

Strategy & Vision for Competitive Carriers: The Path to Profitability

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Disruption in the market

How the market is changing

Market trends driving change

The road to success

Know your customer

Evolve your service offerings to meet your customers' needs

Implement cost effective, flexible networks and business practices

Market Disruption

The old market

One competitor

Primary product offering is voice services

Strategy = undercut the incumbent in price

 The new market Multiple competitors

Primary product offering moving to data services

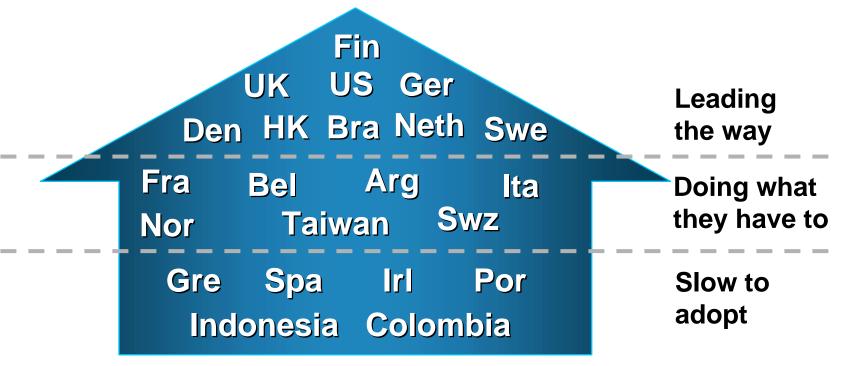
Strategy = differentiation through higher value services

Drivers of Disruption

- Deregulation
- Commoditization
- The shift toward IP applications and data services

Deregulation

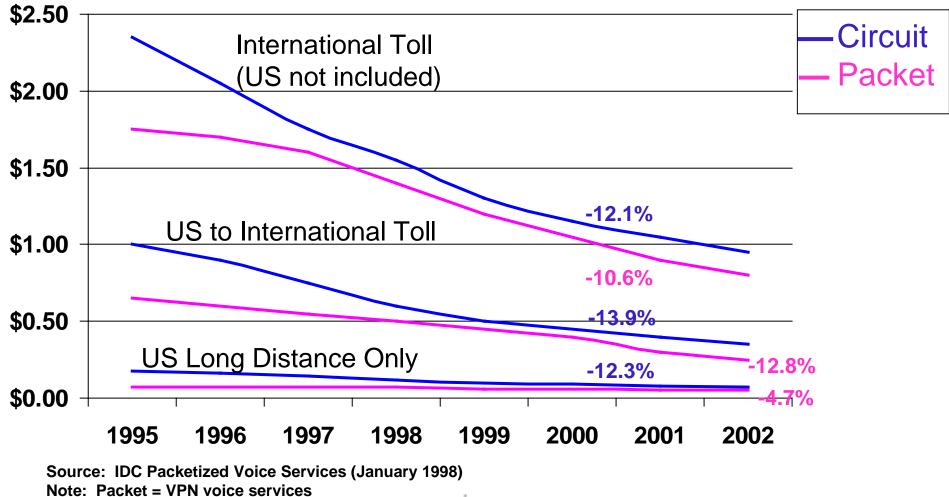
Open Market



Monopoly

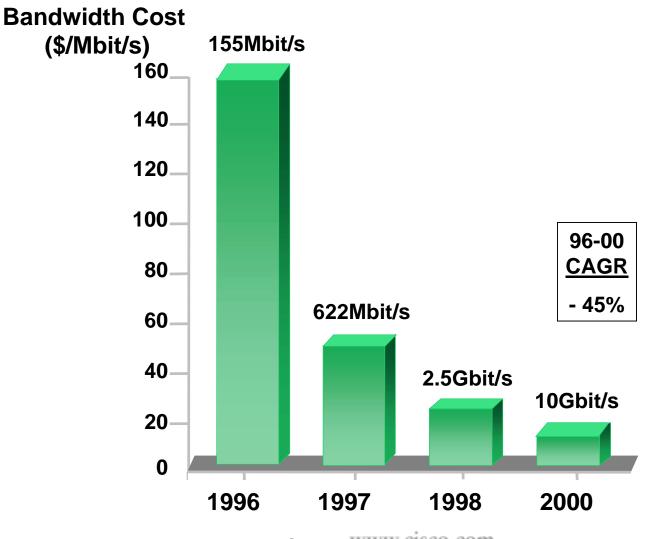
Commoditization: Circuit-switched & Packetized Voice

