



New Management Issues With Hybrid Voice Networks

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Who Is SyncVoice?



- Started in 1999
- Creator of Voice Network Management Systems
- US Development partner of Phoneware here in AU
- Product = Phoneware VXT
 - Billing / Call Accounting
 - PSTN Traffic Studies
 - VoIP Pre Assessment
 - QoS Monitoring
 - Application Bandwidth Reporting

Voice Over IP's Unsolved Management Problems are Slowing Down VoIP Adoption.



- Most IT departments are now managing “Hybrid” voice networks that consist of both VoIP and traditional (TDM) technologies. Most of these end users tend to have several different PABX vendors and multiple telecom carriers as well.

- The result is a complex network that consists of disparate phone systems and networking topologies that obscure the accountability between telecom and IT managers within their organization (i.e. who's responsibility is it to troubleshoot the WAN?)

- These complex networks have end users concerned about:
 - Quality
 - Security
 - Compliance
 - Cost Controls

Vendors need to help IT departments manage these issues before Hybrid voice networks will evolve into pure end to end VoIP solutions.

Top Management Issues Created By Hybrid Voice Networks: QUALITY



- **Basic End User Questions That Are Largely Unanswered**
 - **Before Installation Of VoIP**
 - How can we analyze our existing voice network to find opportunities for VoIP?
 - How much traditional traffic are we using on our E1s?
 - How can we PROVE that our existing network traffic will have the same quality and how much data bandwidth will that take?

 - **After Installation Of VoIP**
 - If we do move to VoIP how will we measure quality?
 - How can I get my service provider to quantify their Service Level Agreements?
 - Who's responsibility will it be to troubleshoot VoIP and what systems are in place to monitor and diagnose problems?

Top Management Issues Created By Hybrid Voice Networks: QUALITY



- VoIP call quality is at risk with real-time packets competing for critical LAN/WAN resources.
- Quality Of Service (QoS) infrastructure can help prioritize traffic but upgrading the data network reduces some of the cost savings of VoIP. Many customers are running VoIP w/o QoS for this very reason.
- Either way, call quality needs to be measured so that Service Level Agreements (SLAs) can be implemented and system integrators held accountable.
- Some customers are hesitant to roll out more VoIP since the above questions haven't been answered with systems, workflows, and experienced support technicians.

Top Management Issues Created By Hybrid Voice Networks: SECURITY



- Security Issues
 - With traditional (TDM) voice networks, telecom managers deal with:
 - Toll Fraud
 - 000 Emergency calling
 - Weak authentication and security practices
 - With VoIP networks IT managers must deal with:
 - Denial of service (DOS) attacks
 - Intrusion detection
 - Viruses, and SPAM.
 - 99.999% availability of telecom resources is at risk due to these security problems. In general consider most security threats to "data" applications, such as email, being present for VoIP phone systems.

Top Management Issues Created By Hybrid Voice Networks: COMPLIANCE



- Compliance Issues
 - Record retention.
 - Much like the requirement to log email history, Instant Messaging and VoIP logging will soon be mandatory. All forms of communication that carry private corporate information and even attachment files that hold Intellectual Property need an audit trail to meet compliance and IT best practices.
 - Resource Availability and Inventory.
 - Accountability for assets directly influence financial reporting and CFOs need to know that controls are in place.
 - Change Management
 - Which users are authorized to add new IP phones to the LAN? What systems are in place to detect Moves, Adds and Changes.

Top Management Issues Created By Hybrid Voice Networks: COST CONTROLS & ROI CHECKS



- Cost Controls & ROI Checks
 - Accountability of Fixed and Variable Telecom Expenses.
 - Local & Long Distance as well as devices and inventory.
 - Budgeting & Cost Allocation
 - Is there a control mechanism in place to monitor telecom spend as well as to fairly allocate it across departments?
 - VoIP Justification
 - Many customers are moving to VoIP on theoretical cost savings. For example Toll bypass is generally considered to be one of the top 3 cost savings (along with consolidated networking and less MAC). However very few customers are analyzing their existing traffic and expenses to calculate a proper ROI. Customers are now demanding that their system integrators help them analyze their current network to build a business case for VoIP.

The Result of Unsolved Management Issues



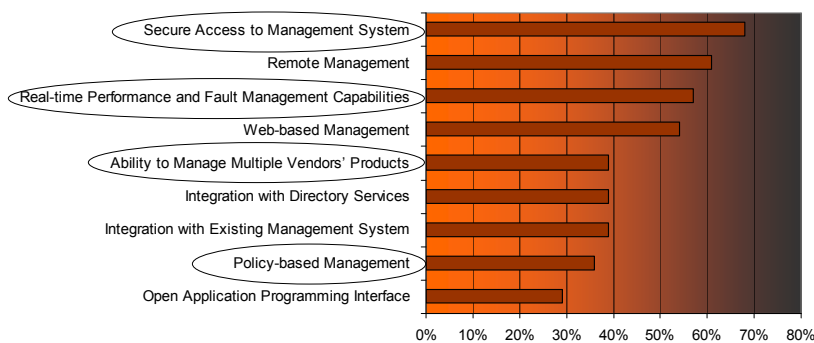
- Quality, Security, Compliance and Cost Control issues troubled early adopters.
- The question is what combination of technologies will be needed to address these problems.
- How soon will customers demand that these solutions be in place both before and after installation of new PABXs?

