"SIP Trunking and the Enterprise SBC –
What is the real ROI?"

2014

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Today's Presenters

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Agenda

- Introduction: SIP Trunking ROI – The Hard Truth
- SIP Trunking – First Hand Experiences
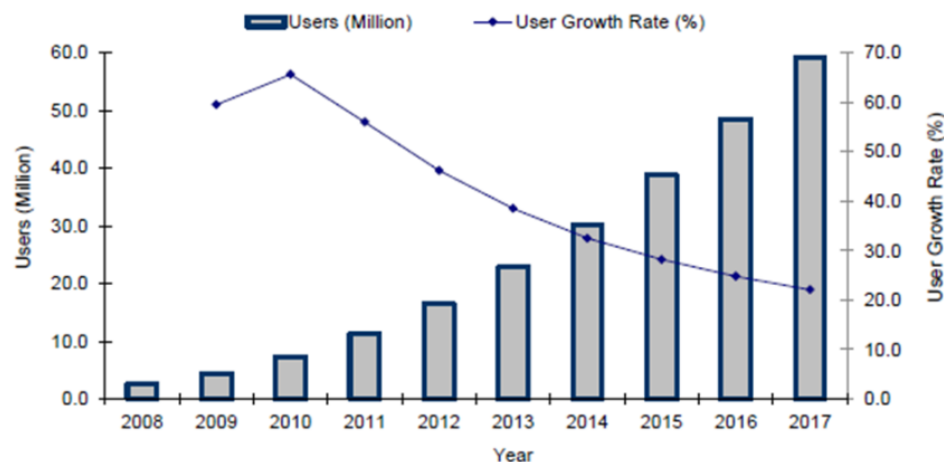- SBCs – Building Blocks
- Q/A

SIP Trunking is Mainstream

- Adoption of SIP trunking has accelerated rapidly in many areas of the world, most notably in North America and parts of Europe

Infonetics Research:

- Adoption of SIP trunking services grew 220% worldwide in 2010

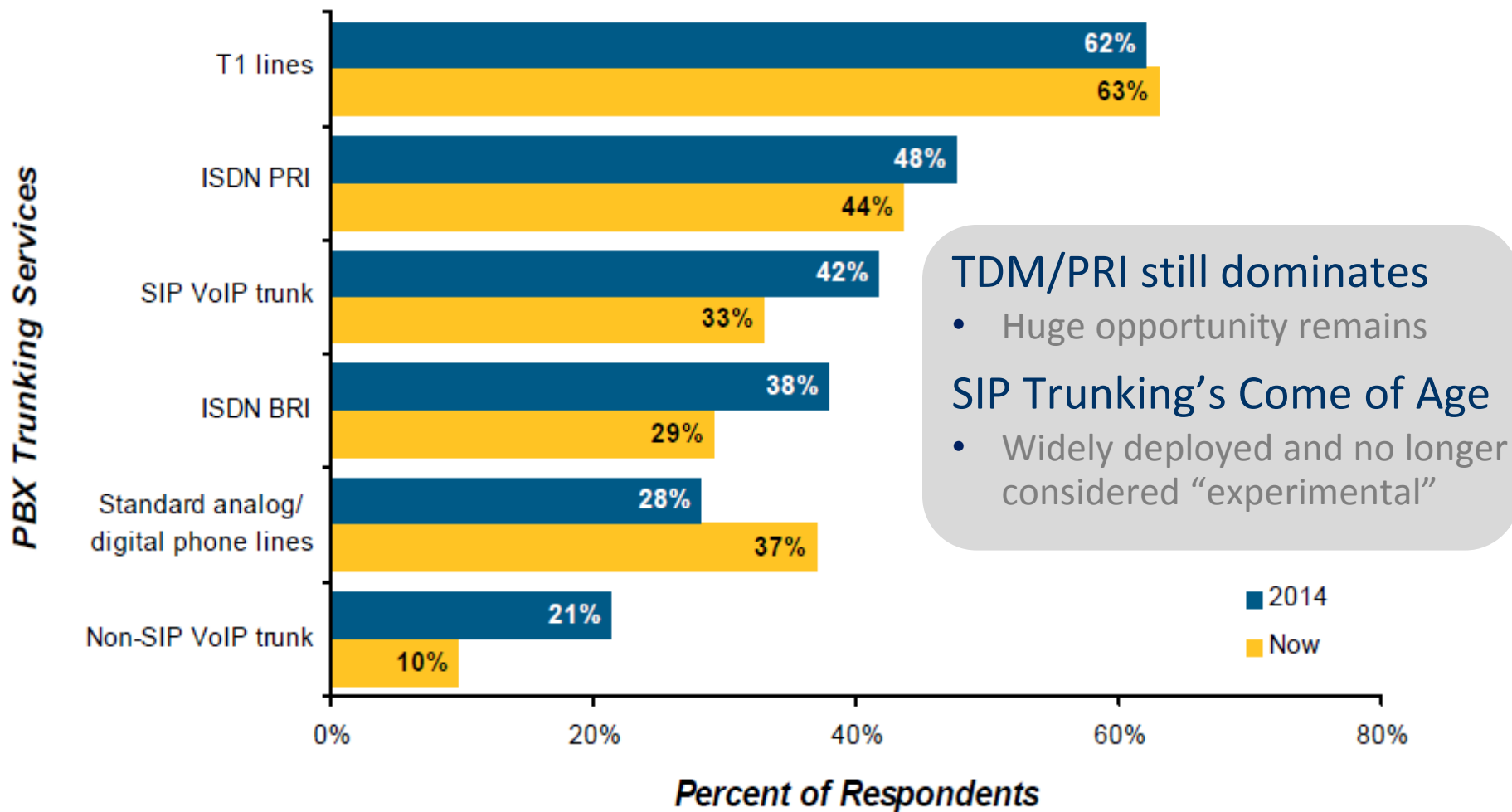**VoIP Access and SIP Trunking Services Market: User Base Forecast (North America), 2008-2017**

