

# Next Generation IP Telephony: Moving beyond phone system replacement

**Irwin Lazar, CISSP**

**Senior Analyst**







**Burton Group**

# Agenda

- **Communications today**
- **The promise of convergence**
- **Underlying technologies**
- **Sample products**
- **Recommendations**

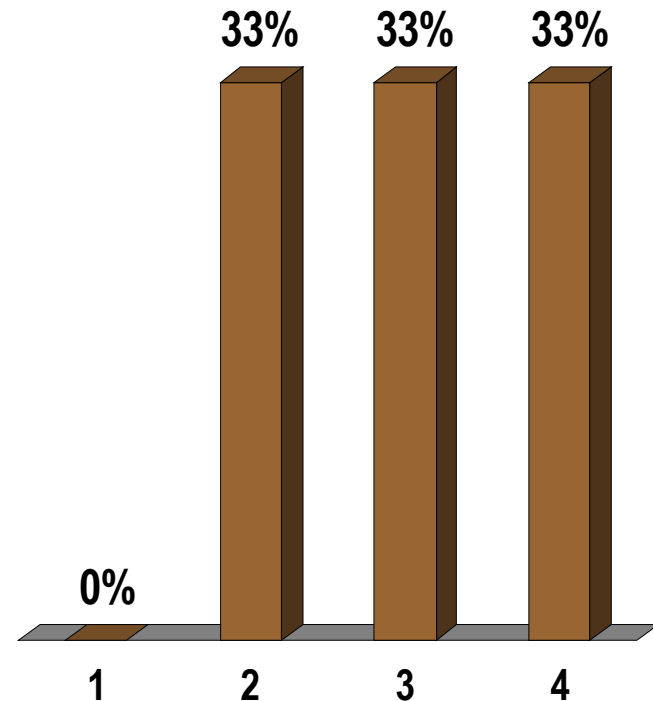
# Communications Today

## A Day in the Life

- |            |   |  |
|------------|---|--|
| 6–8 a.m.   |    | <b>Wake up–Check work e-mail;<br/>Check personal e-mail</b>                            |
| 8–9 a.m.   |    | <b>Go to coffee shop; drive to work<br/>Communicate with office; check traffic</b>     |
| 9–11 a.m.  |    | <b>In office at work</b>   |
| 11–noon    |    | <b>In conference room at work</b>  |
| 12–2 p.m.  |    | <b>Lunch with customer;<br/>receive proposal on laptop<br/>and present to customer</b> |
| 2–4 p.m.   |   | <b>Offsite meeting; authorize<br/>orders in ERP system remotely</b>                    |
| 4–6 p.m.   |  | <b>Drive to airport–check traffic and flight<br/>Check e-mail at airport</b>           |
| 10–11 p.m. |  | <b>Check e-mail in hotel with in-room broadband</b>                                    |

# What Have You Checked Today?

1. Office voice mail
2. Cell phone voice mail
3. E-mail
4. All of the above



# Today's Corporate Communications

- **Multiple forms of real-time systems:**
  - **Desktop phones**
  - **Softphones on laptops & PDAs**
  - **Cell Phones**
  - **Personal calling services (e.g. Skype)**
  - **Instant messaging**
  - **Video conferencing**

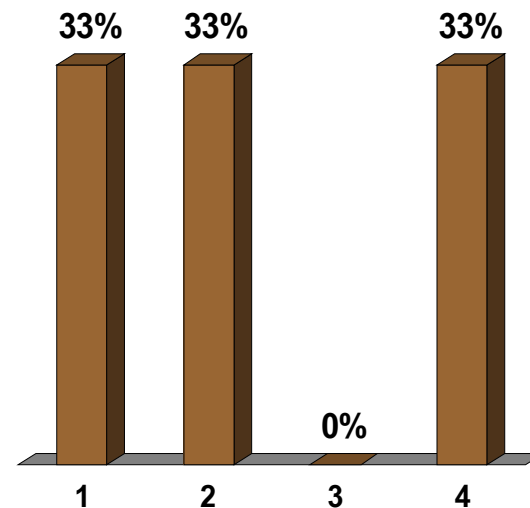
# Increasingly Mobile Workforce

- **Users less likely to be at their desks**
  - 74% say lack of immediate response is crippling
  - 7 devices on average
  - 57% of workforce to be mobile By 2005

[Source: Siemens]

# What is your most important form of communication?

- | **E-mail**
- | **Instant messaging**
- | **Desktop phone**
- | **Cell phone**





