



Preparing Your Infrastructure for VoIP and Collaboration

How your carrier can make *the* difference

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May 4, 2005



The world's networking company SM

Agenda of Topics

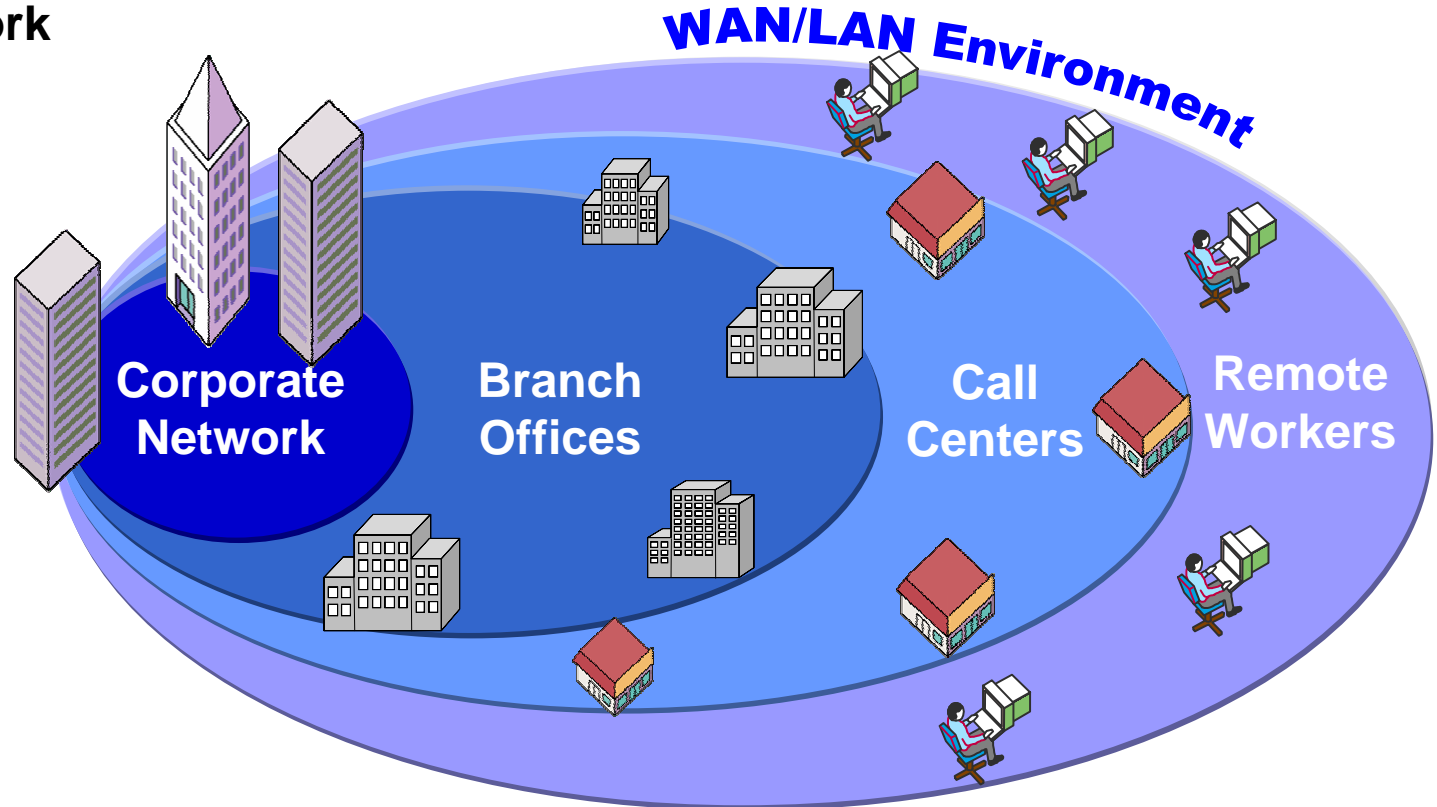
- Overview: Portfolio of Services
- Network Convergence
 - Quality and Class of Service
 - IP VPNs, Multiservice Architecture and Security
 - Network Infrastructure
- VoIP/SoIP Services
 - Interoperability/IP Servers and End to End Services
 - Global Managed Client Experience
- Customer Example
- Summary and Conclusions