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Users (Million)	2.7	4.4	7.2	11.3	16.5	22.8	30.2	38.8	48.4	59.1
User Growth Rate (%)	--	59.5	65.6	56.0	46.2	38.5	32.5	28.2	24.8	22.1

Compound Annual Growth Rate (2010-2017): 35.0%

Note: All figures rounded; the base year is 2010. Source: Frost & Sullivan analysis.

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How Businesses Connect Voice Today

PBX Trunking Services (y-axis) vs **Percent of Respondents** (x-axis)

- T1 lines: 2014 = 62%, Now = 63%
- ISDN PRI: 2014 = 48%, Now = 44%
- SIP VoIP trunk: 2014 = 42%, Now = 33%
- ISDN BRI: 2014 = 38%, Now = 29%
- Standard analog/digital phone lines: 2014 = 28%, Now = 37%
- Non-SIP VoIP trunk: 2014 = 21%, Now = 10%

Legend: ■ 2014 ■ Now

TDM/PRI still dominates
- Huge opportunity remains

SIP Trunking's Come of Age
- Widely deployed and no longer considered "experimental"

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Calculating the ROI for a SIP Trunking requires knowing the following:

- CapEx:
  - Cost of required networking equipment
  - One-time activation/cancelation fees
  - Cost of last mile WAN upgrades
  - Data network modifications
- OpEx:
  - Monthly SIP Trunk service fees
  - Monthly WAN fees
  - E911 Service fees
  - Software support/maintenance fees

If You Do The Reading…

SIP Trunk Provider Problems Persist, Gary Audin

More SIP Trunking Gotchas, Erik Krapf

SIP Trunks: A Call To the Wild, Matt Brunk

And more…

Today's "Cold Hard Truth" of SIP Trunking

- A "Like for Like" conversion from PRI to SIP Trunks in some cases results in a <u>slim reduction </u>in costs

- Why?

  - PRI circuits are now more often priced competitively, easy to provision and simple.

  - Poorly executed SIP Trunking implementation costs or support issues can quickly negate any savings

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Which begs the question:

SIP Trunking and the Enterprise SBC

What is the real ROI?

