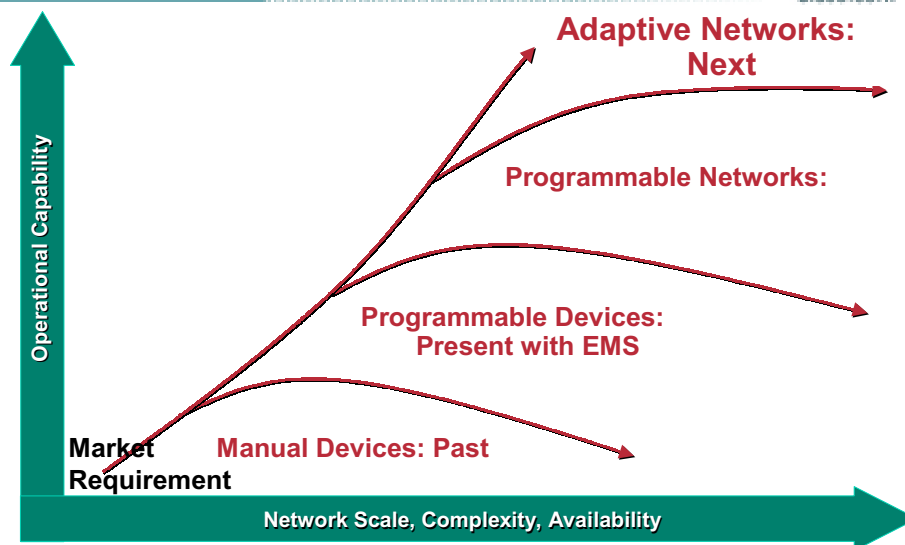
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Cisco Is Driving Intelligence Into the Network

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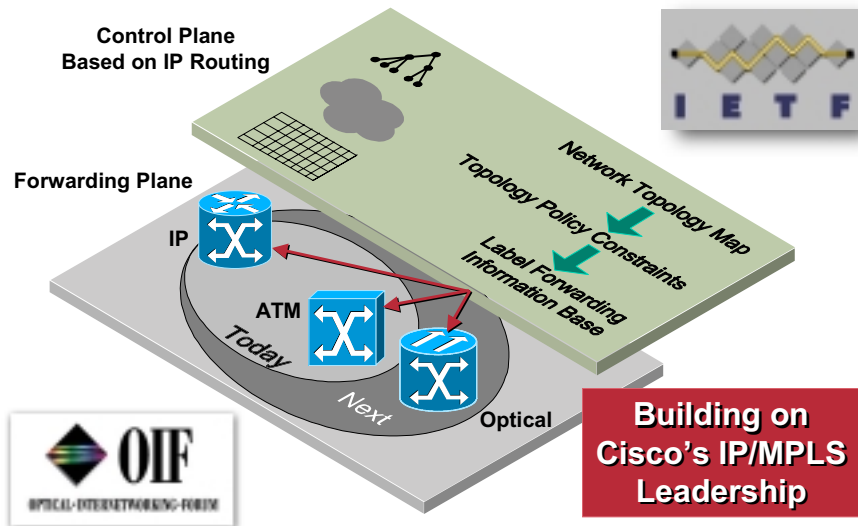


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Cisco's Strategy for an IP-Based Unified Control Plane

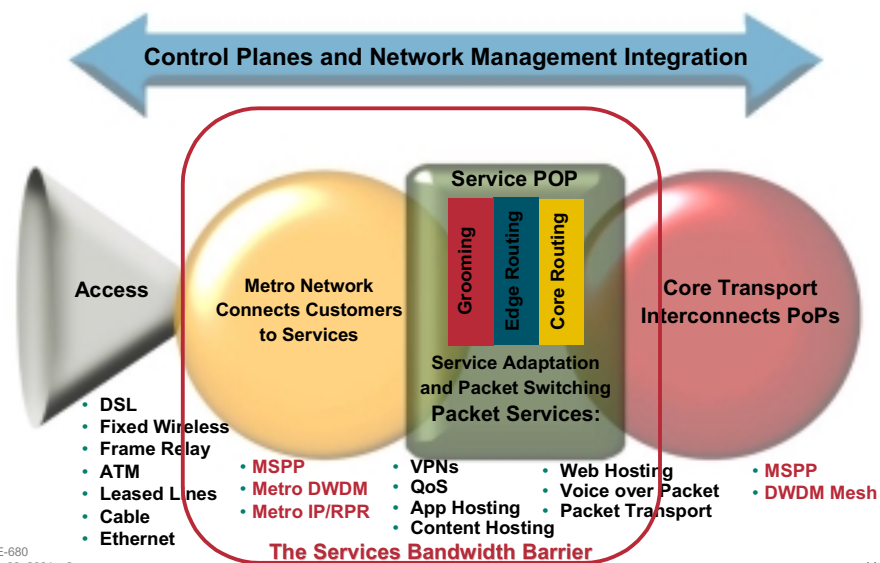


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Transport Network Architecture



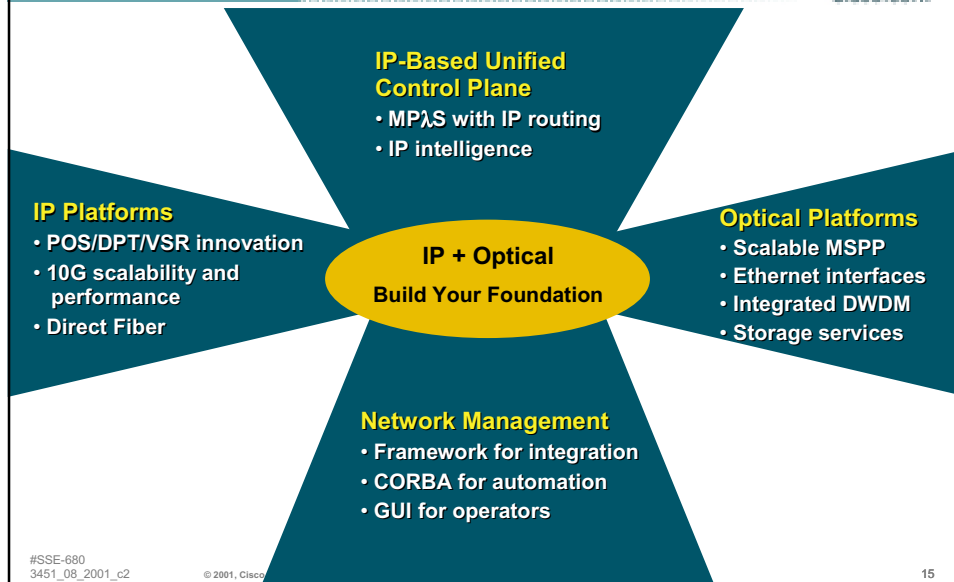
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Cisco IP+Optical Combining All the Elements

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IP+Optical Networking!

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**IP Oriented,
Services Oriented,
Saving Cost Oriented,
Unified Control plane, and
Quick Revenue Oriented Solution,**

Based on your services Plan

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