A Portfolio of Products Will Provide the Solution

Corporate Network

VoIP-enabling the corporate campus and the WAN

- VoMIS/AVTS/PNT
- VoVPN
- IP Telephony
- Any Distance Plan



Branch Office

Extending VoIP to branch locations

- IP Centrex
- IP Telephony
- Any Distance Plan

Call Centers

VoIP enabling Call Centers for advanced call routing and distributed workflows

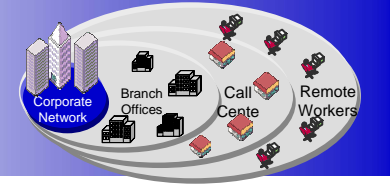
- IP Toll Free
- IP ACD

Remote Workers

VoIP enabling remote, mobile work force

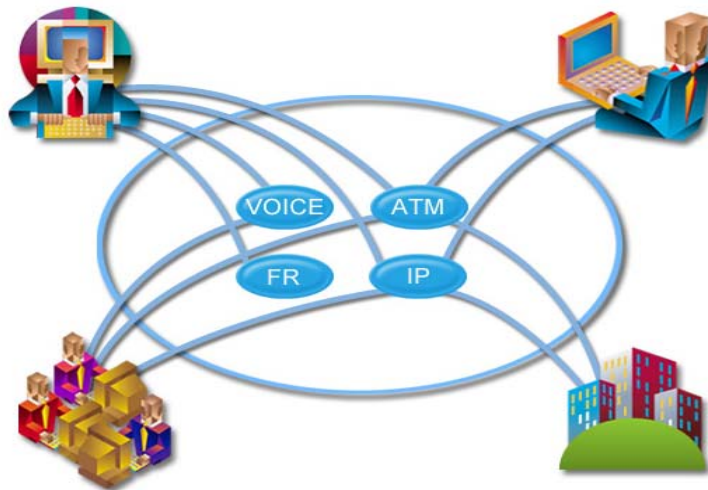
- AT&T CallVantage for Business
- Public Broadband
- Secure VPN Tunneling (AVTS/Anira)

Transforming the Network



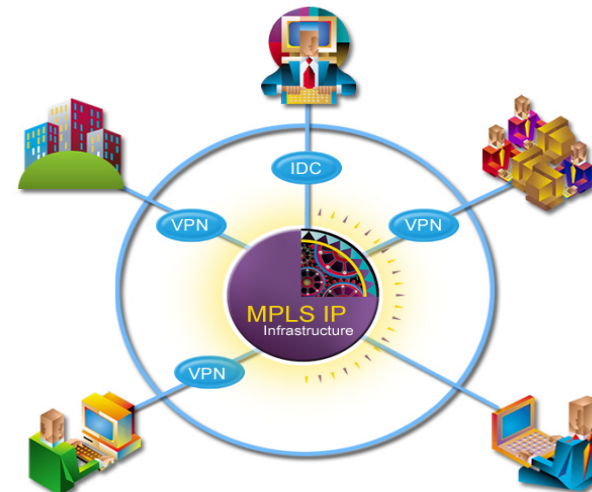
- Converge to a single Global Network
 - Converge several networks to common network IP MPLS infrastructure
- Provide carrier class reliability, availability, & scale including security
- Support Layer 2, Layer 3, & VPN Services
- Support several Class of Service levels
- Develop network-based IP features and services
- Global Network Consistency
- Offer Real Time Performance SLAs
 - US, Global Voice Quality SLAs