Price per Minute for Voice Services



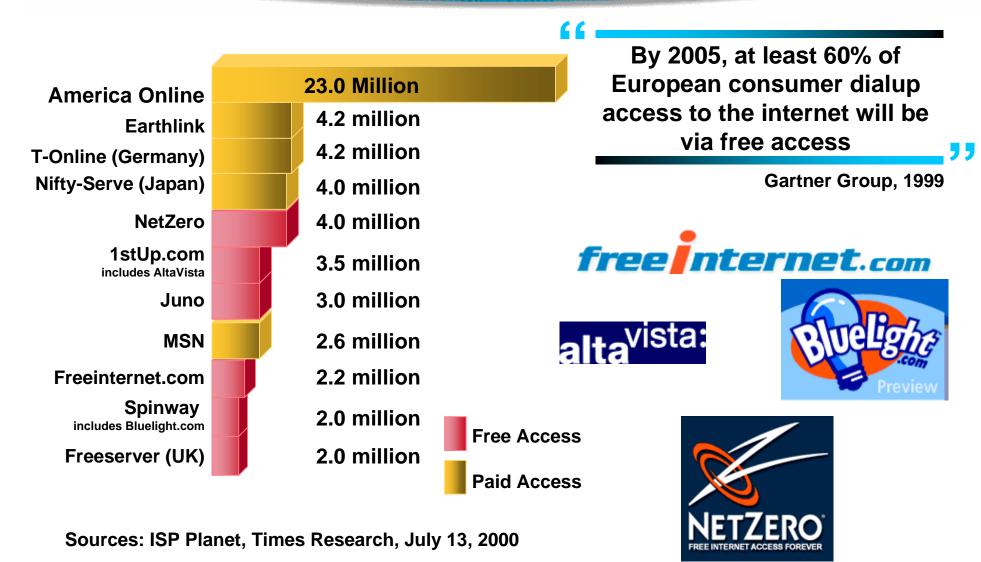
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Commoditization: The Falling Costs of Bandwidth

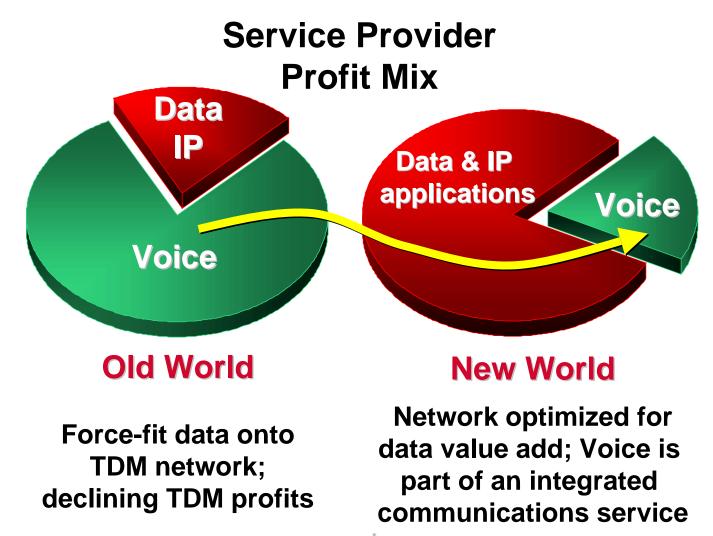


Source: Ryan, Hankin and Kent and Internal Datasco Confidential 7

Commodization of Basic Internet Access



Data and IP applications are Driving Profit Growth





• Disruption in the market How the market is changing Market trends driving change

