RSA Conference 2000

San Jose McEnery Convention Center

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New World Catalysts & Security Challenges

The Internet Is Changing Everything…

From Wires & Protocols

To Users & Information Services through Ubiquitous Connectivity

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New World Catalysts

- Convergence
- The Internet Business
- Mobility
- Entering the Home

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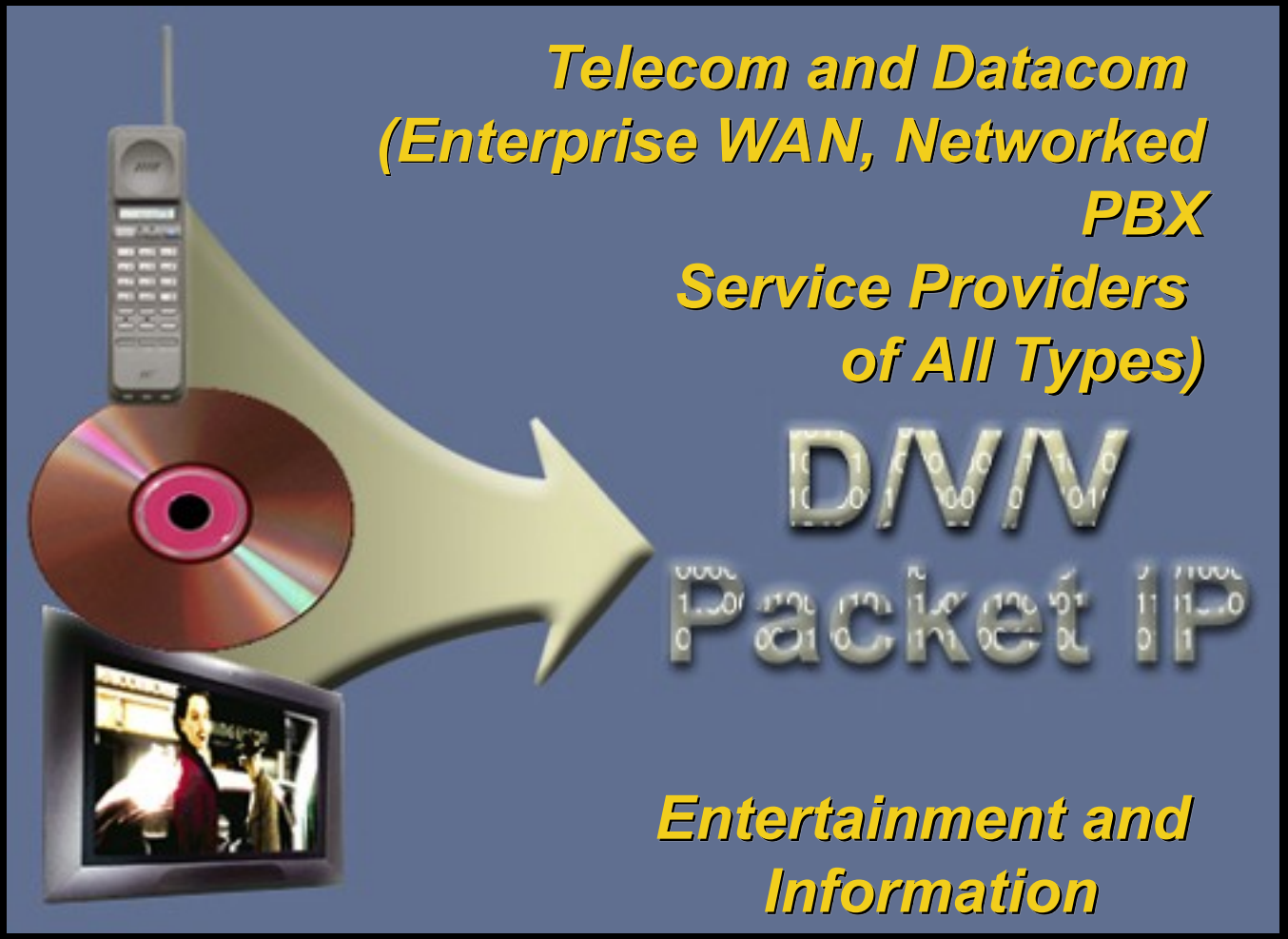
Data/Voice/Video Convergence

