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Peter H. Gregory

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- Take advantage of the mobile workforce trend
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**INTELLIGENT COMMUNICATIONS**

***Midsize  
Business  
Communications***  
FOR  
**DUMMIES®**

AVAYA LIMITED EDITION

by Peter H. Gregory



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Some of the people who helped bring this book to market include the following:

### ***Acquisitions, Editorial, and Media Development***

**Project Editor:** Susan Christophersen

**Senior Acquisitions Editor:**

Melody Layne

**Business Development Representative:**

Jackie Smith

**Editorial Manager:** Jodi Jensen

### ***Composition Services***

**Project Coordinator:** Kristie Rees

**Layout and Graphics:**

Stephanie D. Jumper, Heather Pope,

Heather Ryan, Erin Zeltner

**Proofreaders:** Laura Albert,

Susan Moritz

---

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# Introduction

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**T**he challenge of the midsize business is that it is often sandwiched between large enterprise organizations that can implement feature-rich services and small companies that can provide high-touch services. Midsize businesses don't have the vast resources to build the functionality that large enterprises have, and they typically don't have the agility to provide high-touch service to every customer the way smaller organizations can.

If you're in a midsize business, you are probably beginning to nip at the heels of your larger competitors, while your smaller peers may be nipping at yours. But what is quickly leveling the playing field and driving competitive advantage is *service*. Quality communications with customers, suppliers, and employees is the key to providing the differentiated services needed to compete with larger and smaller challengers.

## *How This Book Is Organized*

The primary purpose of this book is to help midsize businesses address their unique challenges and understand how advanced communications can improve interactions across employees, suppliers, and customers to drive competitive advantage. The chapters cover the following topics:

- ✓ **Chapter 1:** This chapter describes the unique communications challenges midsize businesses face.
- ✓ **Chapter 2:** This chapter discusses new technologies in communications such as IP Telephony, VoIP, SIP, and mobility and shows how these are supporting unified communications.
- ✓ **Chapter 3:** Here you'll find a discussion of new technologies that are enhancing contact center services. These technologies are improving service levels while helping the organization deploy its resources more effectively. Capabilities that were once available only to big companies are now within the reach of midsize businesses.

- ✔ **Chapter 4:** Computers, networks, and devices are now converging in powerful ways. In Chapter 4, you learn how SIP and SOA are enabling real-time communications that change and enhance business processes in ways that support higher-value services customers.
- ✔ **Chapter 5:** In the famous *For Dummies* Part of Tens style, this chapter showcases ten great technologies midsize businesses can use to increase the quality of their communications and improve the bottom line.

## Icons Used in This Book

Icons are used throughout this book to call attention to material worth noting in a special way. Here is a list of the icons, along with a description of each:



If you see a Tip icon, pay attention — you're about to find out how to save some aggravation and time.



This icon indicates technical information that is probably most interesting to IT professionals.



Some points bear repeating and others bear remembering. When you see this icon, take special note of what you're about to read.

## Where to Go from Here

Regardless of where you are in your long-term technology plan, keep your eye on the big picture: Demand open technology and solutions and treat communications as a strategic asset of your business.

Avaya is the communications technology expert. With nearly one million customers around the globe, it has vision and leadership in intelligent communications, converged networks, and security. Discover for yourself why Avaya is the undisputed leader in delivering business-enabling communications solutions for midsize businesses.

## Chapter 1

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# Understanding the Challenges of Midsize Businesses

.....

### *In This Chapter*

- ▶ Understanding the characteristics of midsize businesses
  - ▶ Understanding the unique communications needs of midsize businesses
  - ▶ Integrating business strategy and technology
- .....

**M**edium-sized. Average. Beige. Middle of the road. Not large. Not small. Midsize.

The preceding synonyms sound dry and uninteresting, don't they? However, the mid market is anything but dull!

What does it mean to be a midsize business, anyway?

## *Does the Shoe Fit?*

Okay, do you identify with any of the following challenges that make life interesting when you're a midsize business?

- ✔ **Market share.** You're taking business away from large competitors, or perhaps new entrants are nibbling away at *your* customers.
- ✔ **Enterprise applications.** You need them, but you don't have the resources to implement or integrate them. But you've outgrown the shrink-wrap applications you're

using today. When you look at enterprise applications, you think to yourself, “If only I had the resources needed to make them work!”

- ✔ **Size identity.** You know you’re not a small business — you have too many employees for *that!* But you know you’re not a large business, either.
- ✔ **Growing or identity pains.** Recently, you may have identified more closely with a small business, but you are fast approaching the issues of managing a larger enterprise.
- ✔ **Perspective.** You look up to big companies — those that obviously have far greater resources. But at the same time, you compare yourself to small companies. You can’t quite provide personalized service to every customer the way they can.

## *More characteristics of midsize businesses*

But wait, there are some other factors to consider. Here are some things to think about as this story develops:

- ✔ **Size of the mobile workforce.** What portion of the employees in your company is mobile? Examples of mobile employees are outside salespeople, frequent travelers, and telecommuters.
- ✔ **Communications needs.** How reliant is your company on telephone communications? Who is talking with whom? Are those communications both inbound and outbound? Do they involve customers, suppliers, or just employees? How heavily does your company rely on e-mail and other electronic communications?
- ✔ **Innovation.** How often does your company try something new? I don’t mean changing the desks to face east instead of west, but big things — taking a big risk, such as starting a new service line or introducing a new way to communicate with customers?
- ✔ **Integrated communications.** To what degree has your company integrated communications with core business applications such as CRM (Customer Relationship Management) and ERP (Enterprise Resource Planning)?

Food for thought, right? I just want you to get used to looking at your business as though you were looking into one of those magnifying mirrors in which you can see all the tiny pores.

## *Understanding the Unique Needs of the Midsize Business*

Midsize businesses need love, too. Because a business such as yours is neither large nor small, it can be difficult to find communications solutions that fit core business processes and the applications that support them.