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SIP and SBCs

▸ A Session Border Controller acts as the access interface between your IP voice infrastructure and the PSTN via a SIP trunk (for both signaling and media)
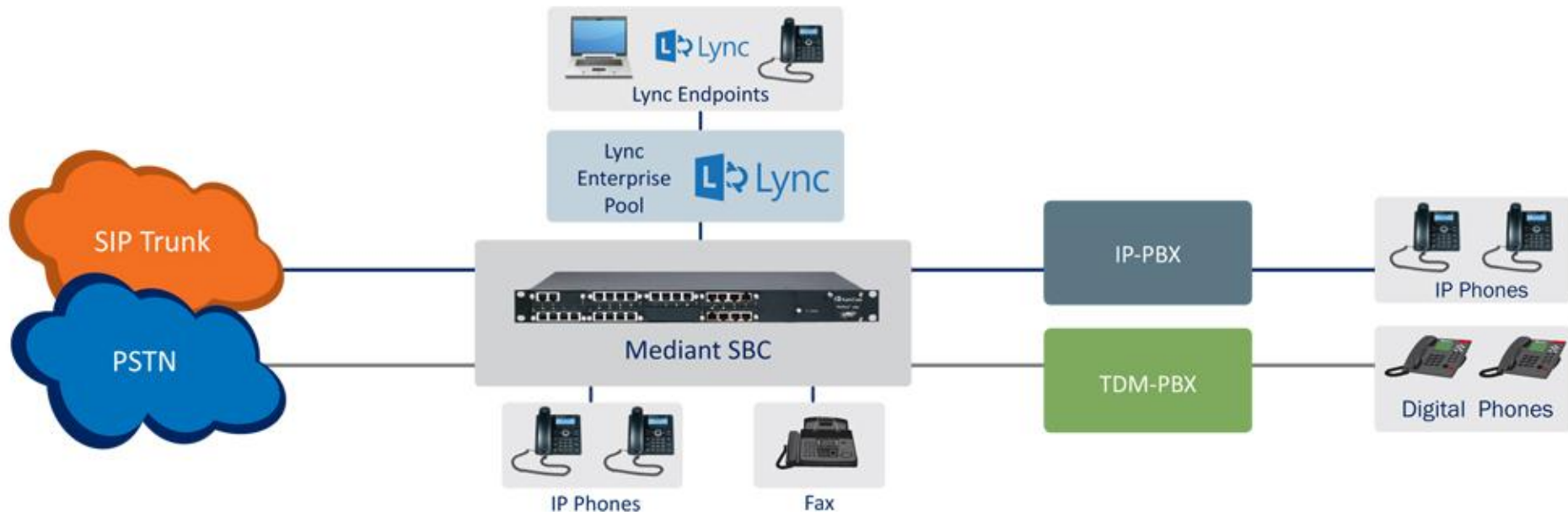
The Straightforward ROI

- In some cases, a "like for like" transition from PRI services to SIP can save money

  - Some carriers provide SIP telecom services at a lower cost as compared to PRI services

- In some cases consolidating multiple PRI services into a single SIP trunk can save money

  - Primarily because you do not need to provision for excess capacity at each PRI connection point

- To determine costs savings for your specific situation, you must "do the math"

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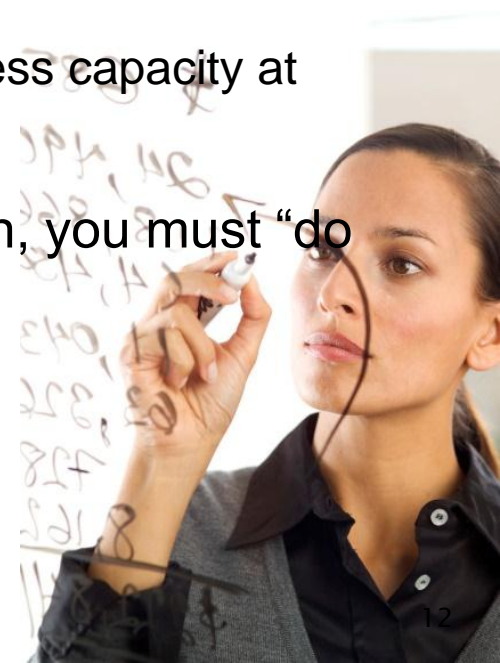
Where an SBC and SIP drives ROI

- Enabling a centralized architecture
  - Less or no equipment required at branch office
  - Process improvement through standardized (centralized) services

- Allows you to "get the job done"
  - Addresses security concerns
  - Can handle spec mismatches between solution and carrier SIP service
 - Can add features to voice / UC platform

The SBC as the "Bridge"

▸ To be successful, you will need to "leap" from your current state to your future end state