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Know Your Target Customer

9,300

7,400

Large Enterprises >1000 Employees

Enterprises 500–999 Employees

Medium 100–499 Employees

Small 21–99 Employees

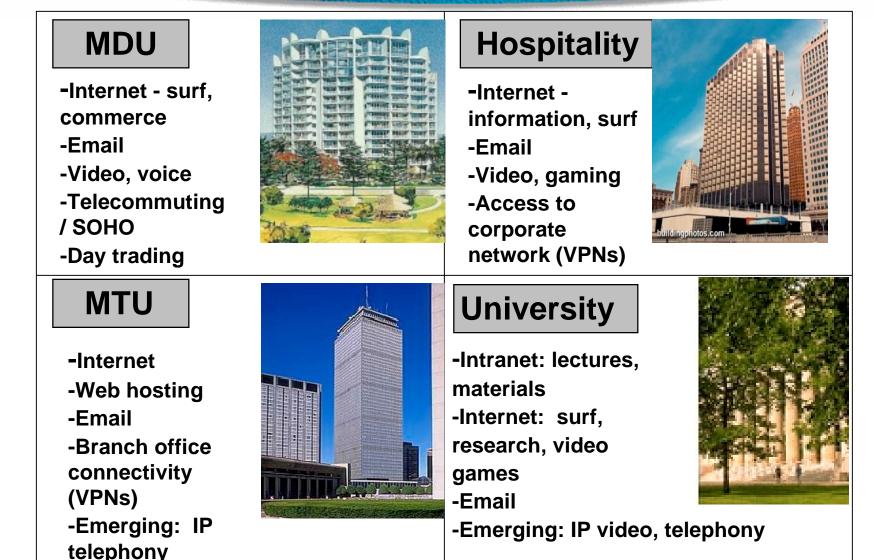
SOHO 1–20 Employees

Residential Number of households

136,250 810,000 6,400,000 104,000,000

Source: Cahners Instat & IDC 1999, ITU 2000 www.cisco.com llang CLEC 010700 © 1999, Cisco Systems, Inc.

New Ways to Reach the Small Medium Business



Small Medium Business Their Issues...

Questions	Issues
How do I grow my business?	 Lower costs, increase revenues Leveraging the Internet Improving efficiencies
How do I stay connected?	 Customers Suppliers Employees
I need to do this simply and cost effectively	 No expertise Price Sensitive Multiple Bills, Multiple vendors

Serve Their Needs

 Win customers by differentiation:
 Bundle services (local, LD, Internet)
 Provide a single bill (discounts)
 Grow SMB business by selling New World applications
 Be a single point of contact

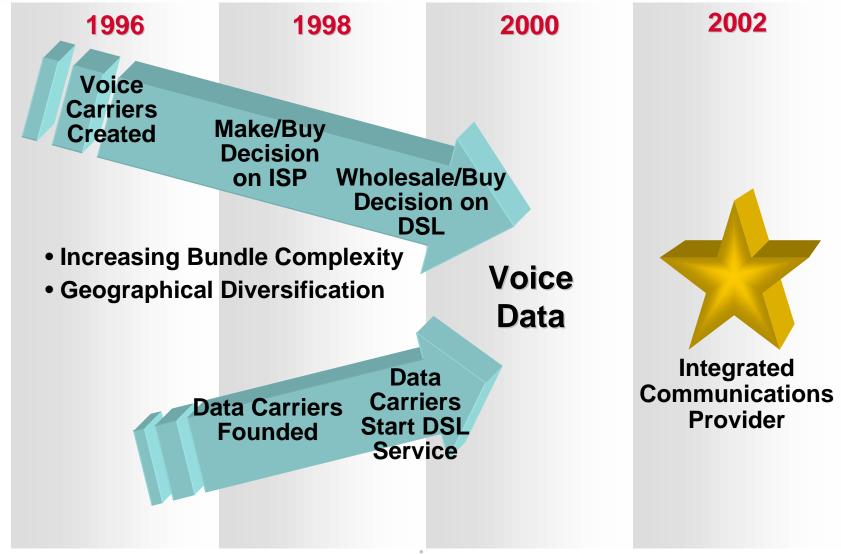


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Bundling: Evolution of US Competitive Carriers



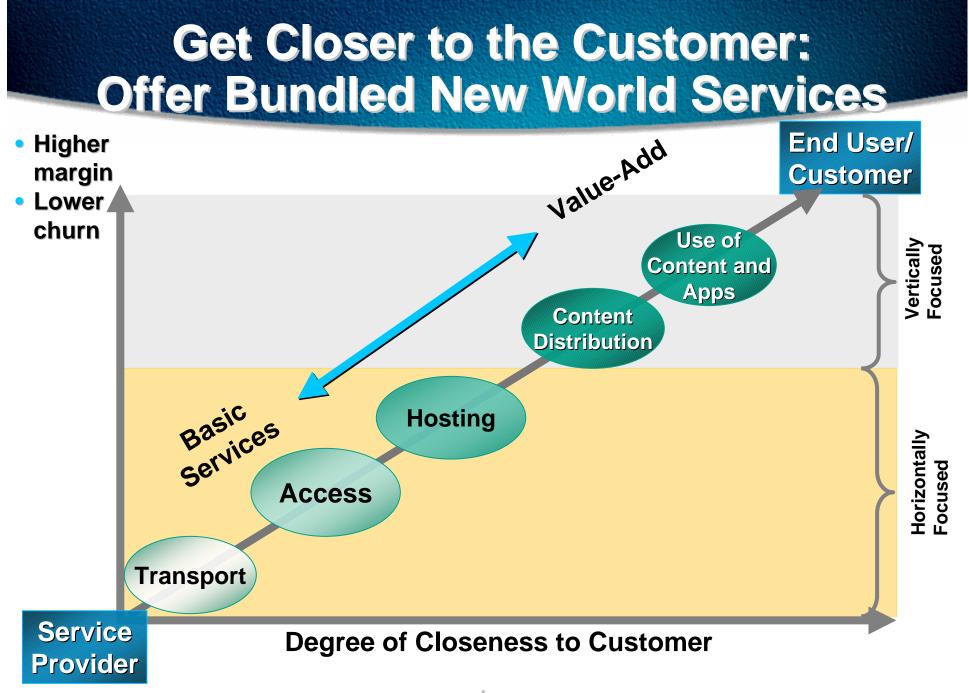
Internet Economy SP Solutions: Content and Applications

