

SIP Forum Best-Practices Workshop: Building Interoperable SIP Trunking Solutions with SIPconnect

Lessons Learned

Richard Shockey

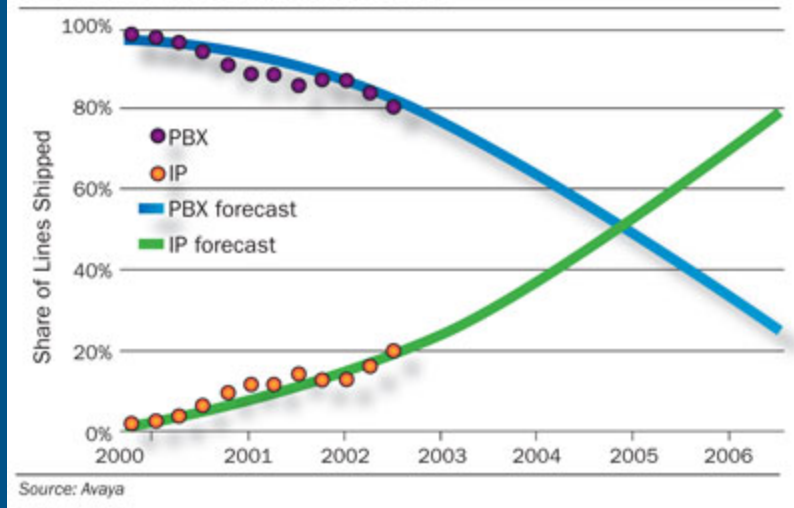
Director and Co-Chair Technical Working Group, SIP Forum

Economic Reality – an all IP world

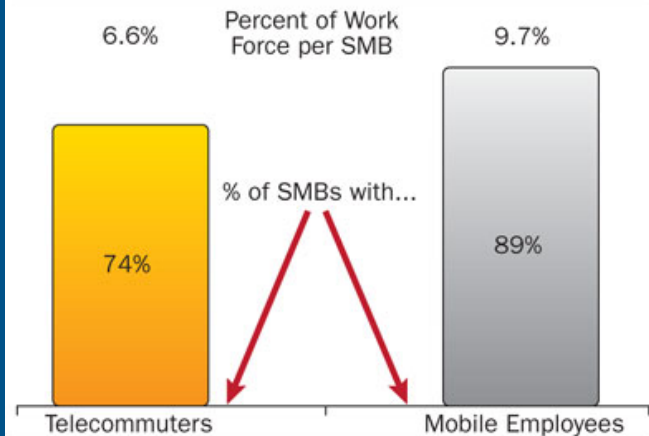
- ❖ Over 70% of all PBX's sold are now IP enabled, typically SIP based .
- ❖ By 2010 50% of the installed base of Enterprise PBX systems will be VoIP.

Telecommuters use VoIP to connect with the office.

IP versus TDM: Trend and Forecast



About 10% of SME Employees are Mobile; 6.6% Telecommute



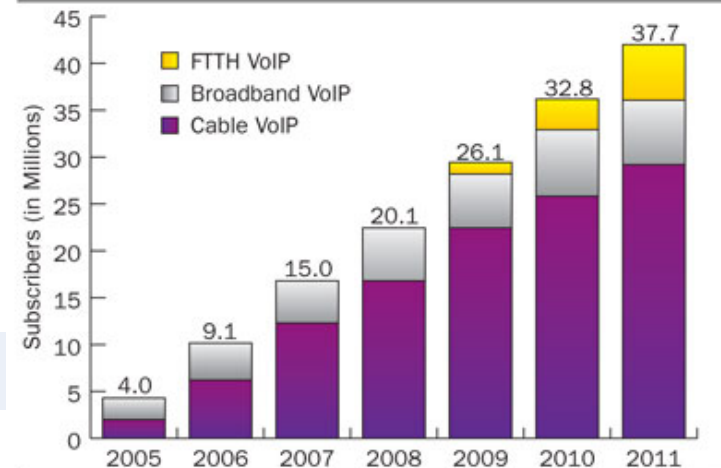
Source: AMI-Partners

Economic Reality of Telecom

- ❖ Fixed Rate services are dominating telecommunications.
 - Triple Play from Cable Operators –
- ❖ All you can eat Fixed rate mobility services
 - Buckets of Mobile Minutes
 - \$99.00 voice - text – web
- ❖ Variable Costs for Operators have become unacceptable.
 - SS7 dips, for instance



2005 to 2011 US Consumer VoIP Subscriber Forecast



Source: Yankee Group, 2007

Sell your used Class 5 Switch on EBAY !!!

The Evolution of Enterprise VoIP

❖ First : Replace the RJ-11

- Immediate gains in CAPEX as single wiring harness simplifies campus management.
- Greenfield ROI – NO Brainer

❖ Second : Replace the TIE Lines

- Integrate Enterprise wide Dial Plan Management into single IP Network. Immediate OPEX gains.