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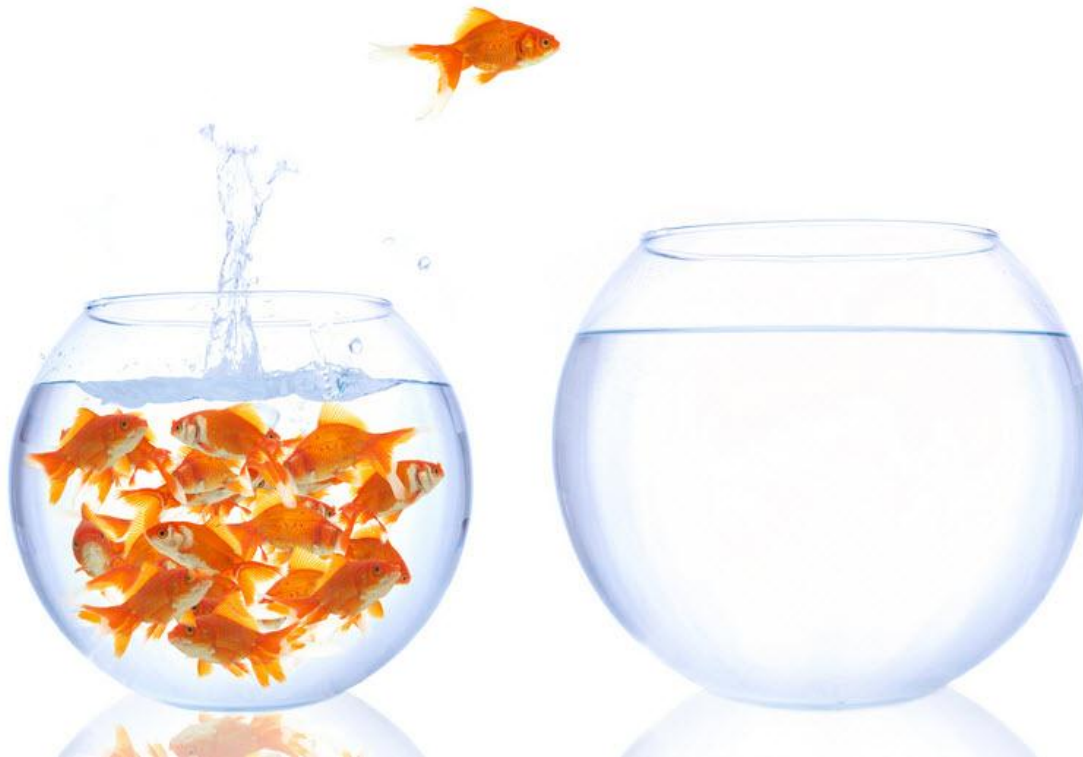
Where an SBC and SIP drives ROI

- Allows you measure and monitor the services you are receiving and the services you are providing
  - Consolidates call quality and usage data across multiple PBXs
  - Helps ensure you are getting what you paid for from carriers
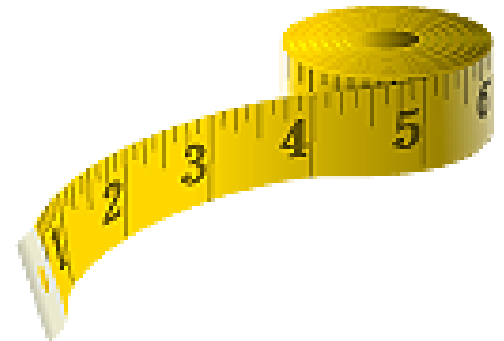
The "Real" ROI: SBCs and SIP

▸ An Enterprise SBC enables achievement of the significant ROI associated with your overall UC business case

- Helps bypass security "roadblocks"

- Allows required centralization of architecture and process

- Smooths functional differences and adds needed features

- Acts as a migration "bridge"

- Provides on-going operational metrics and monitoring

Thank you.

SIP Trunking and the Enterprise SBC

What is the real ROI?

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Recommendations:

1. Plan for Trunk Consolidation

2. Embracing Competition

3. Close Oversight

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Consolidation – Where the BIG Saving are Found
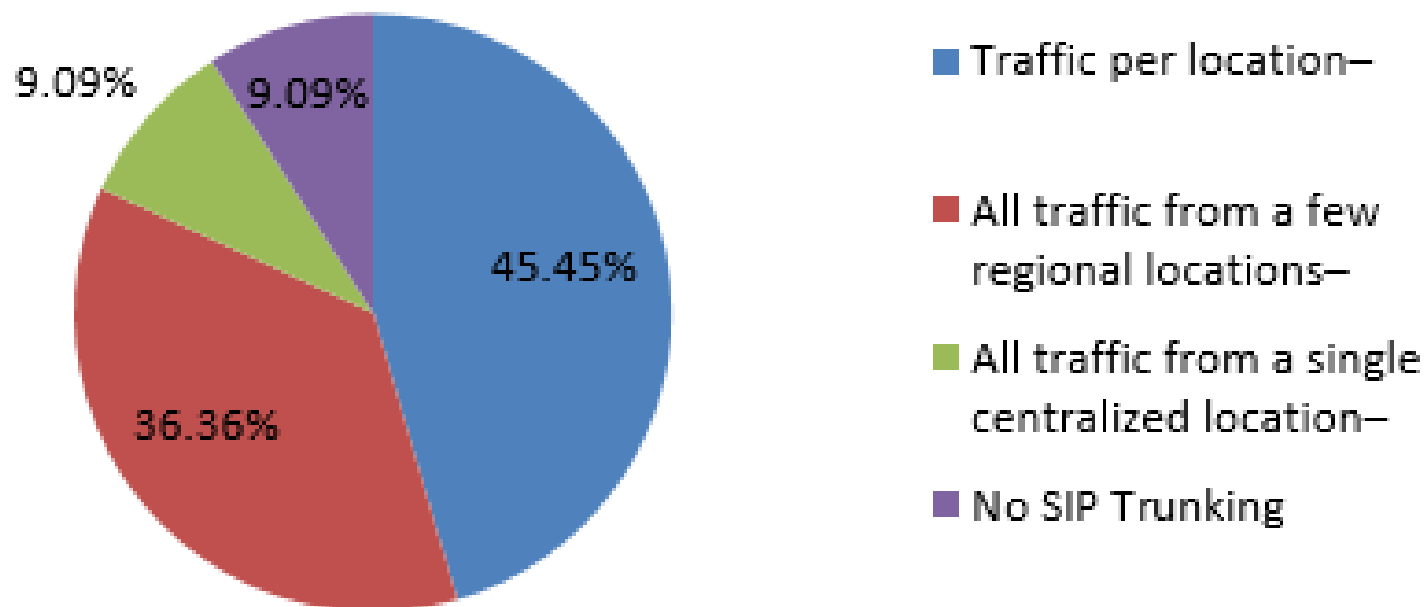
Huge savings from economies of scale – example:

- Consider 100 branch offices with 3 lines each
  - At 0.1% blocking, as little as 3 minutes per hour drives a need for 3 lines
  - At 1% blocking, it still only takes about 9minutes per hour
  - **100 sites at 3 lines each is 300 lines.**
- When access is aggregated, fewer lines are required
- Much fewer – in this case reducing port requirements over 90%