Here are examples of some types of customer communications:

- ✔ **Outbound communications:** How efficient are your outbound contact processes? Are the right people making those calls, and do they have the information they require at their fingertips?
- ✔ **Inbound communications:** How quickly can you pull up key information about a customer who is calling the support or product ordering center? Can your system route the call to the right support representative or team based on characteristics of that customer?
- ✔ **Effective communications:** In a more qualitative than quantitative sense, midsize businesses need communications that work. Rather than focus on tallying the number of e-mail messages or minutes of use, you should ask, “Are people getting through to the people they need, when they need them?”
- ✔ **Support escalation:** How easily can your support organization find the right expert while a customer is holding on the line?
- ✔ **Support site:** How easily can your customers find information about your company’s products, services, and existing orders? Can they contact you online and be able to chat with a support rep?
- ✔ **Support for mobile users:** How easily can mobile users be reached on whatever communications capabilities they have at the moment?

## Brinks Hofer Gilson & Lione

A large intellectual property law firm, Brinks's standard phone switch couldn't keep up with its growing operations. Brinks determined to get more out of its communications investment. Avaya IP Telephony software, media servers, and gateways were used to network headquarters in Chicago, Illinois, with a branch office in Ann Arbor, Michigan. Now when an Ann Arbor attorney calls a Chicago-based client, Avaya software automatically

routes the call through the Chicago office to eliminate long-distance charges. When working on the road, an attorney can use an Avaya Softphone application to make calls through a laptop, boosting productivity and reducing toll charges, especially when travel is international. Smart IP screenphones can automatically alert employees when a coworker is on the phone or away, eliminating phone tag.

These are a few examples of customer communications capabilities that large businesses use and small businesses don't need. But midsize businesses have been left out in the cold. If midsize companies are to capture big-company market share and grow, they need the high-value communications capabilities that sophisticated customers know and have come to rely on.

## *Crossing the chasm from small to large*

If you are a midsize business, you, too, can adopt the clever tricks of a larger business. If you were reading along earlier in this chapter when I mentioned enterprise-class applications, you may have thought to yourself, "If only I had the resources to implement *that!*"

Don't despair! But do keep reading to see how Avaya provides midsize companies with rich communications capabilities, integrated with line-of-business applications at a price point and resource point that you didn't know you could afford. In fact, you can't afford *not* to make use of these capabilities.

Avaya has long developed advanced communications capabilities with features for small and large businesses. Today, you can buy advanced Avaya communications solutions that will bring you big-company features at midsize prices that are easy to implement and easy to manage with your current resources.

## *What Does Technology Have to Do with All This?*

You are smarter than the average bear. *Of course* you know that technology continues to play a major role in how you do business. Unlike any other time in history, new technologies can help your midsize business play in the big leagues; in addition, you need to understand how technology can advance your business strategy.

What *is* a business strategy? It's a set of long-term goals that give the business purpose. Yours might include increased customer loyalty, improved customer satisfaction, increased cross sales, increased call center first-call resolution, and reduced application TCO.

But how do these goals tie to technology? Advanced communications equipment and services, now affordable, can bring about the kind of transformation that your midsize business needs to provide personalized service where it counts and handle growth and volume like that found in much larger organizations.



## Chapter 2

---

# Advanced Communications: IP Telephony and VoIP

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### *In This Chapter*

- ▶ IP Telephony and VoIP
  - ▶ Unified communications
  - ▶ Mobility
  - ▶ Business continuity planning
- 

**C**ommunications technologies have changed dramatically, even fundamentally. This technology elicits many different images to different people. Ask ten people about communications technologies and get ten answers.

Voice communications, however, has been (and continues to be, to an extent) circuit switched since its beginnings more than a hundred years ago. Circuit-switched technology is in its third century, but its days are numbered. This is a good thing.

Circuit-switched is giving way to packet-switched. In other words, voice communications that required a dedicated voice channel is becoming “packetized,” whereby our voice is being digitized and put into packets on data networks.

In truth, this has been going on for years, and if we noticed anything at all, it was that voice quality improved. But there’s a lot more to communications than packet switched versus circuit switched. Gather your belongings and we’re going to take a tour through all of the advanced communications available today that can put punch into your business.

## *IP Telephony and VoIP*

The rapid evolution of communications technology is more than just a “paper-or-plastic” proposition: In almost literal terms, the present communications infrastructure around the world is being ripped out and replaced with a completely new type of IP-based technology to carry voice and other types of communications that were previously carried on slow and expensive circuit-switched networks.

The new technologies are also permitting new types of communications that did not exist before, or are themselves being transformed. Voice technologies are being moved from dedicated networks and integrated with corporate data networks. Voice communications are being integrated with other communications technologies such as instant messaging, audio/video conferencing, and e-mail.

There is an ancient Chinese curse, “May you live in interesting times.” It may be a curse to some, but for us, living in the communications world is interesting, to say the least! Just in the past fifteen years, the rate of change in communications has been like a wooden airplane being changed to metal, and then from two to four engines, and then to jet propulsion, and then to supersonic, all while continuing to fly. What a ride!

### *What is IP Telephony?*

The most important change in communications is IP Telephony. Literally, this means that voice traffic is now another type of payload being carried on enterprise data networks. It’s really as simple as that, although there is a lot more to it in the details.

Another name for IP Telephony is VoIP, pronounced V-O-I-P and also termed Voice over IP. Formally, it means Voice over Internet Protocol. VoIP is a network protocol, or actually a family of protocols, for carrying voice conversations over data networks. And it’s taking the world by storm.

So what’s the big deal? Is this just the IT department hijacking the phone network? Not at all. There are reasons that VoIP has become such an important part of any business’s communications strategy.

## *The VoIP value proposition*

Networks are *expensive*. We're talking *major moolah* here for large enterprises — six, seven, or even eight figures. Yes, larger enterprises often spend tens of millions of dollars to build and maintain separate voice and data networks.

Enterprises have been seeking ways to reduce costs. Nothing is sacred. Technology managers have, for years, cringed at the cost of separate voice and data networks, each with excess capacity — especially the voice network. Couldn't the two networks be combined into one, eliminating the redundancy?

Companies such as Avaya keyed into this years ago and began developing technologies such as VoIP to converge voice and data onto the same network. It's about sharing capacity and equipment to create much needed economies of scale.

## *The VoIP feature shift*

VoIP is more than just telephones that plug into Ethernet ports instead of phone jacks. Let me explain some of the leaps in capability here:

- ✔ **Phones are manageable network nodes.** IP phones are nodes on the network and can be managed along with servers and other network devices. Malfunctions can be quickly identified, and IP phones can be managed and modified easily using enterprise network management tools.
- ✔ **Soft phones.** Instead of separate hardware devices, phones can become software programs that run on workstations. This can eliminate the need for physical telephones altogether in office environments.
- ✔ **Mobile phones.** IP soft phone software can also run on mobile devices such as PDAs. Are mobile phones becoming more like PDAs, or are PDAs becoming more like mobile phones? The answer is yes!