# The Communications Detective



- **How do I contact my co-worker?**
  - **Are they on my IM buddy list?**
  - **Should I call them?**
    - **Are they on the phone?**
  - **How do I arrange a conference call?**
  - **Can they support video?**
  - **What if they don't dial into the teleconference?**

## Ask Yourself:

**How many phone numbers do you have?**

**How many services do you have to check  
when on the road?**

**Do people know where to find you?**

**“Away” messages are frustrating**

# The Promise of Convergence

# The Big Picture

- **Next Generation VoIP goes beyond PBX replacement to enable improved communications based on IP**
  - **Voice but just one component of a converged communications infrastructure**
  - **Convergence no longer means voice & data, but rather convergence all forms of real-time communications into a unified application**

# The Promise of Convergence

- **A simple goal**
  - **Unify all forms of real-time communication**
  - **Eliminate communications between “devices” and instead enable communications between “people”**
  - **Tie communications into calendaring & real-time location information to enable “presence”**
  - **Leverage IP as the ubiquitous communications medium**

## The Promise of Convergence (2)

- **Leverage IP as a communications medium**
  - **Integration with e-mail / messaging infrastructure**
  - **Integration with business-specific applications**
  - **Ability for more flexible communications**

# An Example

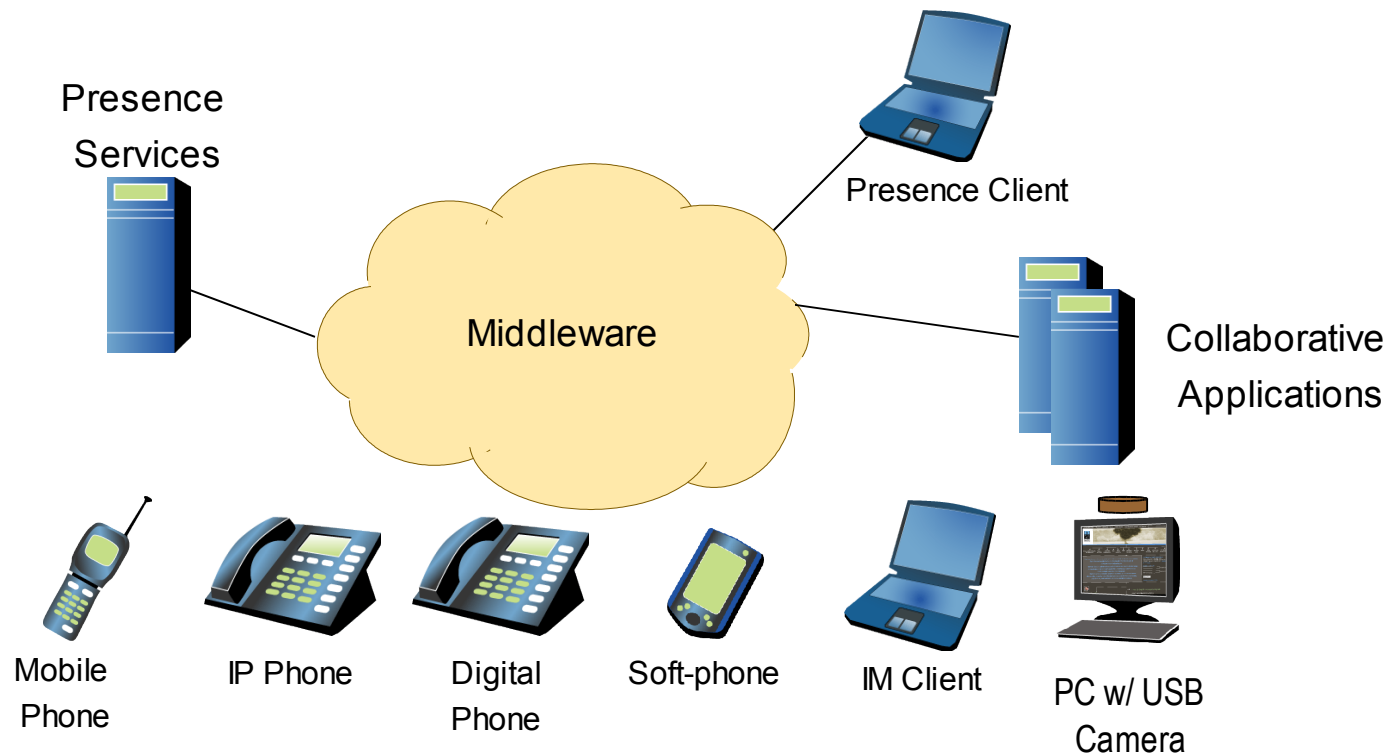
- **January 1st 2005 - New product launch**
- **January 2nd 2005 - 10:00 AM, warehouse reports inventory shortage**
  - **Product manager calls a teleconference via presence portal**
  - **System calls team members preferred devices**
  - **Team members collaborate with real-time application information**
  - **All done via a single click through a unified user interface**