Consolidation allows

13 Centralized ports

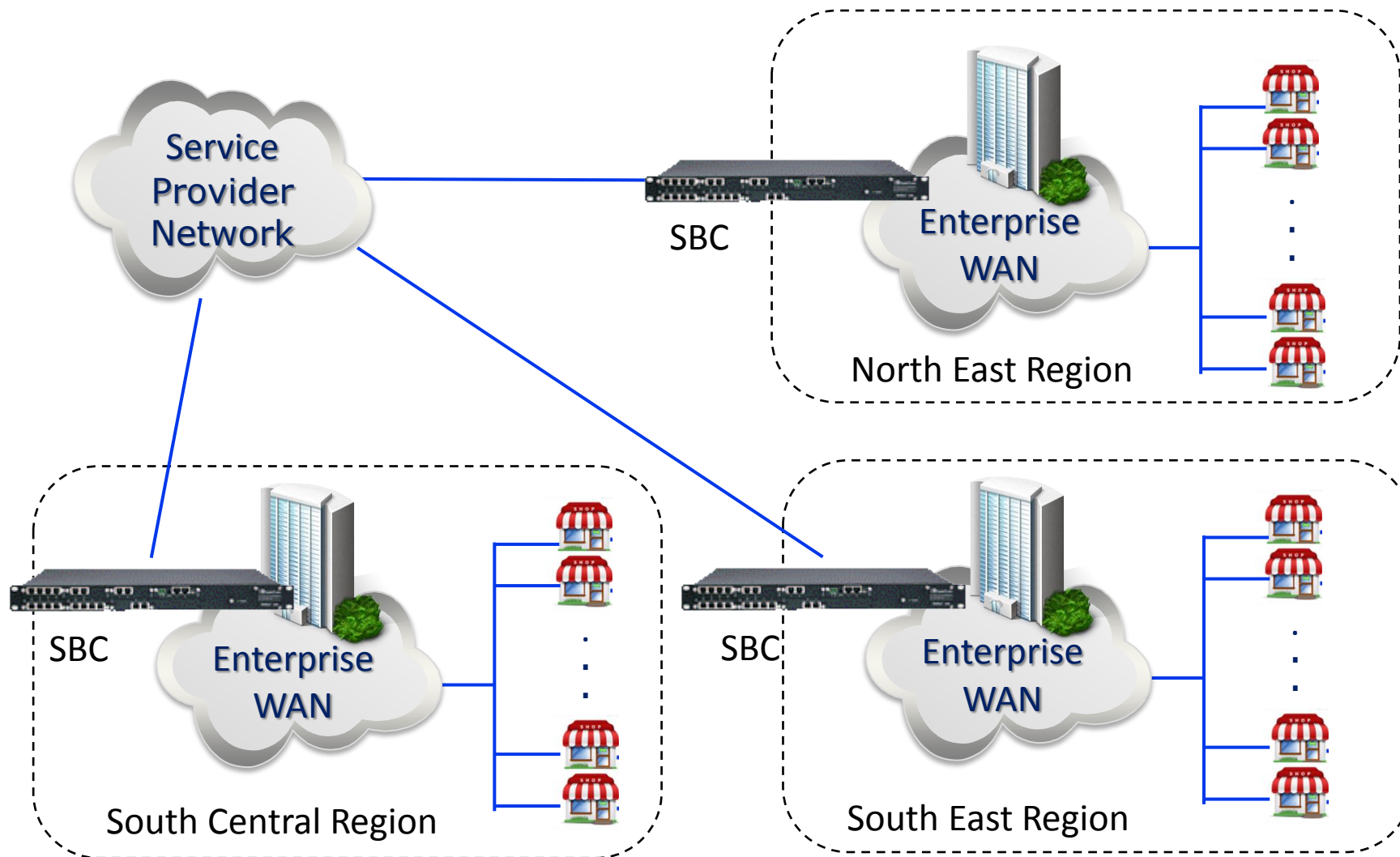to provide the same level of service as the

300 Distributed ports
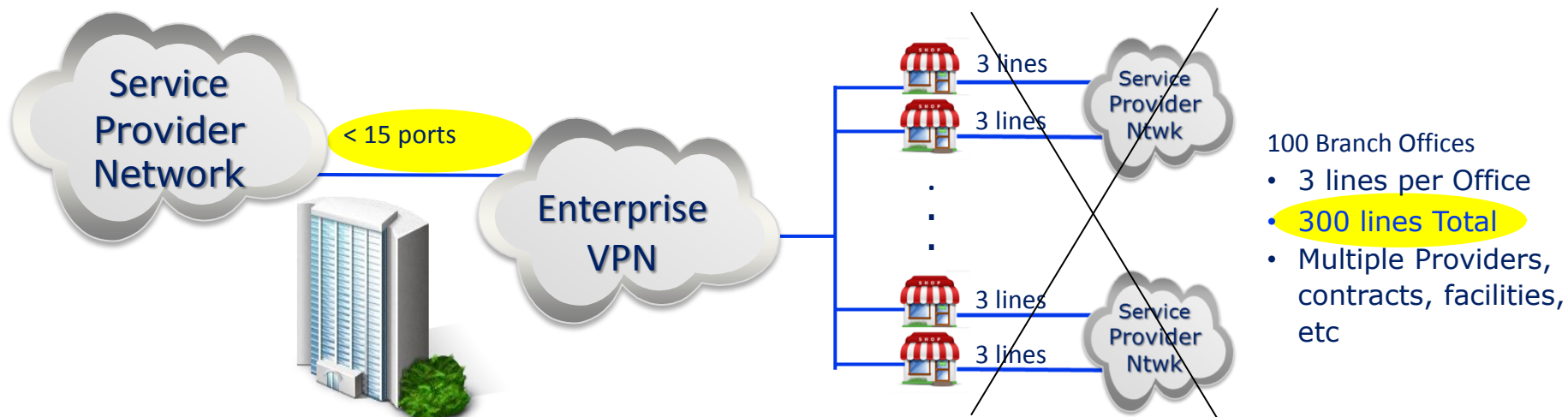
Service Provider Network

< 15 ports

Enterprise VPN

3 lines
3 lines

Service Provider Ntwk

3 lines
3 lines

Service Provider Ntwk

100 Branch Offices
- 3 lines per Office
- 300 lines Total
- Multiple Providers, contracts, facilities, etc

Regional Consolidation – A Good Compromise

Service Provider Network

SBC

Enterprise WAN

North East Region

SBC

Enterprise WAN

South Central Region

SBC

Enterprise WAN

South East Region

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Embracing Competition

Service
Provider
"A"

