



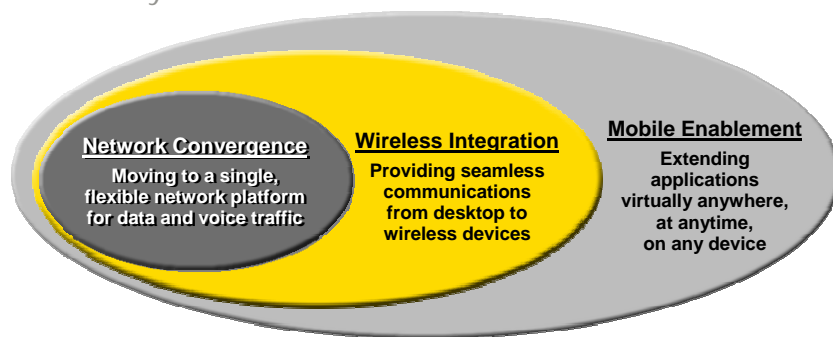
## Emerging MPLS VPN Bundled Services

Michael Buttrey  
Director Product Development and Management

May 23, 2006

### Technology Driver: Convergence

Bundled services driven by need for more than just "standard connectivity"



**"Most companies want a partner that is interested in helping them with the new technology and provide value-added services beyond just being a technology provider."**

– Phillip Redman, vice president Research, Gartner, Inc., July 2005

## Service Flexibility

Enhancing the core offering, bundling value-added services

- > Class of Service
- > Routing protocol flexibility
- > Multicast
- > Usage-based billing
- > End-to-end SLAs and reporting



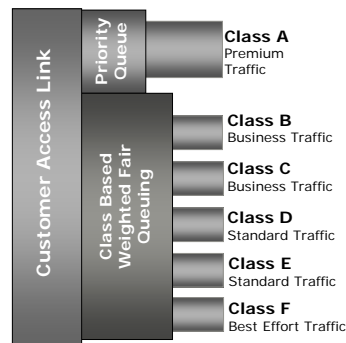
**More features  
bundled into the  
basic core offering**

- Value-added services to enable new applications and enhance productivity:**
- > Secure Internet access
  - > Remote access, extranet connectivity
  - > Managed CPE services
  - > Wireless access for fixed, mobile users
  - > Integrated site-to-site VoIP services
  - > Wireless extension of VoIP

## Prioritizing Business Requirements

Class of Service promotes more efficient use of existing resources and better QoS for real time apps

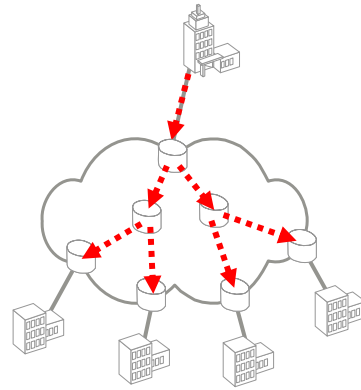
- > Customization provides flexibility
- > Consistent performance
- > Cost-effective bandwidth use
- > Supports convergence



## Efficient Bandwidth Use with Multicast

Enterprises can send a single stream of information and broadcast it to all sites in their network

- > Conserves bandwidth by replicating a single broadcast stream to every subscriber in the network
- > Ideal for videoconferencing, training, streaming news, and global software updates



Sprint Nextel

4

Emerging MPLS VPN Bundled Services

Sprint  
Together with NEXTEL

## End-to-End Performance Guarantees

End-to-end SLAs represent how applications will really perform – not the average of all backbone traffic

### Legacy SLA Approach

- > Only cover backbone of the network – and sometimes only selected parts
- > Delay/latency is an average of all packets traversing the network
- > Jitter and packet loss SLAs are based on averages of all packets traversing the network backbone



### MPLS VPN End-to-End SLAs

- > From premise to premise – including the local loop
- > Delay is actual experience from premise router to premise router
- > Jitter and packet loss SLAs represent how well your applications will run across enterprise VPN

Sprint Nextel

5

Emerging MPLS VPN Bundled Services

Sprint  
Together with NEXTEL

## Elements of the Basic MPLS Service

Managed or un-managed, flexibility for more customer applications and business requirements

Components	Complete MPLS VPN
Any-to-any connectivity	✓
Class of Service (traffic prioritization)	✓
Multicasting	✓
End-to-End Service Level Agreements, reporting	✓
Proactive Transport Monitoring & Notification	✓
Proactive CPE Monitoring & Notification	✓
Outage notification, track to close	✓
Hardware Design & Implementation	✓
Software Configuration Management	✓
CPE On-Site Maintenance Dispatch	✓
Managed Services Customer Portal	✓
Tier 2 Help Desk Support	✓