	Business Solutions	Consumer Solutions	
Hosted Application Solutions	 E-business applications (internal-facing and external-facing) 	 Personal productivity applications Online gaming 	
Content and Media Solutions	 Content delivery: distance learning, advertising, co. websites 	 Content delivery: music-/video-on-demand 	
Communications Solutions	 Real-time Store and forward Managed messaging Telecommuting 	 Real-time Store and forward Telecommuting 	
Portal/ Mediation Solutions	 Web portal Voice portal Online business communities 	 Web portal Voice portal Online personal interest communities 	
	 Data storage and mgmt. Business process outsourcing 	 Home automation solutions (security, energy, appliances) 	

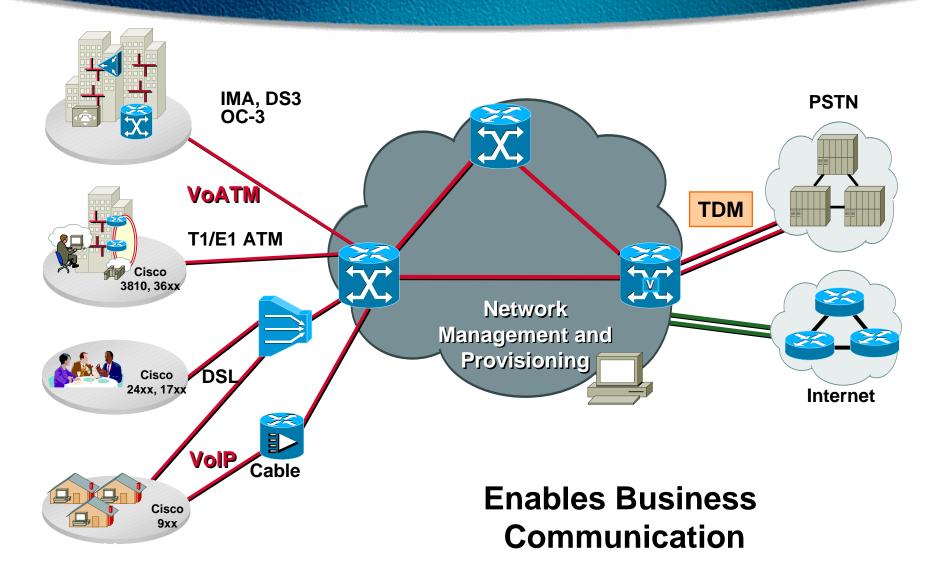
Customer needs New World Solutions

Advertising, Entertainment, Information, Publishing	1999 <u>(</u> \$ B) 489	2004 (\$ B) 695	1999-2004 CAGR (%) 7.3
Business SolutionsPortal/Mediation SolutionsConsumer SolutionsCommunications Solutions	47	233	37.7
Web Hosting Data Access Data Transport	31	82	21.9
Wireless Voice	225	430	13.8
Wireline Voice		815	7.6