## The Hard and Soft Savings of IP Telephony

Organizations are rushing to IP Telephony in droves, and not because it's the cool thing to do (cool-based IT spending went out of style in the 1990s). Rather, organizations realize two things: the value of money, and the value of highly effective communications and customer care solutions. Okay, you probably want a little more detail than that. Here are several reasons that companies are changing from circuit-switched to IP-based telephony:

- ✔ **Circuit costs.** Telecommunications trunks are way expensive. Switching to IP Telephony permits an organization to toss the telco circuits and make only modest investments in existing data circuits.
- ✔ **Local and long distance costs.** IPT connect costs are lower than circuit switched, resulting in direct cost savings.
- ✔ **Switch costs.** Organizations are already reluctant to continue investments in old technology PBXs and switches. They've seen the writing on the wall: They know that IP Telephony is here, making it more difficult to justify continued investment in circuit-switched telephony. But when they see that everyone else is doing it, and that the PBX vendors are putting all their new features in IPT switches, they've got to see the writing on the wall.
- ✔ **Features.** All the cool new features such as SIP-enabled communications are available only on IPT systems.
- ✔ **Application integration.** No way are PBXs going to integrate with your CRM (Customer Relationship Management) application at a high level with interfaces such as SOA. If you want to begin adding communications-related features to your CRM, you've got to have an IPT PBX.
- ✔ **SIP features.** IP Telephony systems sport SIP-based features such as preference, presence, routing, and directory services.
- ✔ **SIP connectivity.** VoIP- and SIP-enabled corporate phone systems can integrate into enterprise and external SIP-based services.

Most organizations identify tangible, quantifiable reasons for moving to an IP Telephony infrastructure, and many will cite qualitative reasons as well, including better customer service and more effective customer service.

## *Understanding Unified Communications*

Communication today exists in many forms: e-mail, instant messaging, text messaging, voice mail, landline, wireless, smoke signals, FAX, pagers, and more. Most of these methods are not integrated with most of the others. For example, they may all have separate directories. And each time another one of these methods was introduced, I remember thinking to myself, “Self, now it will be easier to communicate with so-and-so.” The reality turned out to be more like “Now there are even more ways to try to find someone before giving up — which takes even more time than before.” Years ago, if you wanted to get in touch with a colleague you called his or her one number, left a message, and then gave up. Nowadays, you might also try that person’s mobile number, instant messaging, and e-mail, wasting precious time and ending up with the same result: Your colleague is not available.

Unified communications promises to take care of all that. It will take a little time before this completely comes to fruition, but we’ve made a start. This section discusses the challenges of communications today and the brighter future that lies ahead.

### *The challenges of communications today*

Workers use many methods to communicate with one another, as well as with customers and suppliers or business partners. In growing organizations, these methods of communications are probably not consistent or standardized. Instead, many individuals take it upon themselves to create new avenues of communication, such as smart phones, PDAs, and instant messaging — all of which may lie outside the realm of sanctioned communications, adding to the chaos.

The methods that employees in growing organizations use to communicate include

- ✔ **E-mail messages.** E-mail is a great way to communicate because it is self-documenting, provided that workers keep the messages and remember where they filed them! E-mail is also a great way to transmit documents to other persons through the use of attachments.
- ✔ **Instant messaging.** When e-mail isn't fast enough, there's always instant messaging (IM). This is convenient but also problematic: There are many popular instant messaging services (including MSN, Yahoo, Google, and AOL) with no interoperability among them — and no enterprise security. Some of the IM services now include voice calls, and a few provide inbound and outbound gateways to the world's telephone network.
- ✔ **Mobile phone text messaging.** Also known as SMS (short message service), *texting* is a popular way of getting short text messages to and from other mobile phone users. Texting seems a natural integration point to instant messaging, but we're not quite there.
- ✔ **Telephone.** The next best thing to being there. Of course there are two types: wireless and wireline.
- ✔ **Voice mail.** A great invention that really took off in the 1980s. Call once, leave the message, and hope the recipient will listen to the message and act.
- ✔ **Pager.** Largely replaced by cellphones, both for voice-paging as well as short text messages. But even today there are a *lot* of pagers in use in the world.
- ✔ **Teleconferencing.** This is a great way to get a bunch of people in different locations all together on one telephone-based conversation.
- ✔ **Videoconferencing.** Teleconferencing's little brother: Just add a video camera and monitor at each location, and we can all see each other.
- ✔ **Web-based conferencing.** Teleconferencing and videoconferencing, delivered primarily to desktop and notebook computers. Available features include voice, video, presentations, application sharing, and whiteboarding.

- ✔ **Fax.** Ah, yes, the old telephone-network-based image transmission system that just won't die. Seriously, fax is still as popular as ever but increasingly becoming Internet-enabled: Enterprise fax servers and Internet-based services make sending and receiving faxes via e-mail possible.
- ✔ **Surface mail.** Still used for sending hard-copy documents and other materials or items from person to person.

There are probably a few more, including smoke signals, message in a bottle, and telegraph/telegram, but you get the idea. Most business users routinely use three or more of these methods, and the tech-savvy individuals may use almost all of these! Despite advancing technology, each of these methods of communication comes with its own set of challenges, including

- ✔ **Directory services.** Some of the newer methods, including e-mail, text messaging, and instant messaging, provide built-in directory services that permit you to easily call up a desired recipient. But many methods still require tedious manual effort to find contact information in order to contact someone. You must first find someone's telephone number before you can call him or her.  
  
Few organizations have anything resembling a comprehensive communications directory that includes a person's entire suite of contact numbers and names: desk phone, mobile phone, e-mail, instant messaging (on all of the popular services), conferencing, and so on.
- ✔ **Availability.** Aside from instant messaging's availability indicators (online, offline, away, busy, on the phone, and so on), which vary in value, there is seldom a reliable way to know whether a recipient is willing *and* available at the other end of whatever method of communications you have at the moment.