Voice
Circuit Phone

Data
Packet

Video
Circuit TV



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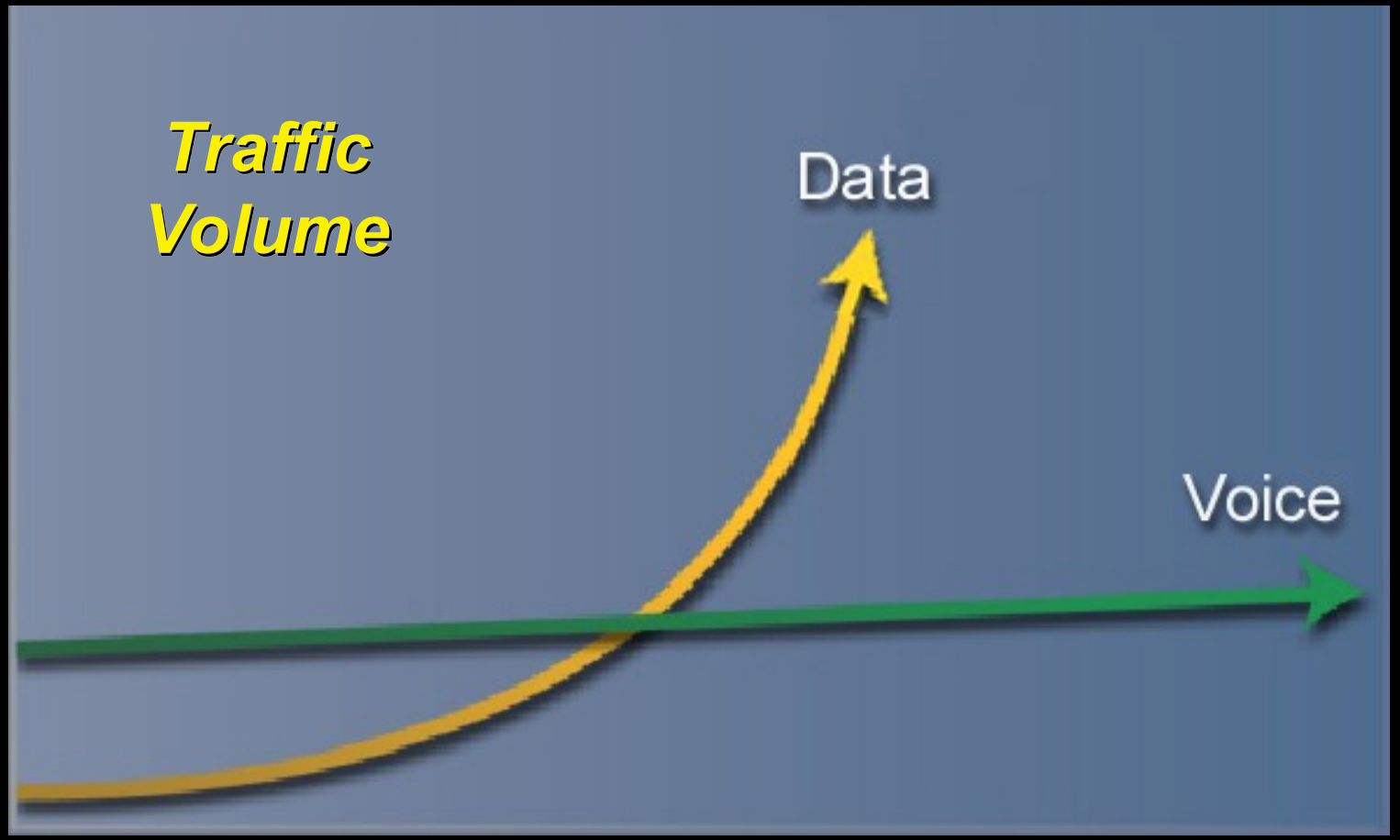
Explosion In Data Traffic



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New World Architecture

- Distributed vs Centralized
- Open vs Proprietary
- Scalability
- High Availability/Reliability

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Internet Advantage
Changing the Way Companies Do Business