Separate Networks

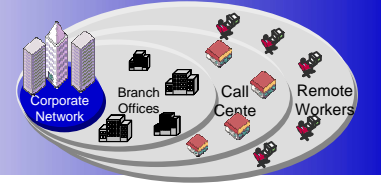


Network
Convergence

Common, Global IP Network

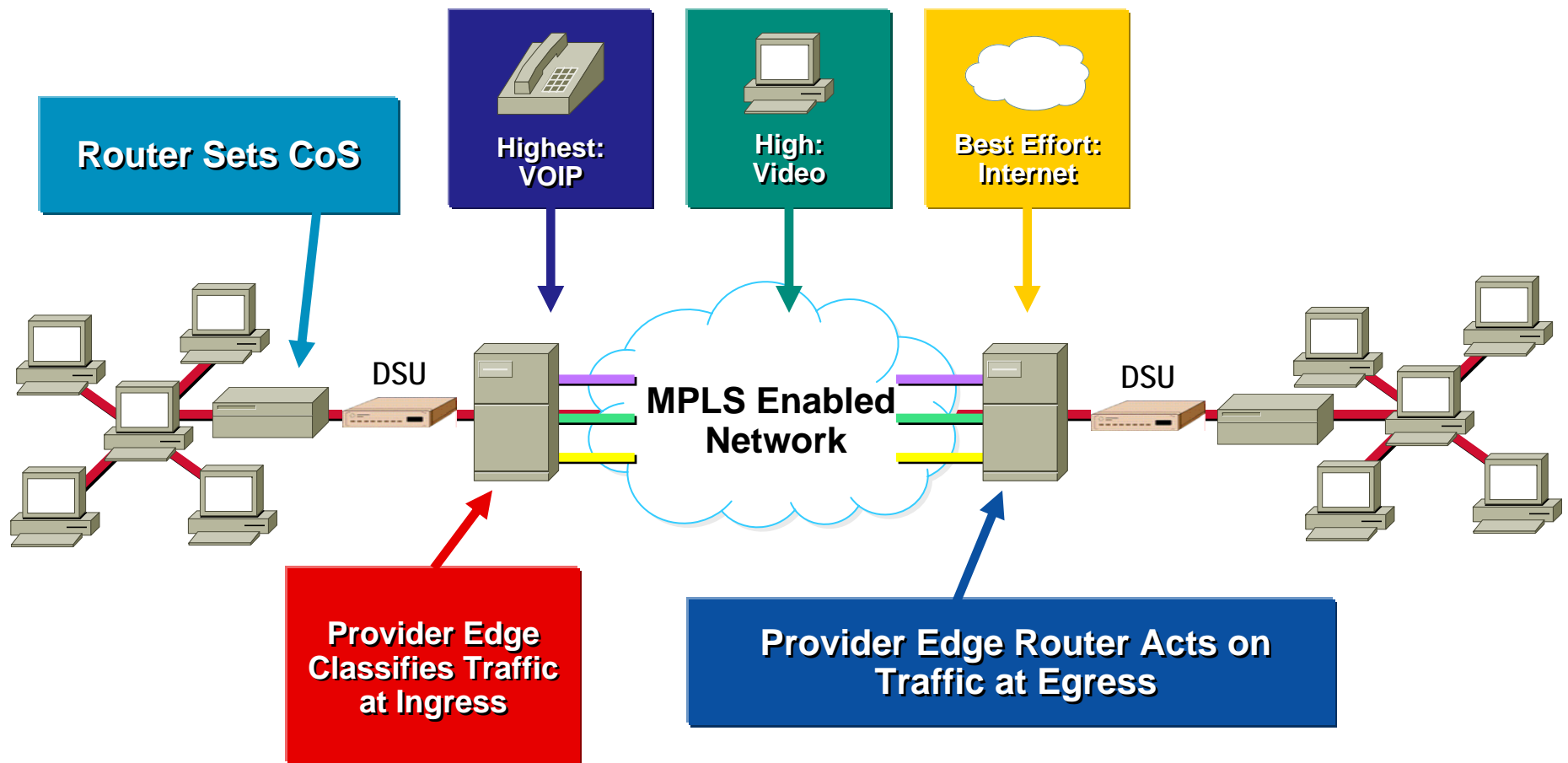


Quality of Service: Class of Service