The result of all this is almost like a junk drawer of communications choices, with little interoperability and very limited directory capabilities. Even though we live in an age of almost limitless communications choices, it sometimes seems questionable whether we are better off because of all the time we waste every day trying to contact an individual in order to ask a question, answer a question, or inform someone of some quasi-important fact. Often, we spend more time trying to figure out *how* to communicate with someone than we do in actual communication.

## J. H. Cohn

Professionals at this large accounting and consulting practice spend much of their time at client sites, where they must remain available to other clients and peers. Rather than force employees to return to the office or a hotel room and face an e-mail inbox filled with dozens of unanswered messages, J. H. Cohn implemented Avaya Unified Communications Center with

Speech Access. This gives associates the ability to make phone calls, retrieve and respond to voice and e-mail messages, access their calendars, and check corporate database information, all using speech commands from any telephone. This has increased productivity and collaboration within the company, enhanced client service, and helped attract and retain top talent.

Without unified communications, we may be worse off today than we were 20 or 30 years ago. At least in those earlier days, if the person didn't answer the phone, we just stopped trying instead of attempting to raise a conversation using half a dozen other methods.

Unified communications solutions, like those from Avaya, promise to knit together all these disparate methods into a single communications system.

## *Elements of unified communications*

Before unified communications, all the available communications methods (and many or all of the directories) were separate from each other, as discussed in the preceding section. Unified communications is an integration of many of the available methods of communications, as well as the contact directories. But it's more than that. Unified communications also bring *preference* and *presence* services, which I explain here.

### *Presence*

Presence makes it possible for your availability to be indicated on the calling party's devices and programs, subject to enterprise and personnel policy rules. You see presence today in IM programs that show a user's wishes ("do not disturb,"

“busy,” “block this user,” and so on). Presence is not limited to instant messaging. It will become more pervasive in other mediums as well.

### *Preference*

A recipient-driven feature, preference allows you to specify how you want to be contacted at different times of the day, by whom, over which medium. Here are some examples of preference:

- ✔ **Available communications.** Particularly useful for workers who aren't tied to their desks, this preference lets you specify how you want to be contacted if you are traveling or in another location such as a client site or conference. You can also have incoming calls to your desk be automatically routed to your cellphone or alternative work location number.
- ✔ **Caller-based availability.** You elect to have your presence visible to your boss but not those pesky salespeople.
- ✔ **Priority-based availability.** You have all but urgent calls go to voice mail.
- ✔ **Time-based availability.** You send all calls directly to voice mail during certain times of the day or week.

## *SIP is the magic glue*

All these usually disparate mediums of communication can be joined somehow so that they act more like a single communications system than a lot of separate ones. Yes, there is a something that joins them together, and that something is called SIP, or Session Initiation Protocol. SIP is an Internet protocol that performs many communications management functions, including the following:

- ✔ **Addressing.** Users have a single SIP address. Imagine having one communications ID for everything instead of one for each mode!
- ✔ **Directory.** Programs and devices that are SIP-aware can access an enterprise central directory of users in order to find the user's address. And remember that the user has one address, no matter how many types of devices he or she may happen to have.

- ✔ **Presence.** A user's ability and willingness to communicate on any given communications device or mode can be displayed to other users so that they can tell how (or whether) a user can be contacted at this time.
- ✔ **Preferences.** A user can specify his or her preferences for communications, depending upon where the user is or what he or she doing.
- ✔ **Routing.** SIP routes all calls or messages (whichever term is appropriate for the mode in use at the time) to the appropriate device, depending upon device availability and user preference.
- ✔ **Trunking.** Similar to traditional circuit-switched trunking, SIP is an increasingly popular trunking protocol for IP Telephony. SIP trunking permits voice calls over the Internet between organizations, or between an organization and a communications network provider.

I should note, though, that for end-users, SIP per se is invisible. SIP is an implementation detail that makes the features they use work properly. You can liken SIP to DNS, the Internet Domain Name Service that makes virtually all Internet-based communications possible, and yet you never hear end-users talk about DNS: It's there making everything work, without their knowledge or awareness.

### ***SIP-enabled devices and programs***

SIP is already gaining much popularity as the control protocol of choice for VoIP and other types of communication. For a program, such as instant messaging (IM), or a device to participate in this magic, seamless environment, it must know how to access networks and services using SIP. Some IM programs today use SIP, although most or all are presently using it only within their closed environment. Some day, though, IM programs probably will be able to communicate with users on other IM programs, all because of SIP.

### ***SIP-enabled enterprise applications***

SIP is more than just knitting together communications systems; it's also about integrating them with enterprise applications such as CRM (Customer Relationship Management) and ERP (Enterprise Resource Planning). Because SIP is an open-standard application and communications product, vendors are free to join the growing SIP-fest and build applications atop SIP that are limited only by their imaginations.

## Understanding Mobility

Companies are moving into multiple locations, multiple time zones, and multiple countries. Business teams scattered throughout the country and the world are becoming the norm. Integrated communications are making this possible. Organizations are untethering their employees in record numbers. Companies are letting their employees work anywhere they want. Here are some examples (from *BusinessWeek online*, “Smashing the Clock” by Michelle Conlin):

- ✔ A full 40 percent of IBM employees have no official office space.
- ✔ About one-third of AT&T managers have no office.
- ✔ Nearly half of Sun Microsystems employees work anywhere they choose.
- ✔ Best Buy is putting its entire corporate headquarters of 4,000 employees on a work plan that lets them work anywhere, anytime.

These companies are seeing productivity and employee satisfaction soar, while costs drop like a rock. Office space is brutally expensive, more so than all of an employee’s benefits combined. And the introduction of IP-based communications — even in light of employees’ locations becoming decentralized — is significantly lowering the cost of communications.

## Understanding the mobile workforce trend

The key to understanding the mobility trend is to understand what is happening, why it is happening, and who is driving it. Several forces are driving the mobility trend upward; there is no single cause. Some of the factors are

- ✔ **Offshoring.** Hiring developers, testers, and other personnel halfway around the world has forced companies to implement more advanced communications capabilities in order to keep those overseas workers logically close. The same capabilities that enable offshore workers to stay in touch work pretty well for the rest of us.