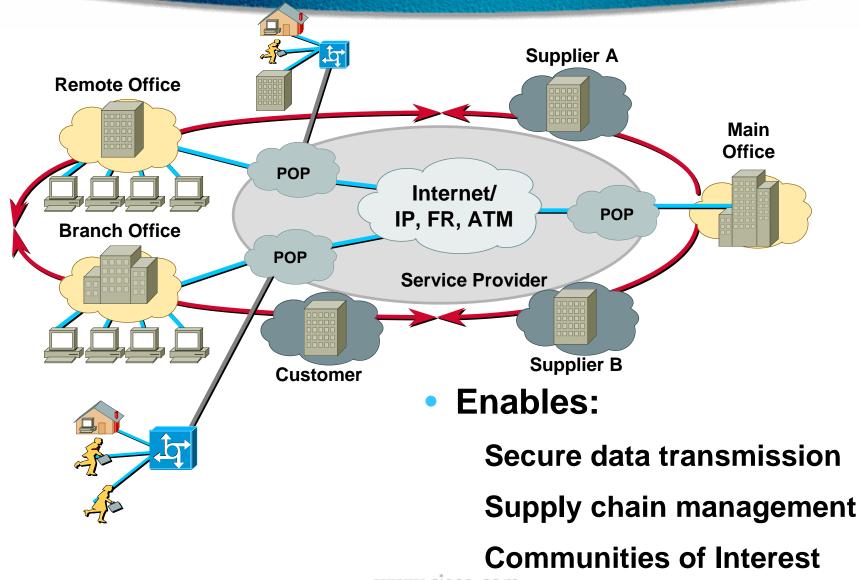
Sources: IDC; Dataquest; Forrester; Morgan Stanley Dean Witter; Internet Research Group; Veronis, Suhler and Associates; Cisco analysis Ilang CLEC 010700 © 1999, Cisco Systems, Inc. 18



Integrated Access Solution



Service Provider VPN Services



Examples of Evolving Service Offerings

Nextlink acquired Concentric:

Nextlink gains data center and IP network service expertise
Concentric gains attributes of a CLEC

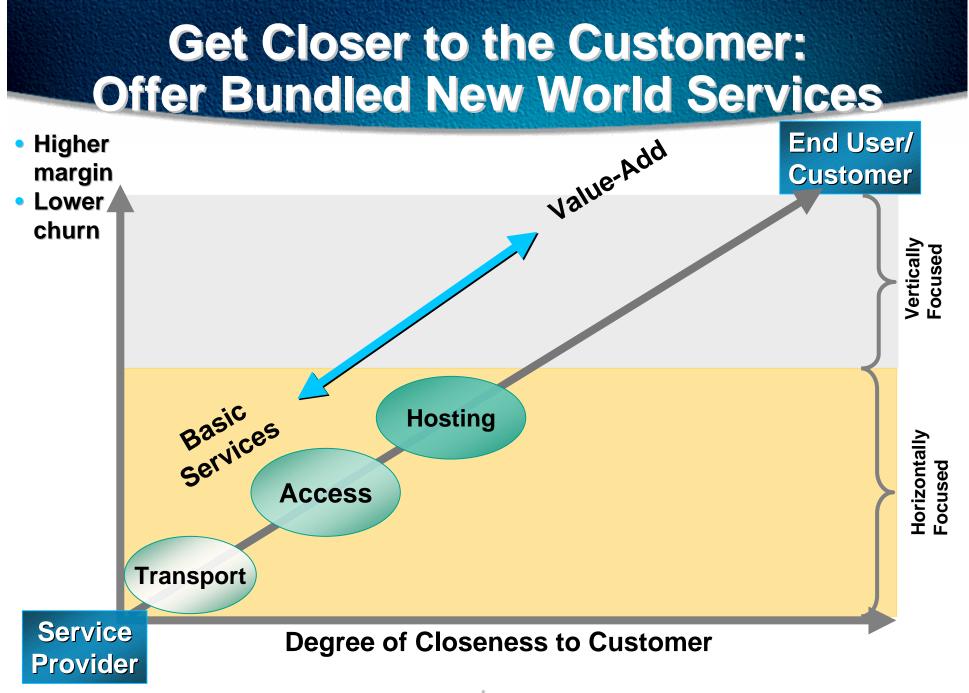


McLeod USA acquired Splitrock: •Accelerates entry into data services market •Expands market presence across the US •Easier to implement higher level new world services