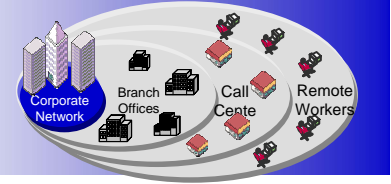


AT&T Provides 4 Classes of MPLS Service

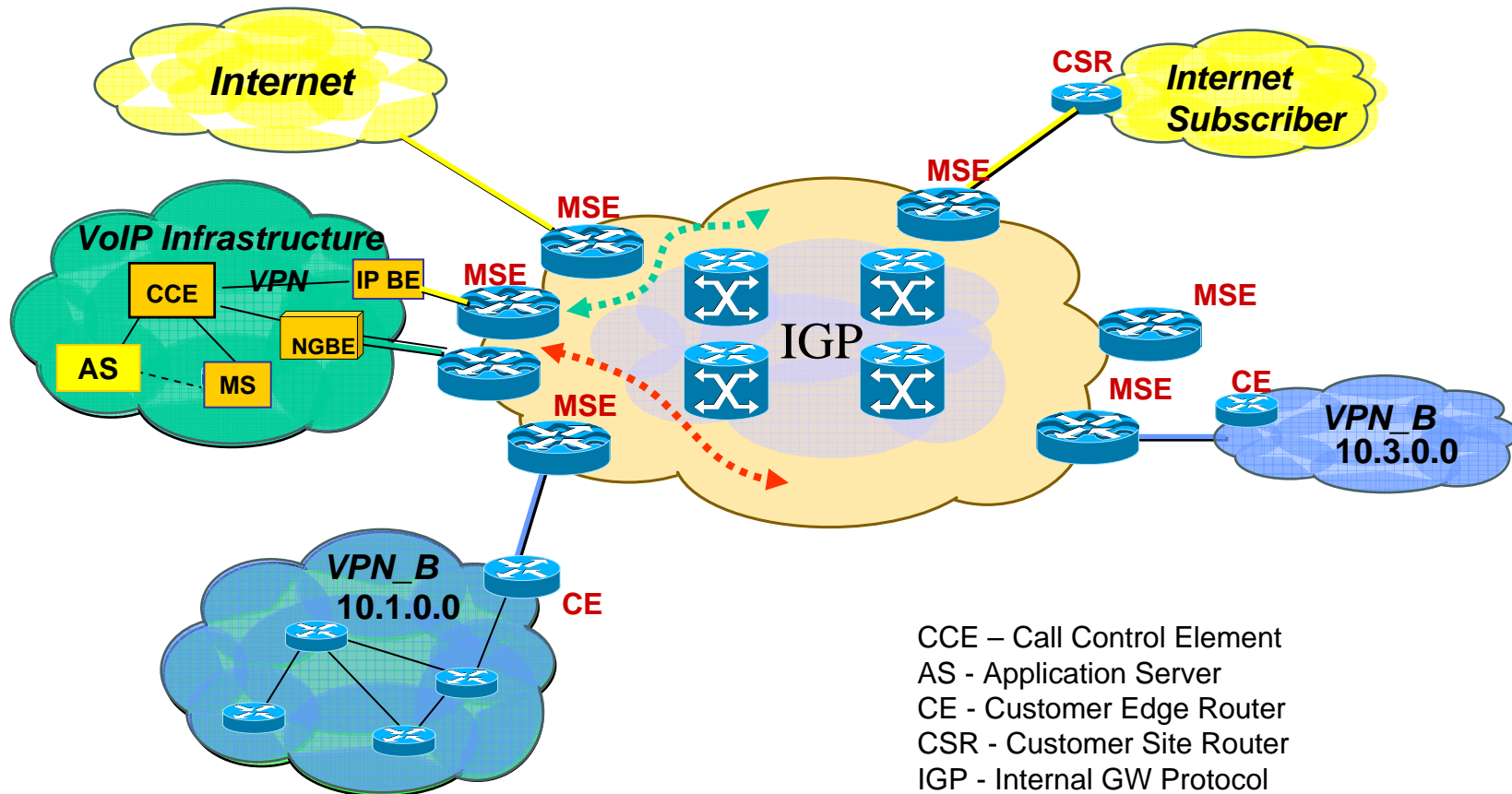
1. Real-time, 2. Bursty High, 3. Bursty Low, 4. Best Effort