Service
Provider
"V"

SBC

Enterprise
WAN
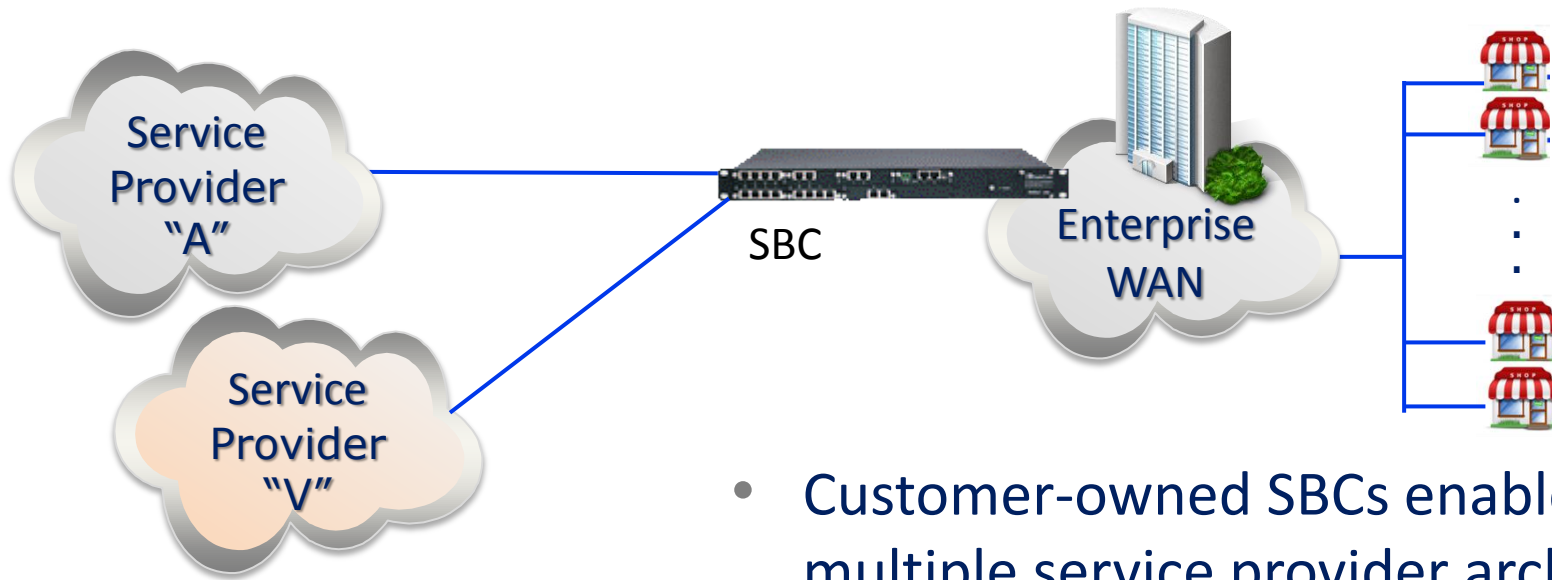
Common Application:
Contact Centers

- Customer-owned SBCs enable a multiple service provider architecture

- Increases negotiation strength

- Improves reliability

- Facilitates local or regional carriers

- Toll-free / DID / Outbound

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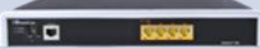# Oversight - Managing Voice Quality

When there are issues, can you prove it?