- ✔ **Outsourcing.** The trend to outsource services has required organizations to build better communications capabilities between the organization and the service supplier. Those capabilities can be just as easily used by employees no matter where they are.
- ✔ **Mergers and acquisitions.** Much of the time, when two companies merge, or when one acquires another, the two are not in the same city. Employers have learned that most employees would rather quit the company than move away from their communities and families. Companies have to figure out how to make the new, combined company work despite its new geographic diversity.
- ✔ **Work-life balance.** Employees in high-tech companies began to burn out in the frenetic 1990s. Witnessing the results in the form of family strife and competing priorities, workers are demanding more flexibility from their employers.
- ✔ **Cost of office space.** Enormously expensive, office space can cost as much as a third of an engineer's or programmer's salary in major markets.
- ✔ **Competitive pressure.** Facing price and features pressure from overseas competitors (largely through differences in cost-of-production), domestic organizations are continuing to find ways to reduce cost, sometimes to get ahead of the competition and sometimes just to stay in the game.
- ✔ **Employee retention/acquisition.** Other companies are doing more to permit employees to be virtual so that they can get their jobs done wherever they are. It's becoming a bargaining chip when companies are recruiting new talent.

When taken together, these trends make mobility not just economically attractive but imperative. Few markets and sectors are isolated from the mobility trend. Many businesses are place-of-delivery service oriented; restaurants and hotels easily come to mind, and there are countless more. But many industries — or at least some part of the workforce in companies — are already aware of the shifting currents. Has your organization begun to adopt the mobile workforce trend?

## The Wireless-Wireline Convergence

As if there weren't already enough changes going on in telecommunications, another trend is approaching: the convergence of wireless (cellular) and wireline (landline) communications. The distinction between the services offered by cellular and wireline telecommunications providers will begin to blur, making the two even less distinguishable.

The wireline business is shrinking. This isn't a big surprise because wireline features have changed little in 20 years. Compared to the constant innovation in wireless telecommunications, telco-provided wireline service is positively anemic and archaic. It's no wonder that many wireless customers are unplugging their wireline service for good.

Companies such as Vonage and Comcast with their VoIP offerings are also nibbling away at wireline companies. In some respects, the trend is ironic because in many cases the competitors are selling VoIP over the telco's own lines. Why don't the wireline telcos themselves offer digital voice? I cannot imagine that the wireline companies intend to watch their business slowly "circle the drain" and do nothing.

Wireline companies want to stem the flow of departing customers; how will they do it? Features. I envision a future in which wireless and wireline are as integrated together as the different wireless companies are beginning to today with features like intercarrier text and image messaging. Some of the capabilities I think we'll see in wireline service include the following:

- ✔ **Inter-carrier text messaging.** Just as in the wireless world, we'll be able to send text messages to and from our wireline phones to other wireline or wireless phones.
- ✔ **Inter-carrier voice mail.** We will be able to send voice-mail messages to customers regardless of whether they are a wireline or wireless user.
- ✔ **Ring tones.** Aren't you tired of those anemic 1980s rings on your wireline phones? I sure am.

I am convinced that this convergence will occur — either that or the wireline companies will just sit back and watch their customers exit for more alluring and useful wireless services.

## *The wireless-wireline glue is SIP*

I discuss SIP, or Session Initiation Protocol, earlier in this chapter. SIP is the glue, the middleware, that will facilitate the wireless-wireline convergence. To SIP, wireline phones are just another type of communications terminal, with whatever capabilities they have: voice, text, video, Internet, what have you. When SIP is in the wireline equation, our wireline phones are just one more way we can communicate with others.

## *Conferencing: Improving Productivity While Reducing Costs*

Many of you will remember business trips for the purpose of attending group meetings. Teleconferencing, videoconferencing, and Web-based conferencing are reducing the need for people to meet in conference rooms face to face. In other words, the cost of business travel for the sake of meeting others is becoming harder to justify. Emerging communications technologies continue to drive this trend.

Unified communications makes conferencing work for users employing whatever technologies they have available at the time. So if a Web-based conference is scheduled and one of the attendees is on a mobile device, he or she might be able to receive documents and low-res images, or at least get the voice portion of the conference. SIP-enabled conferencing services can work with whatever people have available when they join.

## *Putting Together Your Business Continuity Plan*

Business continuity planning is all about keeping your business running in the midst of a disaster. The goods and services that your organization produces today must still be delivered, somehow, even if the big (earthquake, tornado, hurricane, volcano, pandemic, tsunami — pick from one of these or add one of your own) occurs.

### *Communications are key*

Practically every aspect of your Business Continuity Plan (BCP) requires communications. Here are some key examples of the role of communications in this process:

- ✔ **Emergency notifications to personnel.** During an actual disaster, key personnel need to be notified so that they know to begin their contingency operations. Here, advanced communications systems will come in handy because in some types of disasters the local communications infrastructure may be damaged or overloaded by people calling each other to see whether they are all right.
- ✔ **Communications during emergency operations.** The teams of personnel who deliver goods and services during a disaster need to be able to communicate with each other (and with customers and suppliers), much as they would during normal business conditions. Phone, e-mail, fax, and other forms of communications need to be running at some capacity to support emergency operations.
- ✔ **Keeping employees in the know.** Company personnel who may not necessarily be part of emergency operations need to be informed about business conditions — where and when they should report to work and how they need to communicate with and support emergency operations personnel.

These are just a few examples of the need for communications within the organization, and between the organization and its customers and suppliers. Communications are the lifeblood of an organization, during normal business conditions as well as during emergencies.

## *BCP methodology*

The model and methodology for the development and maintenance of a BCP is quite mature and repeatable; there are experts in the field who — for the most part — take a consistent approach to the development of a viable plan. The steps to building a BCP include the following:

- ✔ **Identify an executive sponsor.** A BCP may be seen as a nonessential activity. With everyone already too busy, taking time out to build a pie-in-the-sky BCP might seem frivolous. For this reason, one or more company executives need to visibly get behind and support the BCP initiative. Otherwise, it's likely to die on the vine.
- ✔ **Define scope.** Executives need to define the portion of the business that is the subject of the BCP project. Doing so is vital in large and multinational organizations. Size the scope right and don't bite off more than you can chew.
- ✔ **Build the project team.** Bright people from all the key departments — those who know how key processes actually work — need to be selected. Those persons' priorities must be adjusted so that they have time to work on the plan.
- ✔ **Perform a Business Impact Analysis (BIA).** This is where the rubber begins to meet the road. Here, the project team gathers information about key in-scope business processes to determine which ones are most critical. For each business process, the team develops something called the Maximum Tolerable Downtime (MTD), which is the longest time a process can be inoperative before the survival of the business is at risk.