Multi-Service Network Architecture

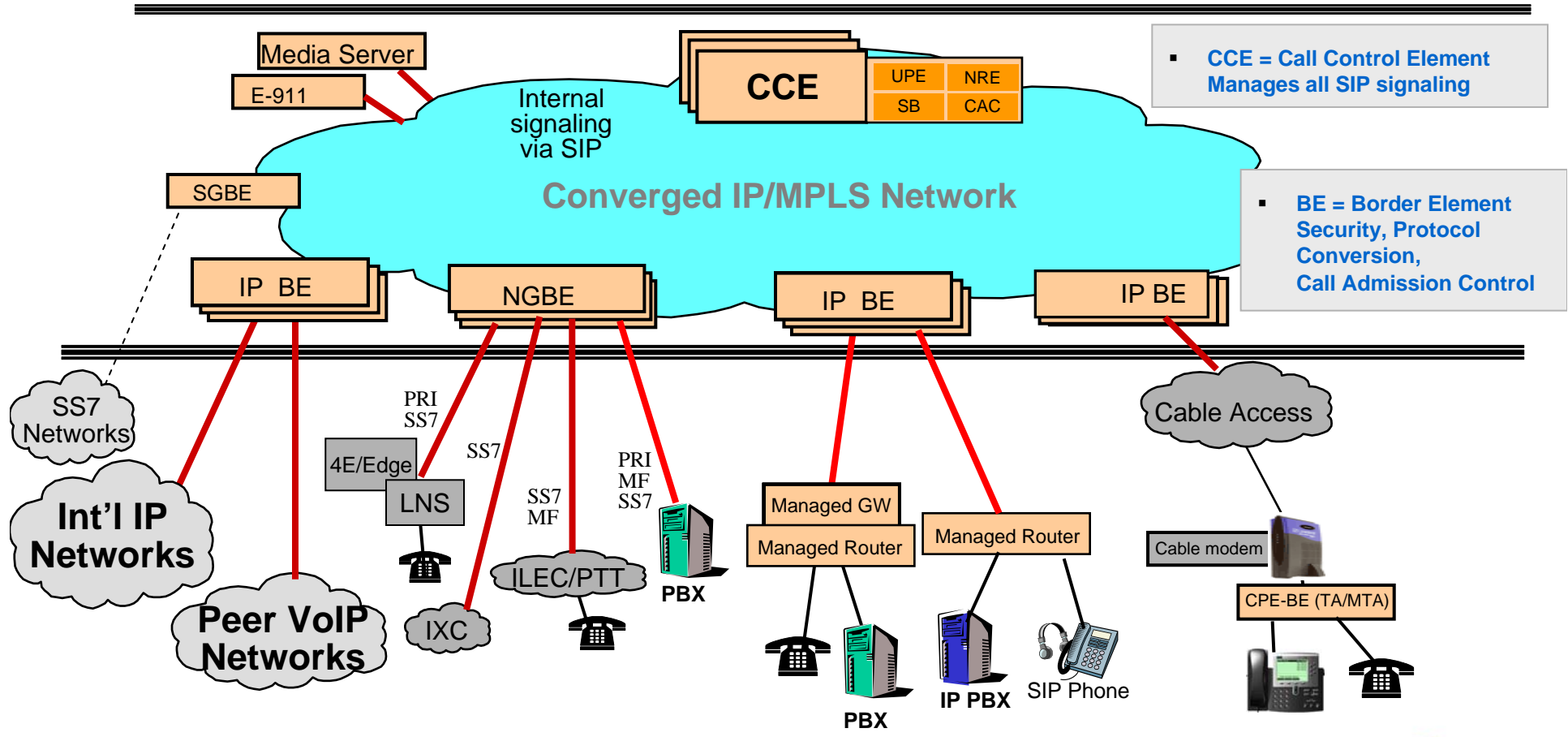
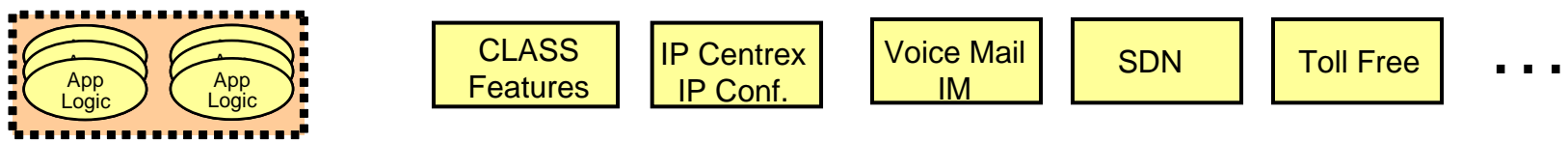
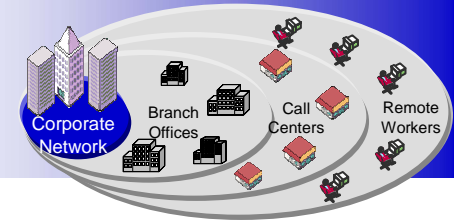


- **MPLS Common Core is Internet Route-Free**
 - Both VPN and Internet traffic is label-switched through the core
- **Service specific edge devices**
 - Public domain separate from private domain



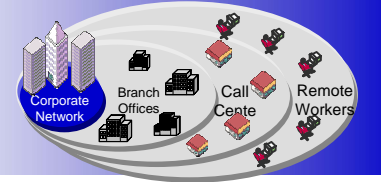
CCE – Call Control Element
 AS - Application Server
 CE - Customer Edge Router
 CSR - Customer Site Router
 IGP - Internal GW Protocol
 MSE - Multi Service Edge
 IP BE – IP Border Element
 NG BE – Network Gateway Border Element