$825 Million
in financial impact

$10 Billion
Run rate

20% Increase
in productivity

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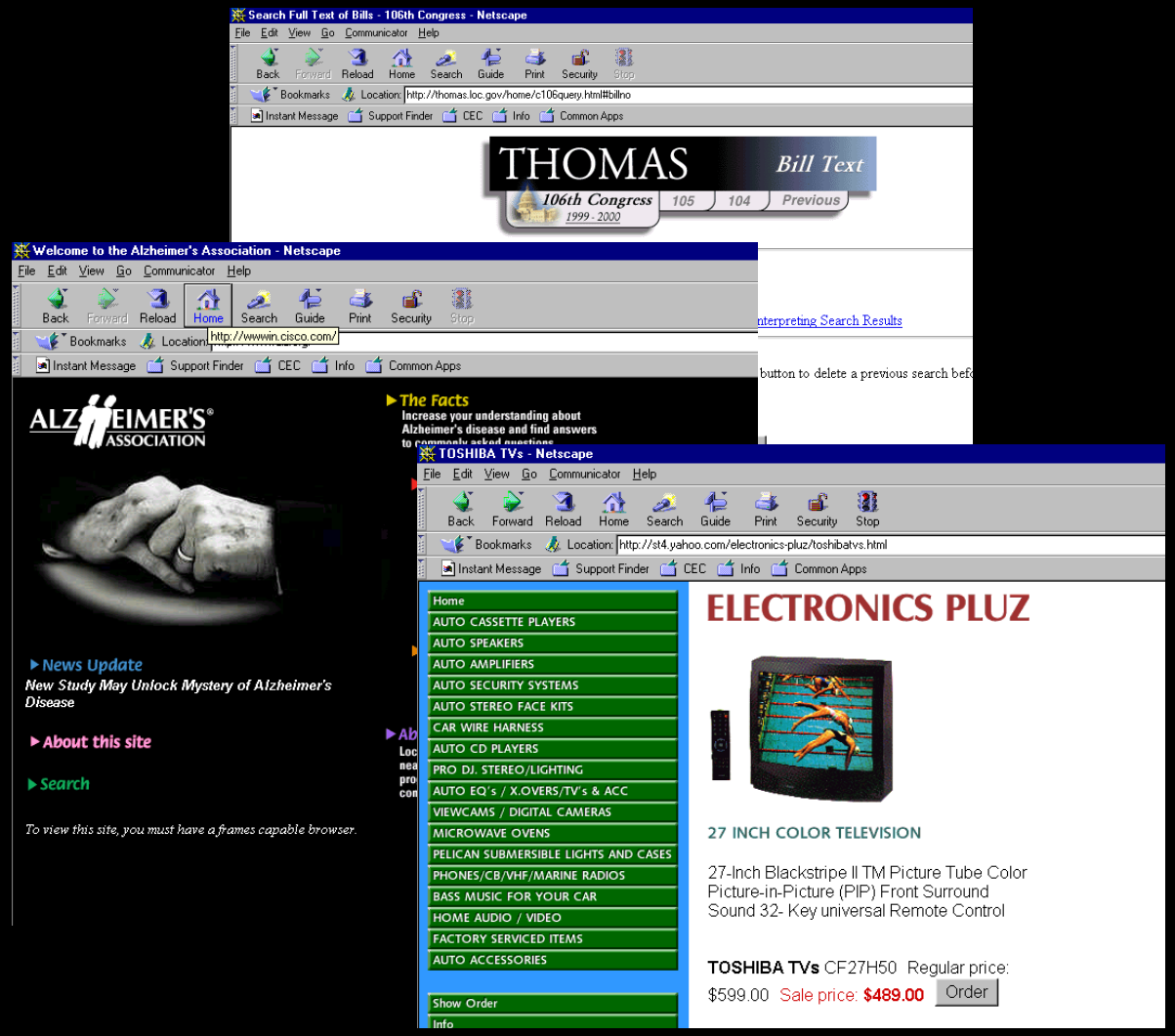
Internet Tomorrow
Reaching Out to the Consumer

- Commerce
- Content
- Community
- Control



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The Mobile User
Removing Location Dependency