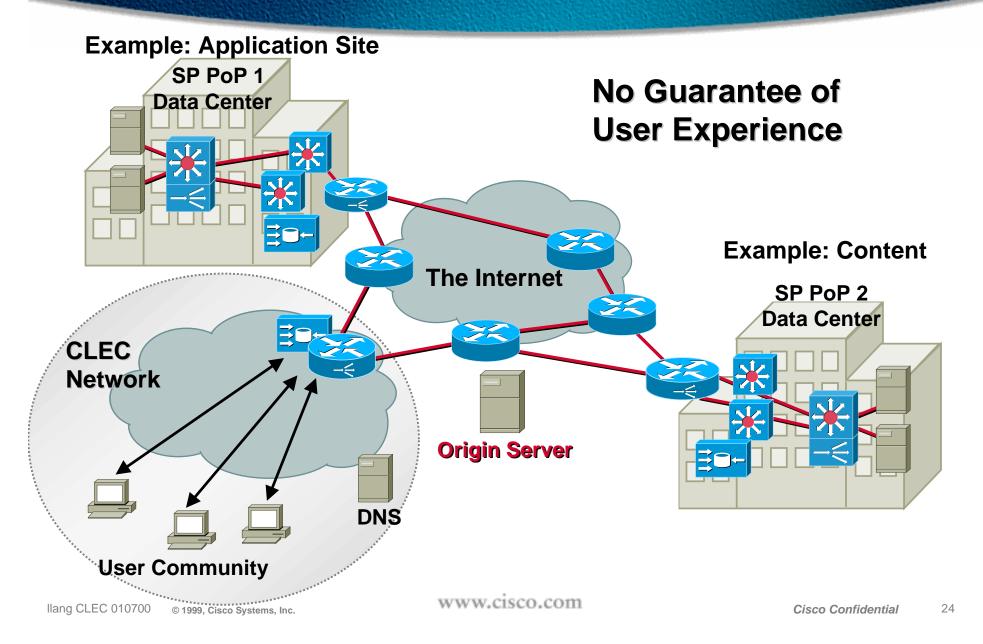








Content Delivery Networks



The Evolution to Content and Application Hosting

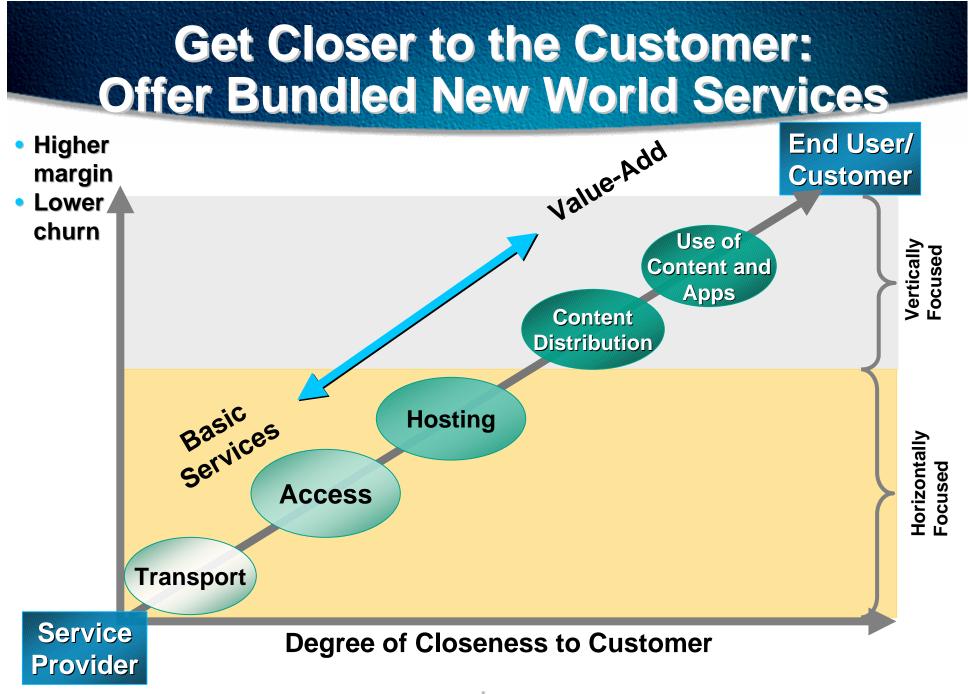
- Market is still evolving
- Many Application Service Providers entering the market
- Focus will be by industry, customer or application type
- Consolidation and partnering still to come





Making software simple.**





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Implement cost effective, flexible networks and business practices