SoIP Common Infrastructure Layer

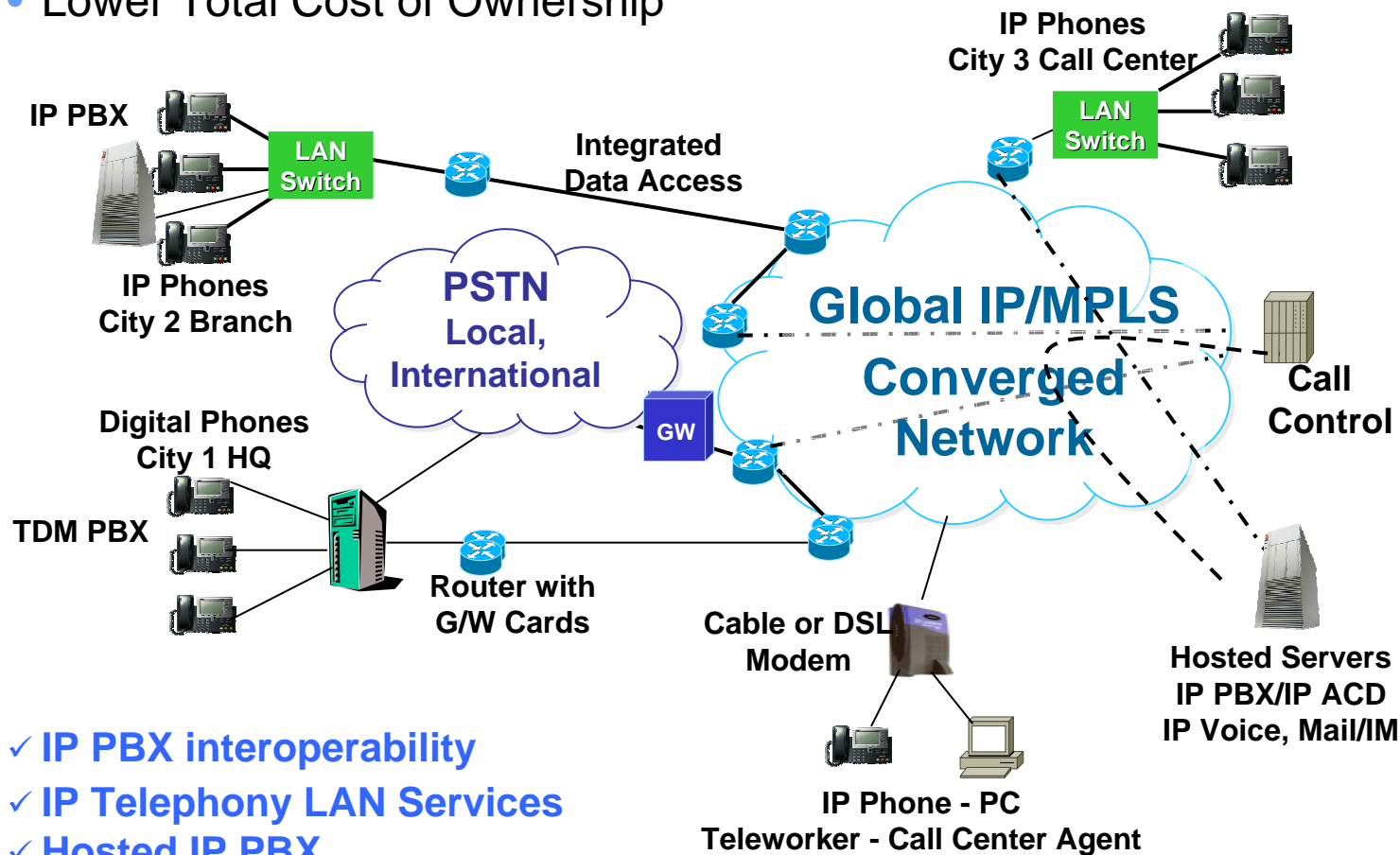


VoIP Interoperability

Migrating from TDM PBX/ACDs to IP PBX/IP ACDs



- End-to-end solution with a range of management options
- From HQs to Branches to Call centers to Teleworker
- Supports premises and hosted TDM and IPPBX/ACD
- Lower Total Cost of Ownership