Anytime/ Anywhere Internet Access

Internet-Enabled Devices

Networking within the Home

On Campus Mobility

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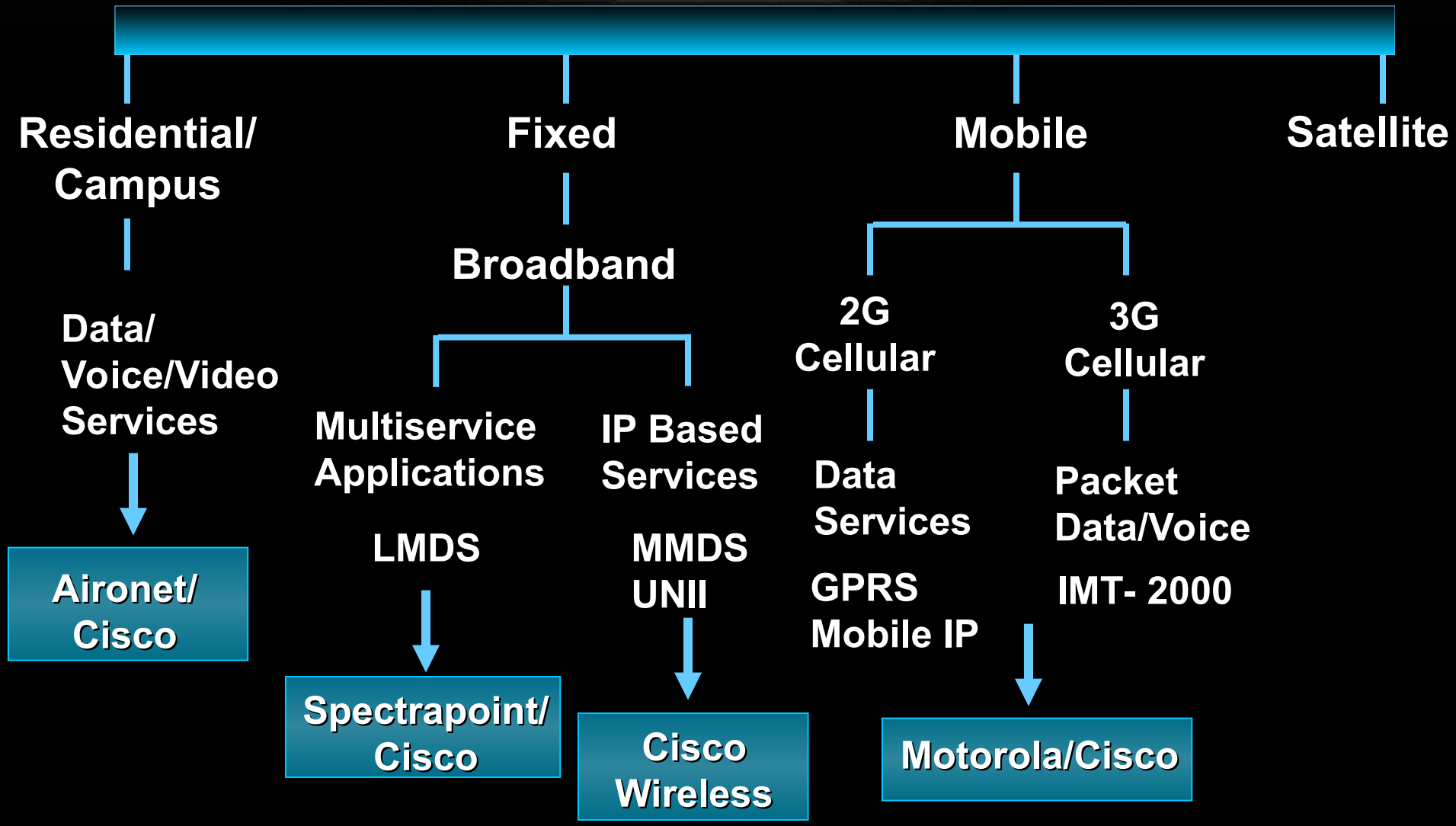
Wireless Market View



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Mobility Is More Than Just Wireless

- Mobile IP = persistent IP address
- Persistent IP vs. persistent services
- Special user interface requirements
  - Network appliances
  - Lower bandwidth

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Entering The Home

Pervasive Computing

Smart Devices

Multi Client Architecture

Ubiquitous Communications

Globally Accessible Internet

Availability vs. Security

Portals

Services, Content

Personalization

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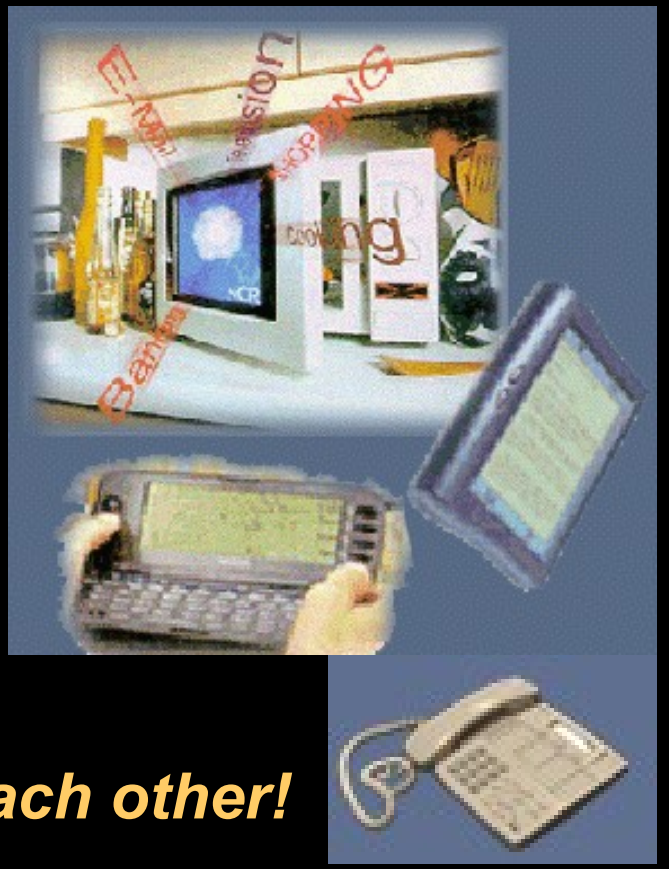
Network Appliances

Dedicated computer appliances bring the necessary ease of use

- Set top boxes
- Downloadable Audio (MP3)
- Electronic Books
- Intelligent phones
- Browser appliance
- “5 IP devices per body”



Connected to the Internet and to each other!