Sprint Nextel

6

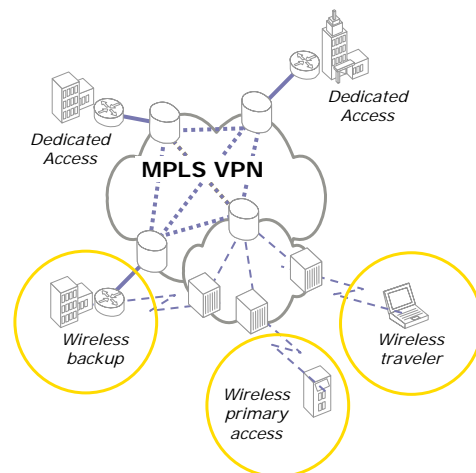
Emerging MPLS VPN Bundled Services

Sprint  
Together with NEXTEL

## Wireless Access: Flexibility and Savings

Benefits for both fixed locations and mobile users

- > Traveling users leverage wireless access to remain productive
- > Applications enabled to wireless devices
- > Wireless access for temporary or movable platforms, kiosks
- > Totally separate backup to primary wireline access



Sprint Nextel

7

Emerging MPLS VPN Bundled Services

Sprint  
Together with NEXTEL

## Integrated Voice over IP Services

Converged, managed data and voice connections

### Integrated access to all services

- > Converge all data and voice traffic onto a single IP-based connection
- > Off-network termination for both local and long distance

### Managed voice applications hosted in the cloud

- > Network-hosted application
- > Integrated local, long distance, PBX functionality
- > Web-enabled control of services



Sprint Nextel

8

Emerging MPLS VPN Bundled Services

Sprint  
Together with NEXTEL

## Wireless Voice Integration

Anywhere, anytime PBX and messaging functionality

- > Wireless device becomes a VoIP device
- > Single number, single voicemail
- > Seamless functionality between desk set and wireless device
- > Eliminates duplication of voice devices
  
- > Merged wireless and wireline voicemail
- > Ability to integrate fax mail, voicemail-to-e-mail
- > Web access for messages



Sprint Nextel

9

Emerging MPLS VPN Bundled Services

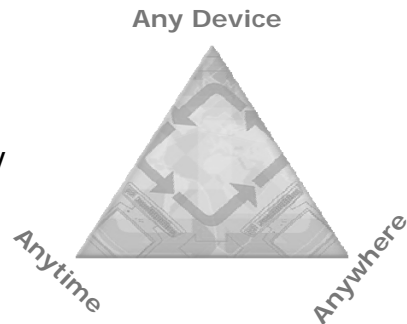
Sprint  
Together with NEXTEL

## Supporting Convergence Through IMS

As both a service enablement solution and a network convergence solution, IMS supports...

- > Access independence
- > Different network architectures
- > Terminal and user mobility
- > Extensive IP-based services

Source: Light Reading, "IMS Guide", March 4, 2005

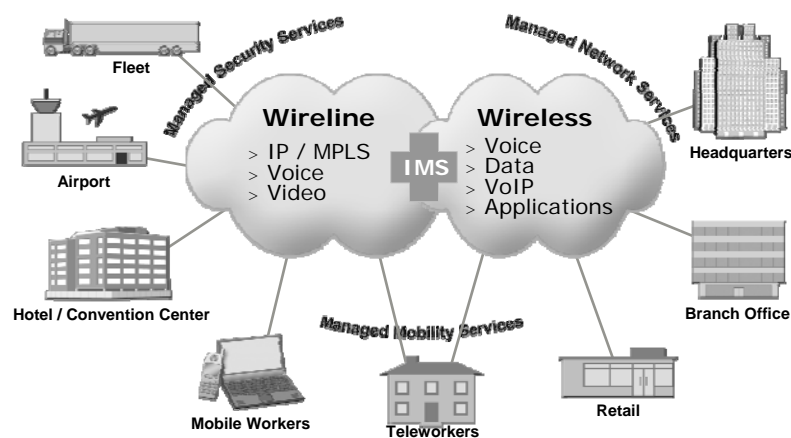


Sprint Nextel  
10 Emerging MPLS VPN Bundled Services



## Convergence: Extending The Workplace

More Choice and Flexibility



Sprint Nextel  
11 Emerging MPLS VPN Bundled Services





Sprint Nextel  
12 Emerging MPLS VPN Bundled Services