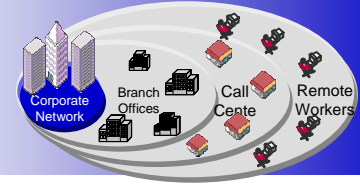


- ✓ IP PBX interoperability
- ✓ IP Telephony LAN Services
- ✓ Hosted IP PBX



Consistent Client Experience

Integrating People, Processes & Tools



- **People**

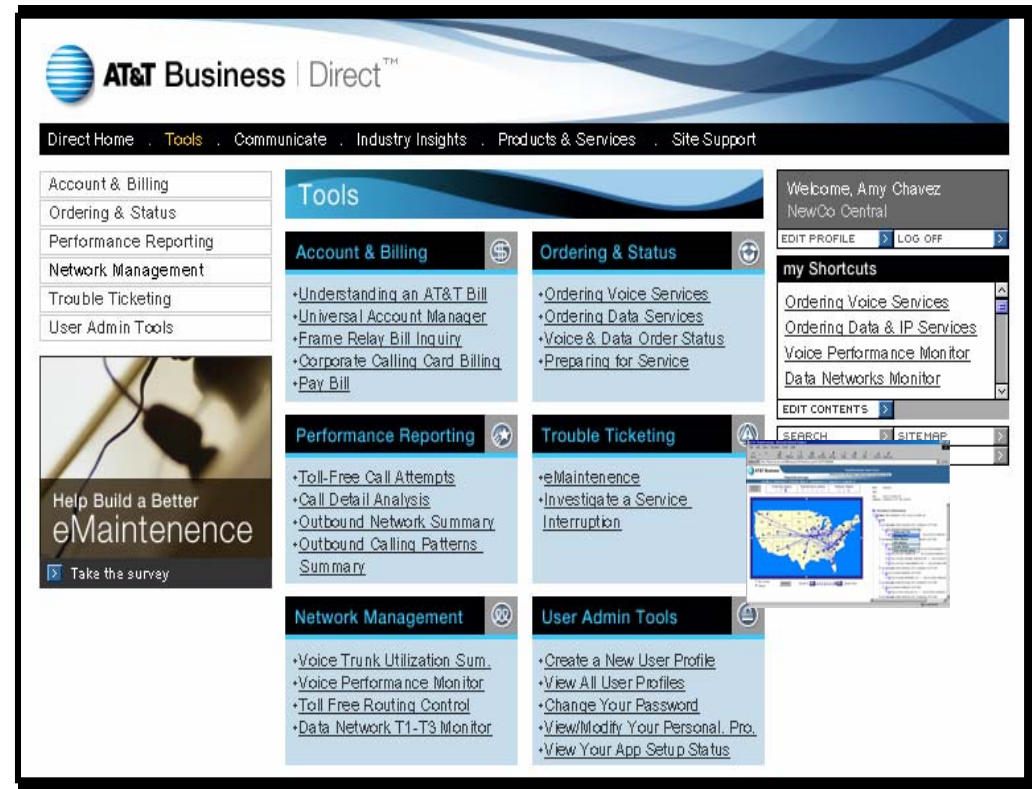
- Design Centers of Excellence
- Operational Management Expertise
- Highly Skilled Global Technical Staff
- Extended IT Team Members

- **Processes**

- Methodical Solution Shaping & Design
- Proven Procurement, Configuration & Installation Processes
- Rigorous Operational Processes for Predictable Performance
- Proven Metrics for Operational Experience

- **Tools**

- Integrated Best-of-Breed Management Tools
- Portal with Infrastructure & Operational Performance Reports



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- ✓ Performance Reporting
- ✓ Ordering & Status
- ✓ Trouble Ticketing
- ✓ Network Management
- ✓ Account & Billing

State-of-the-Art IP Telephony Solution For a Leading Manufacturer / Supplier

- **Business Challenges**

- Business requirements not supported by existing antiquated telephony infrastructure
- Incompatible, disparate global systems that could not communicate
- Maintenance cost in TDM infrastructure did not align with correct head count

- **AT&T's VoIP Solution**

- Managed IP Telephony with Cisco equipment
- AT&T designed the architecture, ordered, staged, configured, tested and installed the customer's IP Telephony and LAN
- Program Management included US and EMEA design workshops and weekly status calls with customer and vendors.