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Consumer Networking Challenges

- Ease of use
- Scalable deployment
- Entertainment quality video
- Privacy issues
- “Micronets”

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Enabling the New World

- Intelligent Network Services
- End to End VPN
- Policy Based Security

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New Applications Require Higher Level of Services

Diverse Range of Clients

PEOPLE Soft

Oracle Applications

Hosted Applications

Intelligent Network Services

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What Is Required Of Intelligent Network Services?

User Awareness

Application & Content Awareness

And Operational Automation

(Provisioning and Management)

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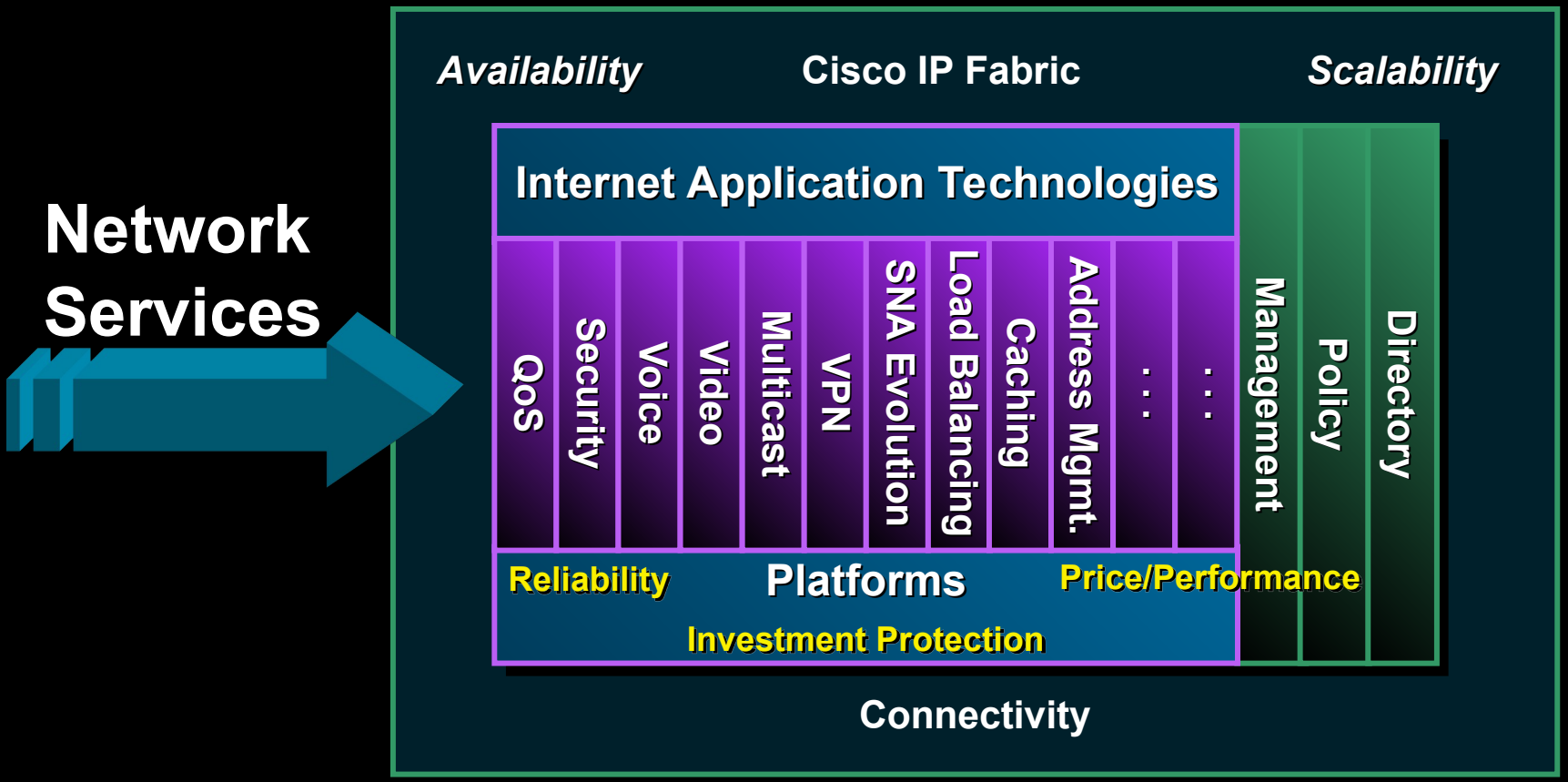
Intelligent Network Services Architecture



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Security Services

- Security is a fundamental element of networking
- Security enables customers to gain competitive advantage through the Internet Economy
- Security services are integral to new application implementations and new infrastructures