- ✔ **Develop Recovery Time Objectives (RTOs).** After the MTDs are known, then RTOs for each process can be developed. RTO is defined as the period of time in which the business will get a given process back on the air after a disaster so that the business can resume providing goods and services to its customers.
- ✔ **Build contingency plans.** Now that the project team knows the RTO for a given process, the team builds a contingency plan, which is the list of detailed steps that the business must follow to get the process going again.
- ✔ **Test contingency plans.** After the contingency plans are developed, they must be tested to see whether they were written well. There are several types of plans, including
  - *Walk through.* This is a step-by-step read-through of the written plans, with plenty of discussion during each step. The team members talk through each step to determine whether it's valid.
  - *Simulation.* Here, the personnel who will actually jump into action during a real disaster practice setting things up and getting processes running.
  - *Full interruption.* In this most significant test, the everyday business processes are stopped, and company personnel implement their contingency plans to deliver actual goods or services to customers. It's like having someone shoot out your car tire to see whether you really can fix it out on the road.
- ✔ **Maintain contingency plans.** After the contingency plans are developed, they need to be revised periodically so that they reflect actual changes in the business that naturally occur over time.

In a nutshell, that's the life cycle. Although it may sound simple, it's not. An entire profession is dedicated to business continuity planning, and within that profession are conferences, formal methods, and professional certifications.



Most organizations require permanent, dedicated staff just to maintain existing business continuity plans and many more workers to develop and test contingency plans.



## Chapter 3

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# Contact Center Technology Enhancements

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### *In This Chapter*

- ▶ Defining a contact center
  - ▶ Understanding what makes a contact center great
  - ▶ Finding out what capabilities are within reach of your business now
  - ▶ Enabling the contact center with technology
- .....

**I**n today's service-oriented and service-valued world, contact centers are the touch points between an organization and its customers. Under pressure to do more with less, contact centers are a prime target for improving a company's reputation and bottom line. The stakes are highest in midsize organizations, which need to emulate the service levels and capabilities of larger organizations but with fewer resources.

This chapter explores today's contact center and its impact on an organization. Nowhere else in the business does such well-planned investment in technology pay off. So buckle up and hang on — we're taking a straight shot to contact centers!

## *What Is a Contact Center?*

That radio or TV advertisement caught your imagination, and you are reaching for the phone. Or maybe you want to add a new feature to your cellphone or download a ring tone, but you can't figure out how. Or perhaps you ordered dishes from the Internet, but they don't look like the ones shown on the Web site.

## International Speedway Corporation

ISC uses Avaya Customer Interaction suite in a central contact center to integrate and manage customer service across all ISC racetracks. This speeds ticket sales and gives fans a new source of race information. Avaya Interactive Response (IR) is used to answer information-only questions, and a customized outbound autodialer enables ISC to personalize service for fans. Sales are up and events are sell-

ing out earlier than when ticket sales were handled independently through telephone contacts at 11 separate ticket offices. Sales are up 30 percent, abandon rates are down 50 percent, and Avaya's IR freed up 8–10 percent of the calls for ticket selling . . . that translates into about 400 calls per day in an industry where the average sale is four tickets.

In all of these cases, you want to get in touch with a business because you want to buy something or ask a question. The person on the other end of the phone, the online chat, or the e-mail works in that organization's contact center.

A good contact center has to fulfill three basic objectives:

- ✔ **Revenue generation.** This objective encompasses sales, upgrades, retention, collections, up-sells, and winning back customers.
- ✔ **Efficiency.** The contact center must be efficient. Contact center personnel should be able to quickly find information about customers, orders, sales, returns, products, services, custom orders, and so on.
- ✔ **Customer satisfaction.** Customers' experiences with the contact center should "wow" them with friendliness, empathy (when things go wrong), and efficiency in order to earn customer loyalty, which drives long-term revenue.

Revenue generation, efficiency, and customer satisfaction all work together to improve the organization's success.

## *Seven practices of a good contact center*

Not all contact or service centers do their jobs well, but good ones share these attributes:

- ✔ **Fast response.** Customers aren't kept in long hold queues or waiting for ages for an e-mail response; instead, they wait only for a short time or not at all.
- ✔ **Earn revenue.** Through collection, cross-sell, up-sell, upgrades, and other activities, the contact center earns its way instead of being the "money pit" that contact centers were considered to be in the past.
- ✔ **Achieve high first-contact resolution.** Customers who call (or otherwise interact with) the contact center should get their problem or question solved quickly and — when possible — by the rep they initially deal with.
- ✔ **Maintain high morale.** Happy contact center reps are generally more pleasant to customers and solve problems more effectively than dissatisfied reps.
- ✔ **Possess good processes and metrics.** Procedures and tasks performed by contact center reps are performed consistently and correctly. Events are measured so that management can produce reports and metrics in order to stay on the pulse of the contact center.
- ✔ **Engage in continuous improvement.** Processes are examined and refined over time to improve efficiency.
- ✔ **Focus on and support overall organization objectives.** Contact center management should be aware of the organization's overall objectives and adjust resources and processes in the contact center to support those goals.

These aren't absolute, but most successful customer care centers share these attributes. How does your center measure up?

## *You Don't Have to Be Big to Be Competitive in the Global Marketplace*

They say you don't need to *be* a big company to *act* like a big company. There are two places where this is especially true:

- ✔ **Web site.** Often called the great equalizer, the Internet permits a small or midsize company to act like a large organization through its Web site.

- ✔ **A contact center.** Even a small or midsize organization can deliver big-company capabilities and superior service through its contact center.

The July 5, 1993, *New Yorker* magazine cartoon by Peter Steiner says, “On the Internet, nobody knows you’re a dog.” You can project a persona on the Internet and in your contact centers that gives your customers the feeling that you’re larger than you may be. Doing so can instill customer confidence in your organization, improving cross-sell and up-sell.

Midsize businesses have to act big. Nowhere is this truer than in the contact center. Agents must be highly professional and well trained; have rapid-fire access to information about customers, orders, products, and services; and be able to quickly resolve issues. Companies whose agents have only a phone and yellow pad don’t stand a chance. It takes technology.