Low cost & Flexibility Accelerated by Open Model

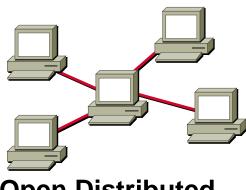
Computing

Old World



Centralized Mainframe

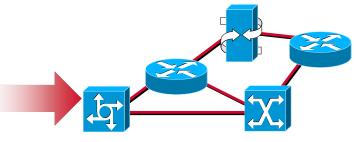
New World



Open Distributed Computing

Telecommunications



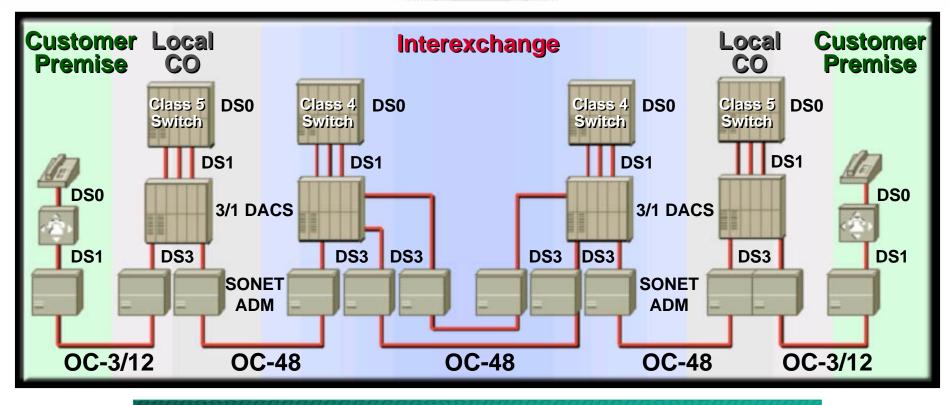


Open Distributed Telecommunications

Central Office Circuit Switch

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Today's Voice Infrastructure: Tyranny of the DSO

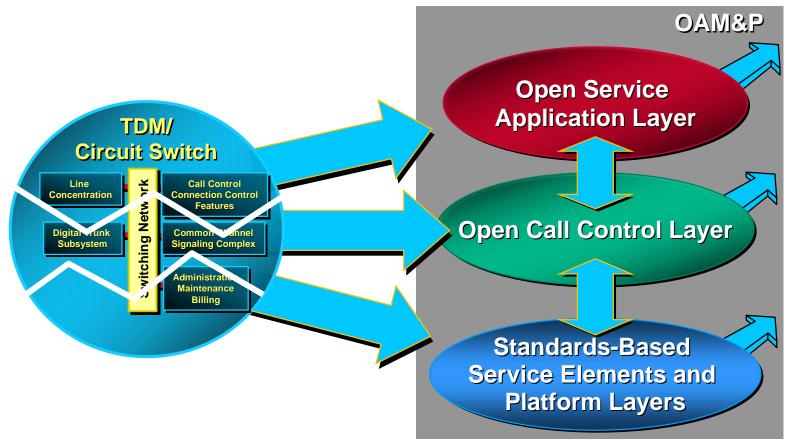


Rigid structure yields high cost per bit

Lower-margin services disfavor new investment

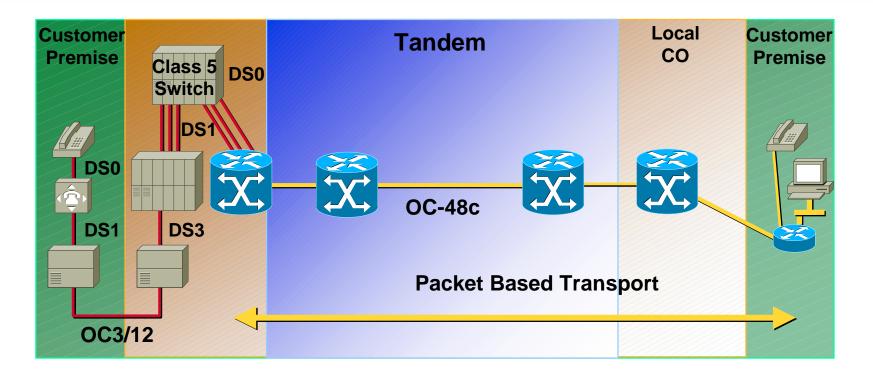
Good infrastructure for adding more DS0s

Driving Open Network Standards for Low Cost and Flexible Networks



Allows fast deployment of new services Easier and less expensive to maintain and grow

Low Cost and Flexible Packet Voice Infrastructure



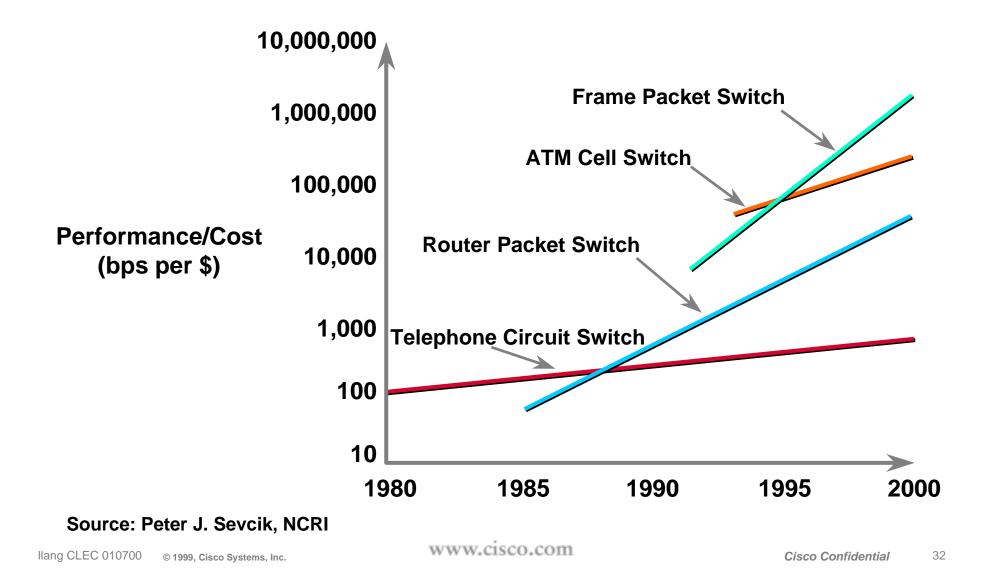
Grow tandem infrastructure with packet technology (VoIP, VoATM, etc.)