# The Benefits

- **Improved productivity**
- **Improved efficiency**
- **Quicker reaction to changing conditions**
- **Ability to integrate even legacy systems**



# Convergence Functional Diagram



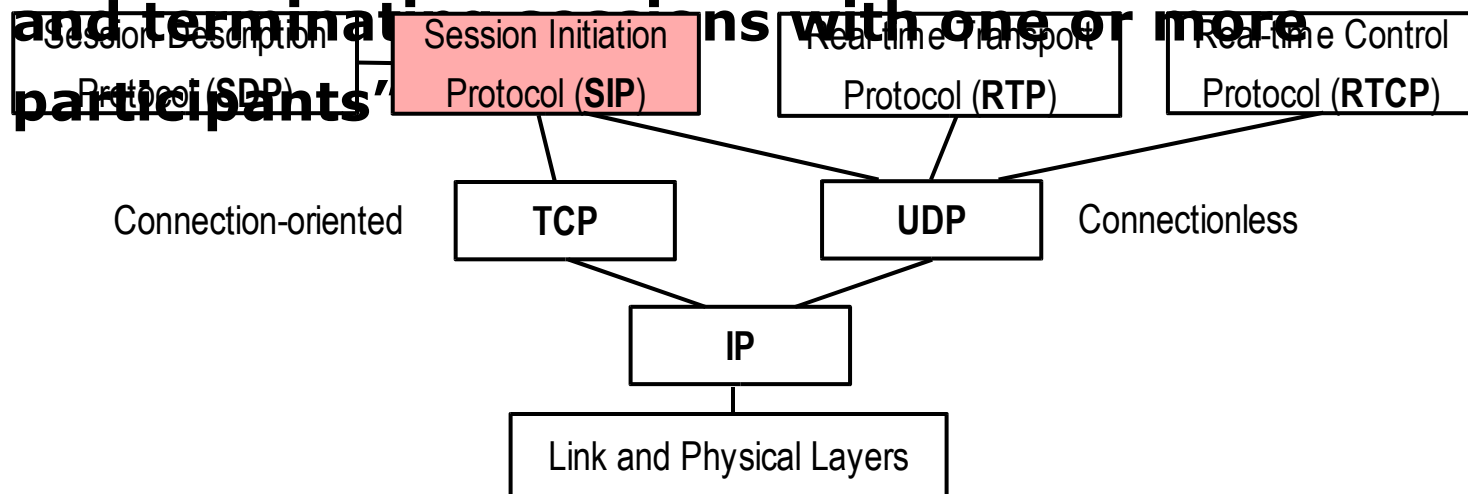
# Underlying Technologies

## Emerging Protocols

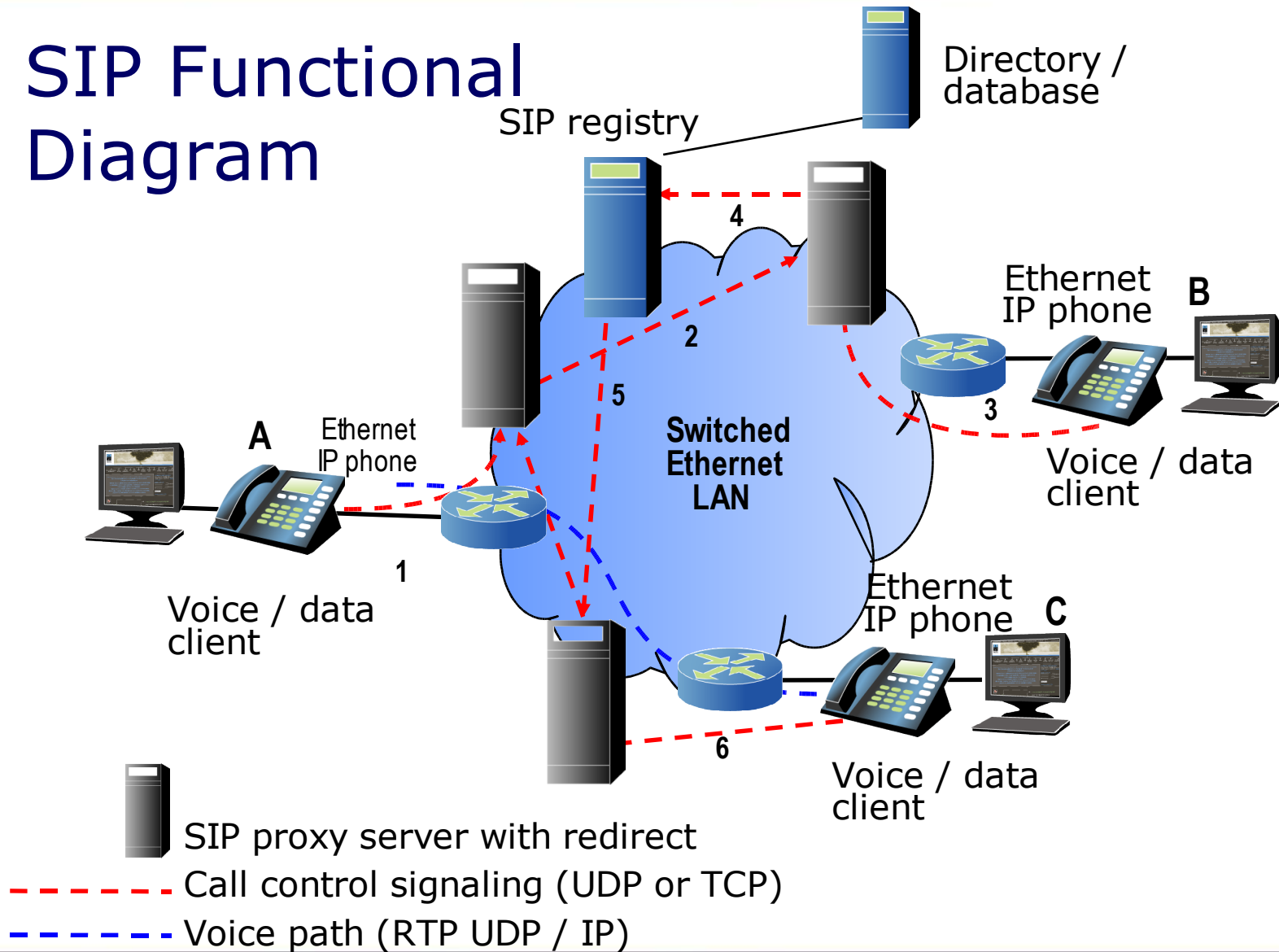
- **SIP - Session Initiation Protocol**
- **SIMPLE - SIP for Instant Messaging and Presence Leveraging Extensions**
- **SOAP - Simple Object Access Protocol**

# What is SIP?

- **RFC 3261: "an application-layer control (signaling) protocol for creating, modifying, and terminating sessions with one or more participants"**



# SIP Functional Diagram



## SIP and Presence

- **SIP may be used for multimedia other than telephony, including instant messaging and videoconferencing**
- **Increasingly presence-based solutions are based on SIP**
- **SIP rapidly becoming the “glue” for converged communications**

## SIMPLE (RFC 3428)

- **Defines a method of exchanging presence information**
  - E.g. notifications
- **Manages exchange of real-time data**
- **Relies on SIP for session establishment**

# SOAP

- **Submitted to W3C (World-Wide Web Consortium)**
- **XML-based communications protocol for accessing web services**
- **Works over HTTP**
- **SOAP provides a way for applications to exchange information**
  - **Will allow for applications to interface with presence systems**



# Sample Products

# Application Development Efforts

- **Two forces**
  - **VoIP vendors adding collaboration/presence capabilities**
  - **IM and collaboration vendors adding voice/video capabilities**

# Examples

## ● **Siemens OpenScape**

- **SIP-based framework for converged applications**
- **Provides presence – let's users know where people are**
- **Provides customization – users can control how they want to communicate**
- **Provides extensibility – can be tied into conferencing systems such as WebEx**
- **Use of SIP enables cross-vendor functionality**
  - **Interfaces with Exchange and any VoIP system**
  - **May also support non-IP voice**