AudioCodes Session Experience Manager

- Receives Media (RTCP-XR) and Signaling Data from Session Border Controllers and/or Gateways
- Aggregates data by device, by link, by network
- Provides real time view, reports, and alarms
  - View Tables by link, device, or region
  - Network View of volume & quality per link
- Drill down to individual calls in 5 sec increments

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AudioCodes SBC Line

Pure SBCs

Product	Target Market	Max. SBC Sessions
Mediant 500	SMB	250
Mediant 2600	SME	600
Mediant 4000	Large Entreprises	5,000
Mediant 9000	Large Enterprises, Service Providers	16,000
Mediant VE	Virtualized data centers	2,000
Mediant SE	Large Entreprises, Service Providers	16,000

Hybrid SBCs (IP and TDM)

Product	Target Market	Max. SBC Sessions	Max. TDM Channels
Mediant 800b	SMB	250	60
Mediant 1000	SMB/SME	150	192
Mediant 3000	Large Entreprises	1,000	2,016

New

New

Widest line of SBCs to optimally fit any customer size and needs

AudioCodes Software SBCs

	Virtual Edition	Server Edition
Capacity	2,000	16,000
Platform	VMWare, HyperV	HP DL320 & DL360 (provided by customer)
Target customers	Enterprises and SPs with virtualized data centers	Large enterprises, Contact Centers, and Service Provider core
High Availability	Yes. 1+1	Yes. 1+1

- Feature parity with rest of the Mediant SBC line (excluding transcoding)
- Scale
  - Optimized for Intel's multi-core architecture
  - Leverages standard embedded HW accelerators (Ivy/Sandy bridge)
- Flexible and modular – dynamic core allocation to suit demand
  - Security
  - Transcoding
  - Signaling vs. Media

- Generally Available as of Feb 2014

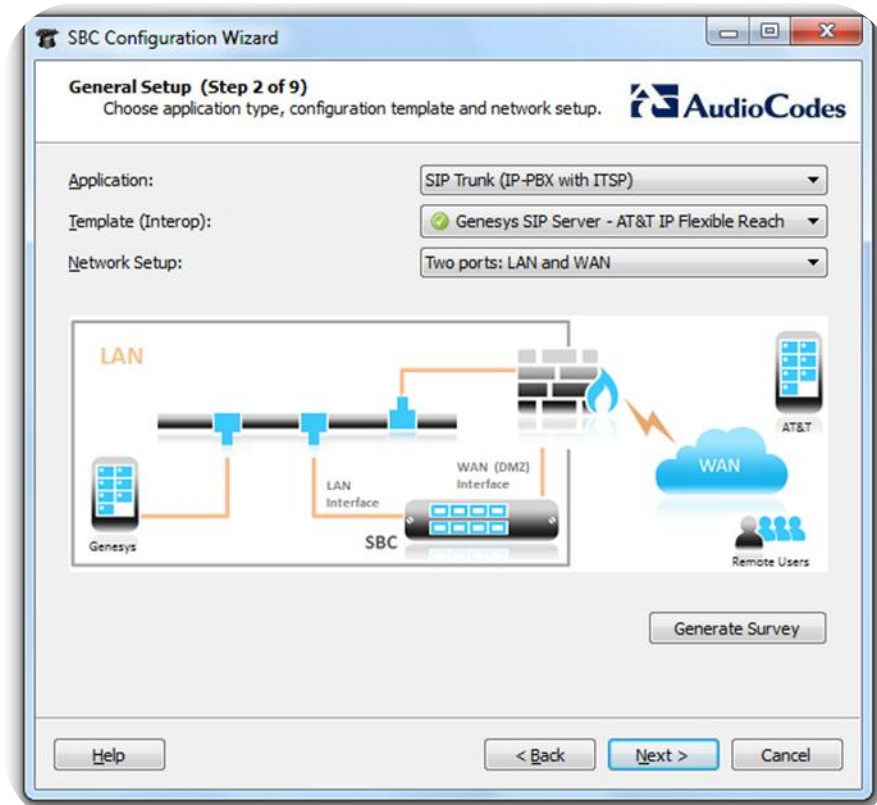AudioCodes

Configure your SBC in 5min with SBC Wizard

Streamline SBC configuration with SBC Wizard

Quick step-by-step configuration for SIP Trunk and Hosted Services

On-line, up-to-date configuration Database for various partners (IPPBX, UCC, CC, SSW)

Covers all deployment topologies

Advanced configuration can continue, if needed by EMS or WEB

Connecting Networks

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Additional Resources

- **Session Border Controller Resource Page:**
  www.audiocodes.com/sbc

- **AudioCodes SIP Trunking Partners/Certifications:**
  www.audiocodes.com/sip-trunking

- **High Availability Media Gateways**
  www.audiocodes.com/HDGW

- Datasheets, videos, case studies, whitepapers, testimonials

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Questions?

Thank you

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