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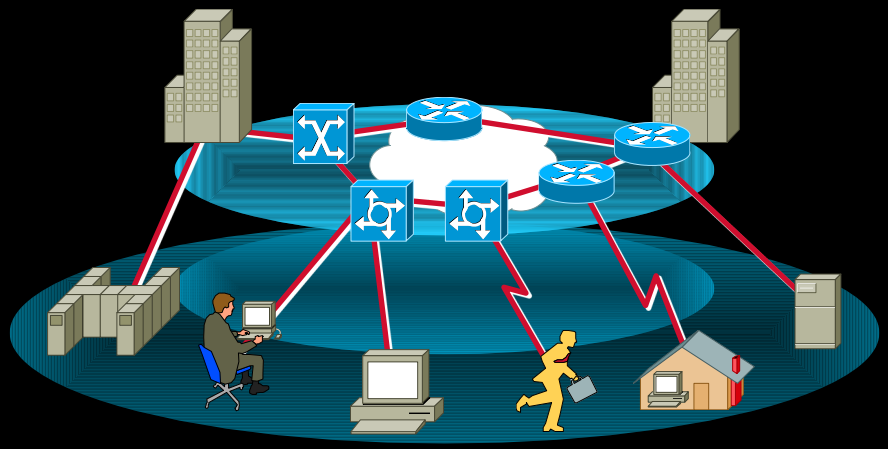
The Value of Security in the Network

- Touches all components
- Already the focus of management efforts
- Effective place to enforce security policy
- Greatest scalability
- Leverage investment in infrastructure



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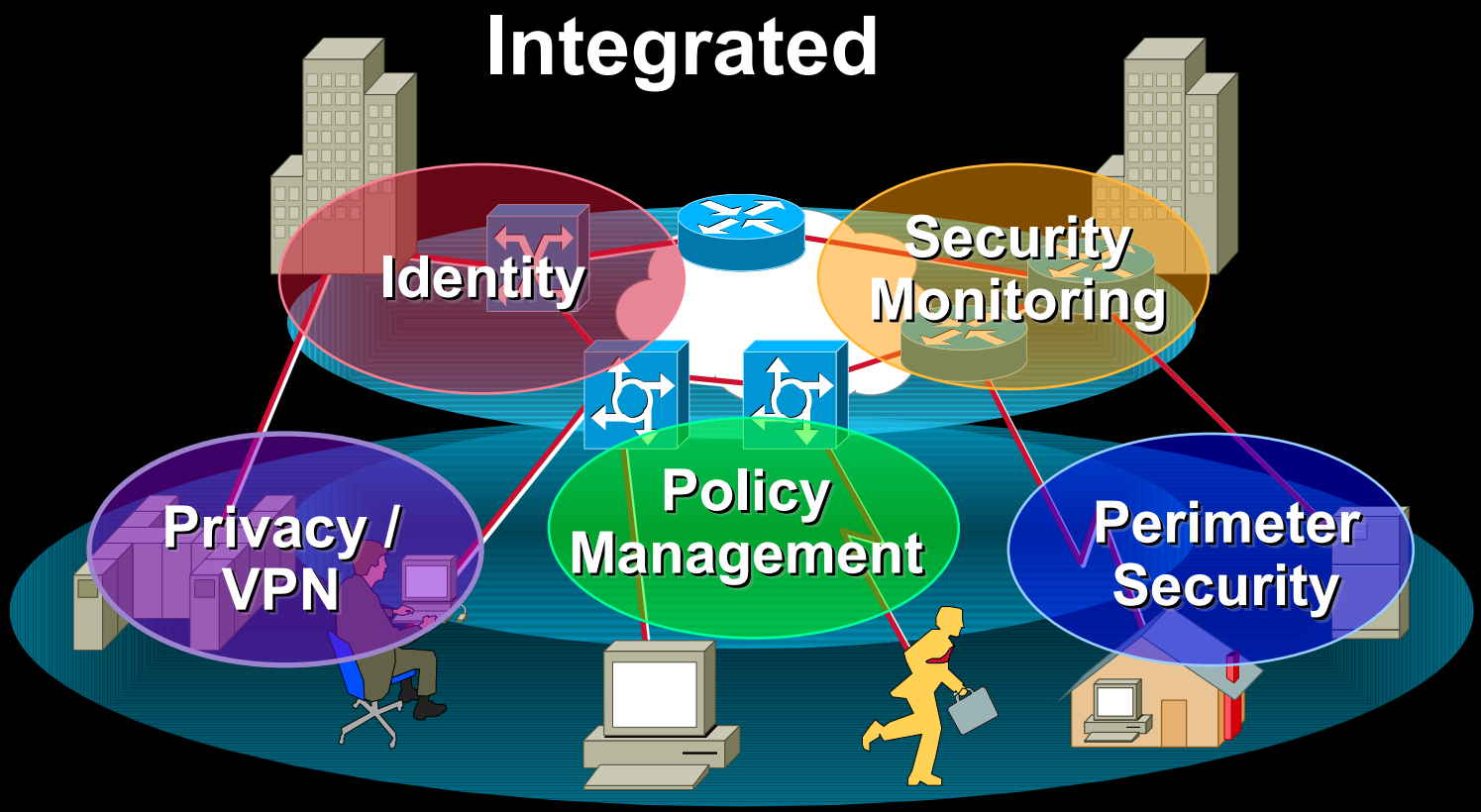
The Future of Network Security