**OpenScape** **SIEMENS** Personal Portal  
My Status **Mark Straton** In Meeting  
My preferred phone **Cell Phone**

### My Calls

Number

Start Conference

Idle

### My Contacts

<input type="checkbox"/>		Chao, Ming (OpenScape)			
<input type="checkbox"/>		Collins, Chuck (OpenScape)			
<input type="checkbox"/>		Crouch, Dick (OpenScape)			
<input type="checkbox"/>		Demo, Client (OpenScape)			
<input type="checkbox"/>		Falotico, Jeanette (OpenScape)			
<input type="checkbox"/>		Gargeya, Padma (OpenScape)			
<input type="checkbox"/>		Gehring, Christian (OpenScape)			
<input type="checkbox"/>		Hanif, Tarique (OpenScape)			
<input type="checkbox"/>		Henry, Chuck (OpenScape)			

### My Workgroups

	Whitepapers	
	Marketing	
	Tradeshows	
	Public Relations	
	Team Members	

# OpenScape Features

- **Extensible**
  - **OpenScape SDK allows integration of presence capabilities into other applications**
    - **E.g. SAP iView Portal**
    - **Custom in-house application**
  - **SOAP support allows for customization using well defined web services interface**

# Nortel MCS 5100

QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

- **Supports meet-me conferencing (video/audio)**
- **Chat rooms**
- **Instant messaging**
- **Collaboration**

## Other VoIP Vendors

- **Avaya Converged Communications Server (CCS)**
  - **SIP-based services for VoIP and integrated Instant Messaging**
- **Cisco**
  - **Stay tuned**

# Microsoft Live Communications Server

- **Presence-based communications supporting Instant Messaging**
- **Extensible to support voice and video**
  - **Basis for Siemens OpenScape**
- **APIs to support application integration**



## SMB Options

- **Zultys MX 1200 Enterprise Media Exchange**
  - **SIP-based Voice, IM, Presence capabilities**
- **SIPQuest Collaboration Agent**
  - **SIP-based voice, IM, collaboration**

QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.

QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.

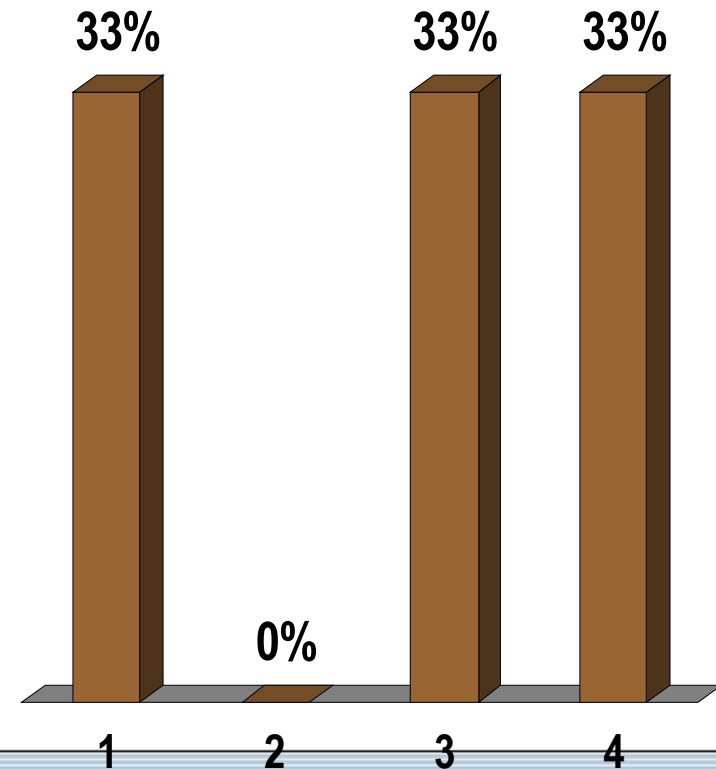
# Recommendations

# Recommendations

- **Determine an “owner” for collaboration**
  - Typically a cross-functional group from voice, messaging, instant messaging groups
- **Determine business case benefits**
  - Can you establish a tangible benefit to converged communications
- **Make converged communications part of your long-term plans**

# Who is responsible for collaboration in your organization?

- 1. Nobody
- 2. VoIP team
- 3. IM team
- 4. Messaging team



# Can collaborative communications help your organization?

- | **Yes, definitely!**
- | **Maybe, need more info**
- | **No**
- | **Unsure**