❖ Third : Replace the PRI (Today) SIPconnect

- All IP E2E

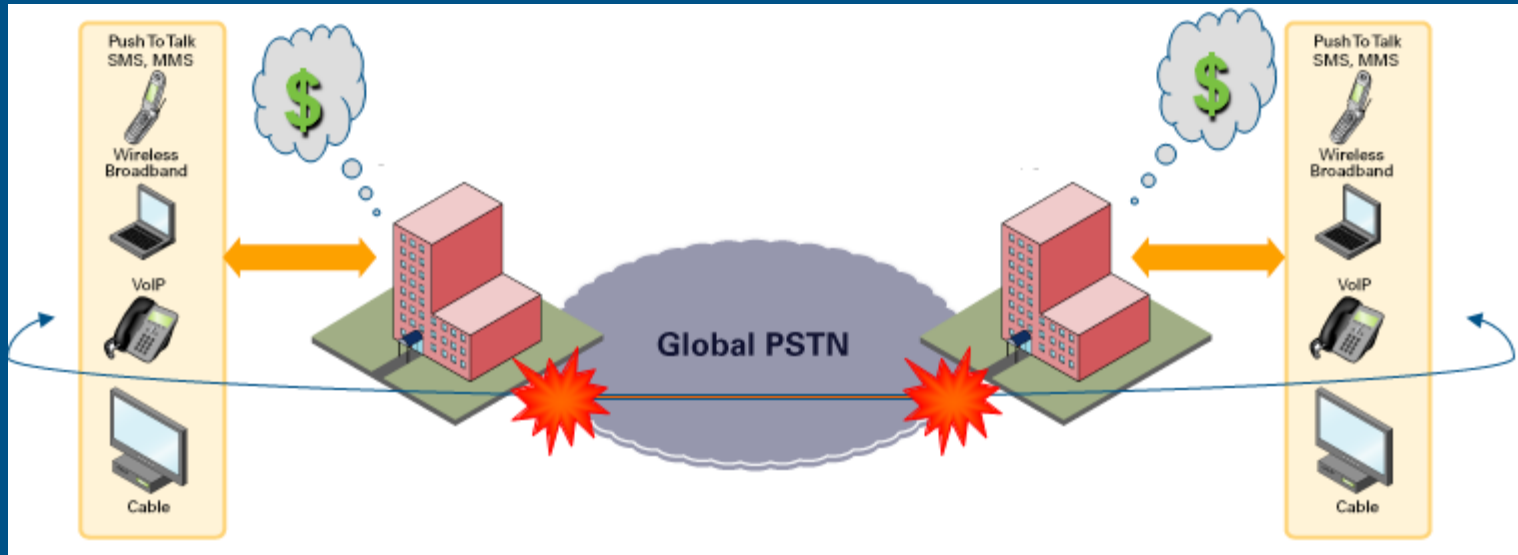
❖ Fourth : Peer with Business Partners

- The 40-40-20 rule

❖ Fifth : Seamless Campus/Mobility Integration

- Its not fixed Mobile Convergence its Substitution

The PSTN PRI's are the Bottle Neck to new Enterprise Communications services



- **The PSTN is used as the inter-VOIP “default” network**
 - Service is degraded as it must transverse multiple networks
- Every VOIP network is an Island (apologies to John Donne!)
- PSTN Primary Rate Interfaces are the last bottleneck.

What is SIPConnect?

- ❖ “ The SIPconnect Technical Recommendation is an important industry initiative that builds on existing IETF standards to define a method for interconnection between IP PBXs and VoIP service provider networks, and specifies a reference architecture, required protocols and features, and implementation rules necessary for seamless IP peering between IP PBXs and VoIP service providers.”

The Lessons Learned

- ❖ Where did this information come from?
 - Informal survey of SIPconnect service providers and vendors
- ❖ Is this the end?
 - No.
 - SIPconnect 1.1 further refines best practices
- ❖ “A rising tide lifts all ships”

SIPconnect in an Interoperability Program

- ❖ The Goal: Make SIP Trunk testing and deployment easier than a PRI
 - Significant reduction time to market
 - Concept branding
- ❖ N Paired - Service Provider and Vendor interoperability testing inefficient
 - In-house – Requires personnel timeline management
 - Equipment/Software vendor – Dependent on multiple vendor timetables, and less control
 - 3rd party test houses – Dollar resources

General Guidelines from Service Providers

❖ Document the installation process

- Incorporate guides from your vendors and partners
- Develop own documentation
- Simple site surveys

❖ Promote a common standard

SIPconnect



❖ Push vendor partners to become SIPconnect compliant

- Reduced configuration permutations saves “months” of test time

From the IP PBX Vendors

- ❖ SIPconnect compliant
 - SIPconnect becomes a “brand”
 - Branding promotes consumer confidence
- ❖ Promote the program with service providers
 - Faster interop testing saves resources aka (money) for both parties
- ❖ Implement the DIGEST authentication method
 - TLS is required by SIPconnect
 - Watch for updates from SIPconnect 1.1

Fax and Modem Deployments

- ❖ Fax and Modem traffic is not going away
 - Fax is actually going up.
- ❖ SP's need to explicitly test fax and modem deployments
- ❖ Consider deploying a separate DS0 interface
- ❖ SIPforum is forming task groups to address issues

NAT & Firewall Issues for the Service Provider

- ❖ Document what you support (again...)
- ❖ Training
 - Customer facing organizations need to know what to expect
 - Train your channels
 - Proper configurations and deployment
 - Troubleshooting tips and best practices
- ❖ Potential issues in the deployment
 - Deploy a SIP-aware firewall
 - Provide configuration guidelines if the end user already has a firewall – One click configuration options.

Now to the Economics

❖ Cost Savings are real :

- Network gateway costs reduced/eliminated
- “Reduced reliance on premises gateways can save 40-60%”
- Be sure you can support the services
 - Internal Enterprise or Carrier support costs will kill margins

❖ Additional Revenue Opportunities

- Provide DN/DID services to smaller companies
- Centralized management
- Deliver services to individual end users

❖ Reduce Churn with services that complement the PBX

- Provide Stickiness
- Integrate voice as an application, among others

Conclusions

- ❖ It works ..
- ❖ It delivers the ROI it promises
- ❖ SIPconnect 1.1 in process
 - <http://www.sipforum.org/sipconnect>
- ❖ SIPconnect 1.1 builds on success
 - Still “Voice Centric”
 - Strengthen MUST vs SHOULD implement
 - Call Transfer expansion.
 - Implicit vs Explicit Register issues
 - UM issues for 2.0