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Applied Security Services: The "P" in VPN

Separate Data

Tunneling

- GRE
- L2TP
- MPLS

Increase Protection

Encryption

IPSec

DES, 3 DES

MPPE

Prevent Tampering

Integrity

TCP Checksum
AH in IPSec

Identify Source

Authentication

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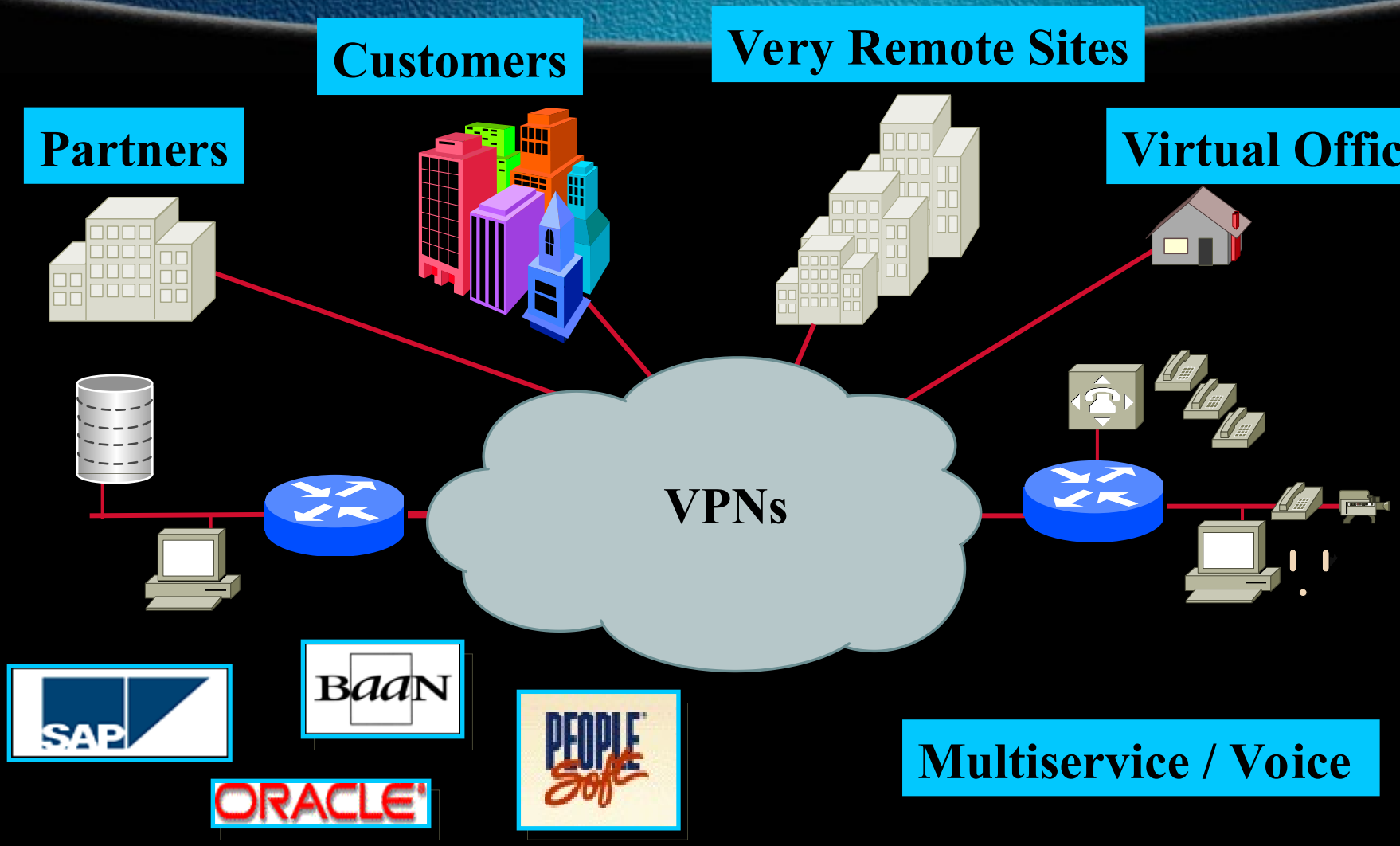
VPNs Enable the Internet Economy