Contact center technologies need to integrate with enterprise applications, such as the following:

- ✔ **Customer Relationship Management (CRM) system:** Finds data about the customer and supplies it to employees at the right time in an easy-to-use format.
- ✔ **Enterprise Resource Management (ERM) system:** Provides rapid status of orders and the availability of goods and services.
- ✔ **Financial system:** Provides status on invoices, payments, purchase orders, and so on.

Avaya’s new all-in-one, multichannel communications solution for midsize businesses, Customer Interaction Express, is the perfect match for midsize businesses that need to become more like large enterprises. The use of advanced products like Customer Interaction Express will be discussed in the next section.

## *Driving Profitability with Technology*

Contact centers scale well only when they have adequate technology to support their agents. Technology, starting with inbound call processing systems, is required in order to make

organizations more efficient in identifying customers and connecting them to the right persons in your contact center.

Midsized businesses used to be locked out of the game: Enterprise-class CRM systems and the accompanying communications technology were just too expensive for any but the biggest organizations. You need to consider several types of technologies in order to provide excellent, efficient, and measurable customer service in your contact centers. I take you on a deep dive in the rest of this section (you won't have to hold your breath, though).

## *Telecommunications technologies*

At the heart of your contact center's technology are telecommunications services and features like these:

- ✔ **Automatic Number Identification (ANI) and Caller ID.** ANI and Caller ID (which are very similar but not exactly the same) permit an integrated contact center system to take an incoming call and put information about that customer on the screen even before your agent answers the call.
- ✔ **Dialed Number Identification Service (DNIS).** Many contact centers are reached through several different phone numbers. DNIS knows which phone number a customer called and can route the call accordingly.
- ✔ **E-mail.** Many contact centers communicate with customers via e-mail. This is a handy alternative that permits customers to send in questions or inquiries when it's convenient for them. Contact center personnel can send text replies containing instructions or URLs for downloads and more information.
- ✔ **IP (Virtual) Contact Center.** This is handy for organizations that have more than one contact center so that calls can be routed to different contact centers as needed.
- ✔ **Automatic Call Distribution (ACD).** The heart of a contact center's phone system, ACD routes calls to waiting agents and can route by DNIS, ANI, and agent skill level.
- ✔ **Predictive dialing.** *You will live a long and prosperous life.* Oops, no, I'm not talking about fortune cookies but telecommunications equipment that enables outbound communications so that you can proactively and automatically reach out to your customers.

- ✔ **Interactive Response (IR) and Voice Portal.** *Please type or speak your account number.* IRs and Voice Portals provide voice-oriented prompting that is friendlier and also more useful for mobile users who prefer to keep their phone in their pocket or their hands on the steering wheel.
- ✔ **Self help.** Callers can be directed to options where they can listen to information or simple instructions that free up time for your agents to handle more pressing and complex issues.
- ✔ **Assisted browsing.** Links the agent's and the caller's Web browsers so that both see the same content. In this way, an agent can lead callers through specific content to assist them with their issue.
- ✔ **Chat.** If your callers are online and text enabled, they can chat instead of speaking live with your agents. Your agents may be able to handle several chat sessions simultaneously, which would be challenging on live calls!
- ✔ **Call logging.** Callers' identities, options, choices, and even spoken responses can be recorded for later analysis.
- ✔ **Call blending.** Enables agents to be switched between different types of inbound and outbound communications.
- ✔ **Agent scheduling.** Automates the agents' scheduling process so that your contact center has the right mix of coverage and skills at all times.
- ✔ **Reporting.** Capturing events and creating statistics and reports helps your organization better understand call flow and customer problems. This can lead to changes in how your call center handles customer issues.

These technologies are available and within the reach of midsize businesses. You don't have to be one of the big boys to use these anymore; they are easier to integrate and cost less than you think.

## *Information-enabling technologies for agents*

After the inbound contact reaches your agent, he or she needs quick access to information. The technology

supporting this is called Computer Telephony Integration, or CTI. Here are examples of several CTI features:

- ✔ **Coordinated screen transfer.** Provides smooth handoffs when you need to transfer a call to another rep.
- ✔ **Mandatory data entry.** Requires the rep to enter data before leaving the screen and taking the next call.
- ✔ **Dynamic scripting.** Gives the rep a break from reading the same dull script over and over by enabling your application to custom build a script for each customer based on that customer's preferences and buying history.

These capabilities make your agents more effective and result in higher customer satisfaction.

## *Information-enabling technologies for customers*

Customers need information, too! Several technologies are available to make it easier for customers to get the information they need, including Interactive Response (IR) systems. This nifty technology permits customers to speak their answers to your systems, which is a whole lot better than punching in numbers on a phone keypad.

Speech-driven systems go even further than IRs by recognizing commands that simpler response systems aren't designed to handle.

## *Finding the Right Technology*

Does all of this mean that you can go to the Avaya Toy Store and run up and down the aisles, filling up your shopping cart with contact center goodies? Well, maybe — but even more likely it means that you'll want to do a more methodical and intelligent job of identifying the best technologies that *your* organization needs to put the heat on your competitors (or take the heat off you!).

So *how* do you determine which technologies are right for your organization's contact center and will help you reach and even surpass your business goals? Good question. Consider these principles:

- ✔ **Organization objectives.** What are your organization's goals and objectives, and how well is your contact center filling them?
- ✔ **Customer satisfaction.** Are you listening to your customers? What are they telling you in terms of how you can better serve them?
- ✔ **Competitive analysis.** How do your competitors' customer service capabilities stack up to yours?
- ✔ **Technology road map.** What is the current state of your contact center and IT capabilities, particularly in CRM, ERP, and order fulfillment? Where is your organization considering making investments in the future?
- ✔ **Employees' skills, knowledge, and experience.** What are your employees telling you about contact center technology in other places they have worked? Some things that work well in other organizations may work well in yours.
- ✔ **Trade associations.** Through trade association relationships and journals you can learn what your industry peers are up to, including contact center technologies.

Finding the right technology takes careful analysis and experience, and it's critical that you have the proper support from design through implementation and maintenance. Avaya Global Services has extensive knowledge and the experience to analyze your business needs and identify gaps in your contact center's processes and technologies.

Providing your customers with the best care possible will keep them coming back, and they're bound to tell their friends and colleagues. Bottom line? More profitable business for you!

## Chapter 4

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# Embedding Communications into the Business

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### *In This Chapter*

- ▶ Understanding SOA and software applications
  - ▶ Looking at real-time communications
  - ▶ Examining presence and SIP
- .....