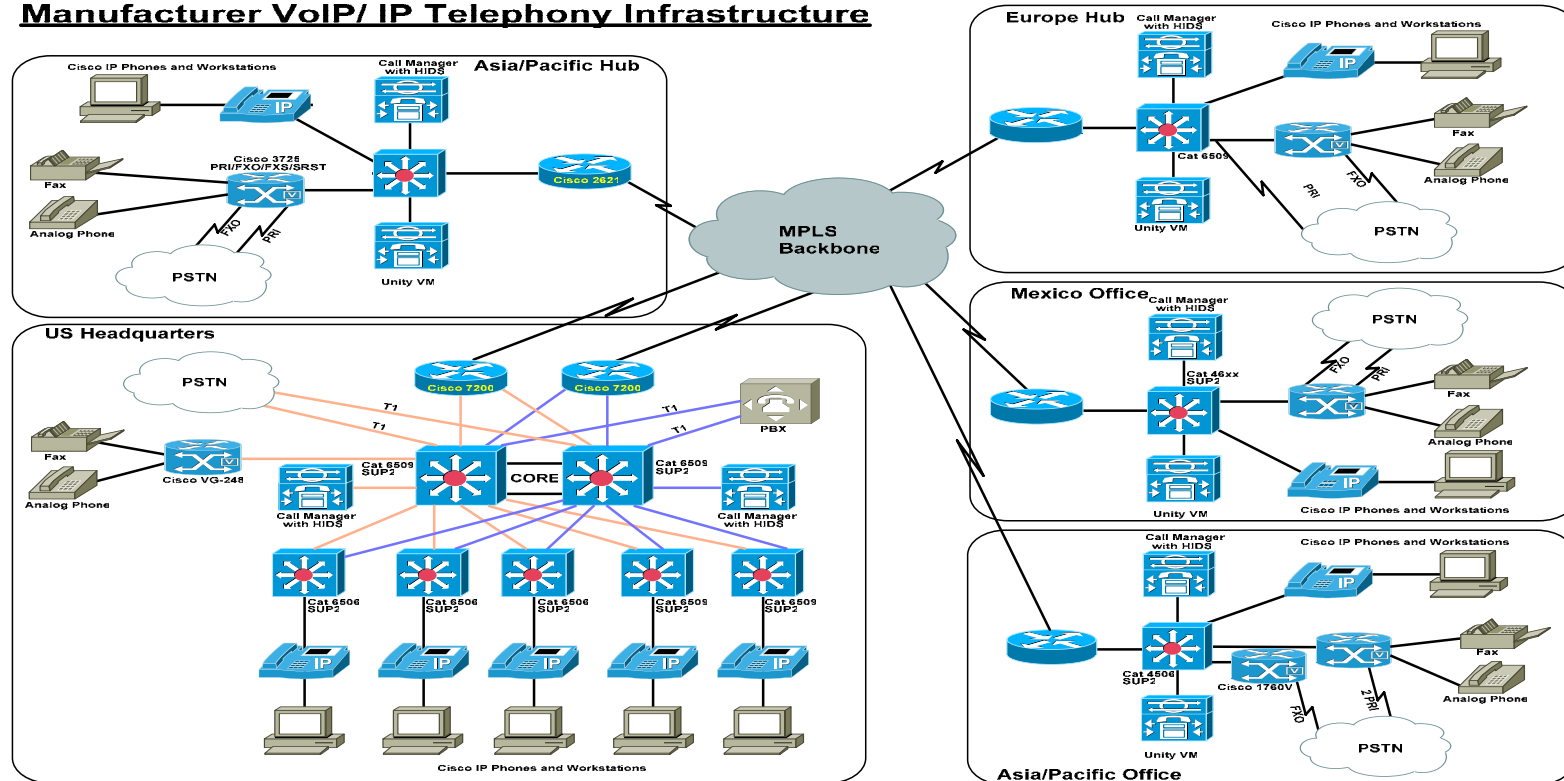
- **Client Benefits**

- 20% savings in monthly telephony costs
- Projected ROI within 18 months
- Solution can be easily replicated in other regions (EMEA and Asia Pacific)



IP Telephony Solution Architecture

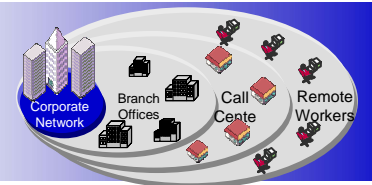
Manufacturer VoIP/ IP Telephony Infrastructure



Net Result / ROI

- Phone burden rate reduced from \$30 per month to \$24 per month (20% savings)
- Projected ROI within 18 months
- Easily replicate to other regions- EMEA and A/P cluster will be similar to the US cluster
- Program management delivered high customer satisfaction due to flexibility, skills, and technology expertise – migration partner of choice

Summary and Conclusions



- CoS is critical to meeting QoS Needs
- IP VPNs with MPLS can provide
 - QoS/CoS,
 - Security,
 - Flexibility and scalability,
 - It's even possible to bridge IP VPN between Carriers
 - Across HQ, Branch, Call Center and Remote Worker Sites
- Advantages of Managed Services from Service Provider
 - End to End Support for LAN, Access and WAN Networks
 - Global SP can offer WW PSTN connections without CPE Gateways
 - Customer Has Administrative Controls with Webs Portals
 - Full set of management reports
 - One throat to choke

AT&T: The World's Networking Company

Thank You

