

# ***Results from the Lab: Trends in VoIP Testing***

# *Overview*

- Miercom's history of VoIP evaluation
- Current trends in testing VoIP
- Beyond the PBX
- Making sure it works

# *Miercom's History in VoIP*

- Testing since 1998
  - Gateways for carriers to PBXs for enterprise
- PBX evaluation for *Business Communications Review*
  - Annually since 1999
- VoIP beyond the PBX
  - The impact on the network

# *Methodology Adaptation*

- Architecture
  - Single site to Multi-site
- Endpoints
  - Hard Phone to additional features / forms
- Management & Administration
  - Moves, Adds, Changes to Full system administration

# *Methodology Adaptation*

- Features
  - From the basic to the advanced
- Security
  - From limited to comprehensive
- Performance
  - From does it work to pushing beyond TDM

# *VoIP Outside the PBX*

- Voice Application Testers
  - Does it work, where are the issues
- Session border controllers
  - SIP based
- Conferencing system
  - SIP-based bridge
- Everything else
  - 3<sup>rd</sup> party phones, hard and soft
  - Call center / ACD
  - Routers

# *Architecture*

- Multi-site integration
- WAN / PSTN failover
- Multi-link WAN support
- Failover / Backup
  
- Vendor Highlights
  - 3Com
    - Highly distributed call control and redundancy

# *Endpoints*

- Basic Hard phones
- Advanced Hard phones
- Softphones
- 3<sup>rd</sup> party phones
  
- Vendor Highlights
  - Mitel
    - Innovative form factor and functionality

# *Management & Admin.*

- De-mystifying management
  - Network vs. Telco perspective
- Unifying management of multiple sites
- Unifying applications
  - Voice mail, PBX, Call Center
- Debugging and Maintenance
  - Firmware upgrades, mass phone deployment
- Reporting
  
- Vendor Highlights
  - ShoreTel
    - Direct and easy config., management and administration

# *Features*

- The basics
  - The sixteen everyone knows how to use
- The advanced
  - The other 400 – 500 features
  - IP exploiters
- Vendor Highlights
  - Avaya
    - Comprehensive coverage of traditional phone systems features

# *Security*

- The system
- The call path
- The endpoint
  
- Vendor Highlights
  - Cisco
    - End-to-end coordination of security

# *Performance*

- Voice quality
- Call volume
- Network components
  - Packet order, packet loss
  - Jitter
  - Latency
- Vendor Highlights
  - Siemens
    - Pushing the envelope in call delivery reliability and quality

# *Outside the PBX: VATs*

- What are they?
- Where do they sit?
- What do they do?
  - Monitor
  - Manage
  - Secure
  - Troubleshooting
- Vendor Highlights
  - ClearSight Networks
    - Comprehensive coverage and presentation of VoIP data

# *Outside the PBX: SBC*

- What are they?
- Where do they sit?
- What do they do?
  
- Vendor Highlights
  - NexTone
    - Impressive management to gain control of the SBC

# *Outside the PBX: Conferencing*

- What are they?
- Where do they sit?
- What do they do?
  
- Vendor Highlights
  - Alcatel
    - My Meeting Place standalone conference server

# *Outside the PBX: Other*

- What are they?
- Where do they sit?
- What do they do?
  
- Vendor Highlights
  - RadWare
    - Improving reliability through link management
  - Touchstone
    - Testing and evaluation of VoIP products