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Major VPN Challenges

- Mobility
- Streaming services
  - Voice, video, audio require IPSec
  - SSL doesn't secure UDP traffic
- Scalable deployment
- Policy management

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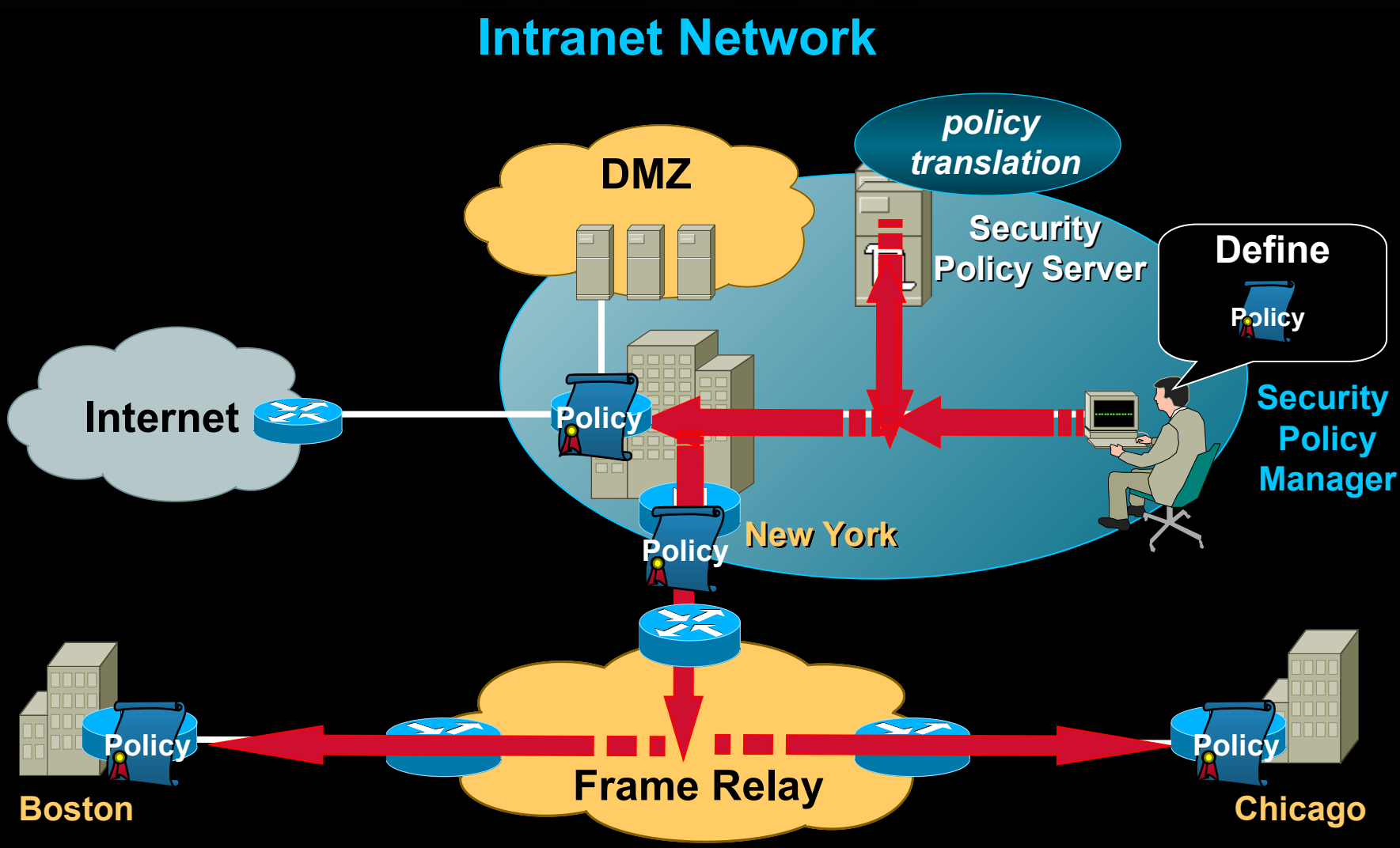
Security Policy Management



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Cisco's Security Focus

- Deliver leading-edge products in key network security markets
- Achieve interoperability and accelerate implementation of secure IP Networks
- Collaborate through standards bodies and industrial organizations
- Develop reference technology to speed market acceptance

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The Goal: Intelligent Self-Defending Networks

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Non-Technology Challenges

Role of Regulation

Conflicting National Policies

Local Standards and Practices

Globalization of Language & Culture

Intellectual Property Rights

Digital Divide

Privacy

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EMPOWERING THE INTERNET GENERATION

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