Leverage statistical multiplexing over packet core

Enable integrated voice/data access

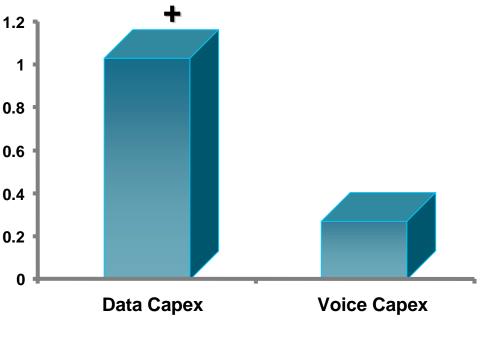
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Economics of Alternative Switching Infrastructures



Revenue and Margin Returns in Data/Internet

- For every \$1 of capital spent: Voice drives \$0.30 of recurring revenue
- Data and IP drives \$1 of recurring revenue
- Gross margin: Data and IP is approximately 2000 points higher than voice



Recurring Revenue per Dollar Invested

Source: Salomon Smith Barney, May, 2000

Winning in a Disruptive Market

Increase revenues

Offer IP applications and data services

Differentiation

Speed to Market

Agility & flexibility

Lower costs

Open standards

Converged network

Automating by e-enabling your business

"Internet Business Solutions" Create Competitive Advantage

 Higher customer **Employees Customers** nformation satisfaction Lower costs Competitive agility Accelerated Enterprise time to market **Partners Suppliers** Higher **Ubiquitous Connectivity** employee where the Business efficiency **Runs on the Network**

Internet Business Solution

• Customer service efficiencies:

Over 90% of customer orders taken on the Web Satisfaction up to 4.25 from 3.4

 Supply chain management 70% cut in order cycle time (6–8 weeks to 1–3 weeks) 45% inventory reduction for Cisco and partners

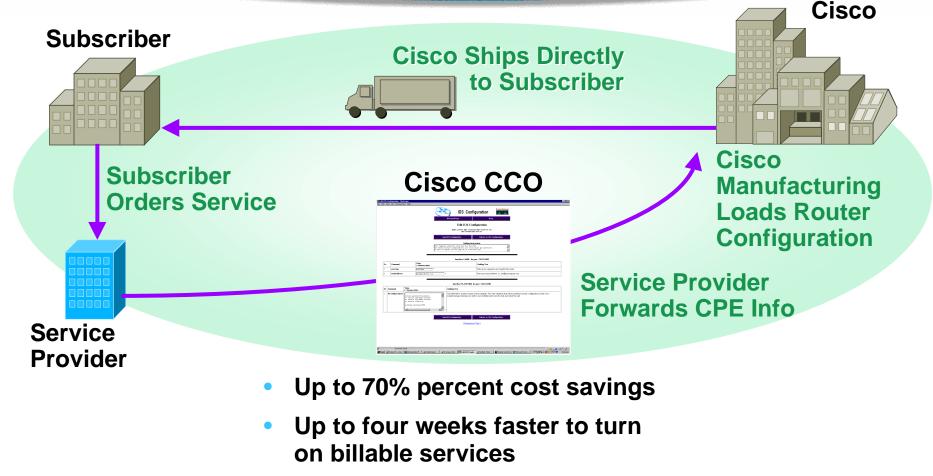
E-learning

40–60% cost savings vs. instructor-led training



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Configuration Express for Speed, Agility and Low Cost



- Improved customer satisfaction
- Ideal for mass deployment of CPE

Winning in a Disruptive Market Summary

- IP applications and data services will drive revenue and profits
- The long term advantage will come from a low cost, flexible networks and business models

Build multi-service packet networks

Open standards

Streamline by e-enabling your business

 Leaders of the past may not be leaders of the future