- Sooner than you think!
 - New Tender/RFPs have complete sections asking what technologies and practices a system integrator will provide to help the customer feel comfortable that platforms have mature management.
 - This is ultimately a good thing for system integrators. TDM services are highly commoditized and Day 2 management issues were rarely a purchasing factor.
 - VoIP will be purchased from those that answer the questions!

The Challenge and Opportunity for VoIP Integrators



- **Today, customers are forced to choose between an IP networking company with no track history in Voice or a Voice network company with no track history in IP**
- **What requirements do customers have when evaluating a partner that will install and help maintain VoIP?**



Source: Infonetics, 2004

There's Something Wrong With This Picture

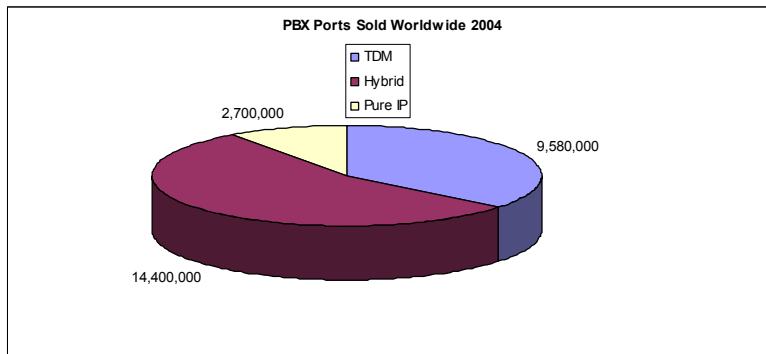


- Over 47% of all PBX ports shipped are "IP Enabled"
- Up to 85% of existing networks are not ready for VoIP (Gartner Group)
- There is a 50/50 chance of failure for installations that don't do a network assessment (Gartner Group)
- System integrators are not making IT managers feel comfortable by analyzing their current networks, performing VoIP Pre Assessments, monitoring call quality on a 24/7 basis and delivering a strong Service Level Agreement

State Of Convergence



Year	2003 (Ports)	2004 (Ports)
TDM	10,805,400	9,580,000
Hybrid	9,005,400	14,400,000
Pure IP	1,800,000	2,700,000
Total PBX Ports Sold	21,610,800	26,680,000



* Source: In-Stat, 2005

Market Place Problems & Opportunities



- Phone system prices are falling (more competition + open standards)
- Hardware players have to offer value added services to survive
- CIOs (the customer) want systems and expertise in managing converged voice

IT Customers demand systems and expertise that can help them with

- Quality, Security, Compliance and Cost Controls
- Yet integrators are not delivering this value with a strong service level agreement

The timing couldn't be better for integrators to deliver a service that fulfills this demand while creating more revenue

Integrators Feel the Pain

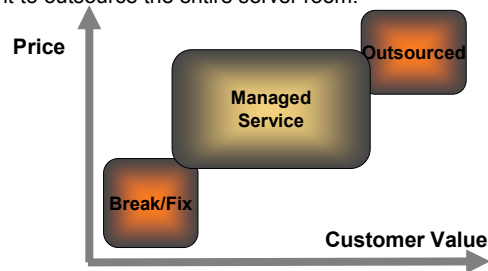


- The Historical Interconnect model: Sell and maintain TDM technology that never breaks and support revenue is highly profitable.
- The Interconnect model is at risk:
 - Technicians need a lot of training (if not complete replacement)
 - Competition is daunting as data/IT players are jumping into the game
 - Customers are having quality issues with no definitive troubleshooting process.
- Interconnects need a strategy to make VoIP as profitable as TDM.
 - Remote troubleshooting tools
 - Additional new revenue streams for support / maintenance
 - Service Level Agreements

Managed Services Meets VoIP Networks



- Reactive “Break/Fix” support contracts aren’t good enough for VoIP networks because of call quality problems and fundamental “convergence issues” (Who’s responsibility is it to troubleshoot the LAN?)
- CIOs like the idea of outsourcing some of the management piece (Moves, Adds, Changes, Monitoring and Remediation) as they don’t have enough voice expertise but don’t want to outsource the entire server room.



- A “Managed Services” offering should deliver the platforms and the expertise that allow a customer to choose the level of support they need.

What’s Going To Change



- System Integrators will be adding Managed Service offerings that will include both systems and expertise.
- Good voice network management technology:
 - monitors call quality
 - identifies security risks
 - creates an audit trail of communications and inventory for compliance
 - quantifies and budgets fixed and variable telecom expenses

When combined with a system integrator’s expertise, this type of offering will help answer these tough management issues and accelerate the rollout of VoIP within today’s “Hybrid” voice networks.