**C**omputers and telephones used to be separate. But no more. A plethora of technologies and methodologies is providing more ways for telecommunications systems and enterprise applications to work together.

The line between business applications and communications is beginning to blur. Before long, it will be difficult to tell where the application ends and the communication begins. This chapter discusses various software and communications technologies that are bringing this about.

## *Getting into Step with SOA*

Service Oriented Architecture, or SOA, is the architecture that consists of loosely coupled software services. SOA uses standard high-level interfaces that applications can use to communicate with other applications and communications systems.

So why am I talking about this? SOA is the platform that enables organizations to finally realize the tight integration between applications that they have envisioned for years. Although interapplication technologies such as COM and CORBA have existed for years, they required more investment for application integration than most organizations were willing to put out.

The purpose of SOA is to build high-level interfaces between applications that allow them to share information and process flows. SOA promises to achieve higher levels of application interoperability, which can result in better application integration with business processes, faster deployment of new capabilities, and increased flexibility for application and business process modification.

In the context of midsize businesses, SOA permits high-value applications and communications integration at relatively low cost. Prior to SOA, such integration had to be customized, at great expense and with a long development cycle. An organization that wanted to be nimble could not consider such line-of-business integration. SOA is changing all that by providing and exposing high-level intelligent interfaces that can be used to connect applications and communications systems.

## *SOA components*

SOA's modular framework consists of several components that are explained here, as follows:

- ✔ **Service Registry.** A central directory of available services in an environment.
- ✔ **Service Provider.** A system or environment that contains invocable services. A Service Provider publishes its available services to the Service Registry so that they may be discovered and utilized.
- ✔ **Service Contract.** A document that defines the details of the services offered by the Service Provider.
- ✔ **Services.** The application software components provide, well, services to other applications and communications environments.

You could say that an application is an aggregation of services. An SOA-aware application could even make some of its

functions act like services. In fact, that's exactly what SOA means to do: Expose functions within applications that can be made available to other applications in a generic way.

## *Exploring some SOA functions*

Some examples of how SOA can operate within a corporate environment include the following:

- ✔ **Retrieve customer record.** A contact center application can request of a CRM system a specific customer record.
- ✔ **Request order status.** A CRM system can make a request of an ERP system for the status on a particular customer's order.
- ✔ **Retrieve price list.** A front-end contact center application can request price lists (and other products and services information) to display to a contact agent, or to a customer who is on a Web site or a phone.
- ✔ **Manage shopping cart.** A typical shopping cart application can expose its principle functions through SOA so that those functions can be made available to other applications or systems.
- ✔ **Place order.** A customer or agent on a Web interface, IVR portal, or other application can invoke a "place my order" function that initiates the cascade of events that bring about order fulfillment.

I hope that I have whetted your imagination here. Whatever function an application, communication system, or other equipment or service can provide, can be made available as an SOA service for use by other SOA-aware environments — even those that may exist outside of the organization!

## *We Humans, Always Getting in the Way*

Our current methods of communication (phone, voice mail, e-mail, and so on), while intended to help keep things moving, sometimes don't help. Imagine the following scenario.

A part is low in inventory, triggering the preparation of a purchase order. The preferred supplier's database is consulted, but that supplier is out of stock. This generates the need to go to an alternative supplier, which requires the approval of a senior manager. But existing systems might, at most, send that manager an e-mail and await her response. Things grind to a halt until she gets around to reading her mail and granting her approval (and what if she's out for a day or more?). What if, instead, we made communications part of that business process flow? When the exception for the alternative supplier is reached, the system could instead automatically find the senior manager on whatever communication devices she's using at the time, and send her an immediate notification of the exception — or it could escalate to someone who *is* available to make the decision. She could handle the request in real time on her phone or mobile communications device, grant the approval, and the workflow continues unimpeded. This is the power of how Avaya is communication-enabling business processes.

## *Intelligent Communications, Transforming Processes*

Let's face it: When we want something, we want it *now*. In a service-oriented business, this impatience translates into having information at our fingertips — or on the phone — when we need it.

Service is quickly becoming the primary competitive differentiator between organizations. Customers who are pressed for time don't want to wait in queues or be passed around from person to person, and they don't want to be called back tomorrow. If the information your agent needs is somewhere in your organization, why not get it to the agent and the customer *right now*?! Higher rates of first-call resolutions drive up customer satisfaction and lower costs, which translates into profitability. But you know that.

*Right now* is possible in your organization. Avaya's innovation in communications technology, even for midsize businesses, means that smaller organizations can be as feature-rich as the big boys. This can help you to continue nibbling away at your larger competitors' customers, and keep your own competitors from winning your customers away from you.

## Charter Steel

Charter Manufacturing upgraded an existing Avaya IP Telephony Solution by implementing Avaya MultiVantage Communications Applications on its existing Avaya DEFINITY Communications Servers, seamlessly connecting

1,000 employees across multiple sites. In doing so, they improved connectivity to remote locations, enhanced mobility for telecommuters and road warriors, and reduced costs.

## *Presence: Is Anyone Home?*

In an agile, customer-centric service organization, communications are important. But more than that, communications with the right people are vital. To answer questions or solve problems, agents and other workers must know how to contact subject-matter experts.

Sure, the person we need to contact has a desk phone, cellphone, pager, four instant-messaging clients, e-mail, and a PDA. If there is a customer waiting on the line, trying one communications method after another is out of the question. How can we tell how to contact someone we need quickly?

*Presence* solves this issue. In an environment with presence-aware communications systems, a co-worker can, in real time, see which modes of communication are available for anyone in the organization. So, rather than use trial and error to contact a specific individual, it's now possible to see which communication methods are available at any given moment.



*Presence*, in conjunction with another communications feature called *preference*, helps colleagues to instantly know how to reach someone, or in cases where specific individuals are not available, alternate resources who can provide whatever help is needed at the moment.

*Presence* is delivered by a protocol called SIP and is a feature of unified communications, which is discussed in Chapter 2.



## Chapter 5

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# Ten Technologies Midsize Businesses Need to Know

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### *In This Chapter*

- ▶ Evaluating technologies that can drive new efficiencies, growth, and competitive advantage
  - ▶ Examining some Avaya solutions that help organizations stay in touch
- .....

**A**re you ready? This chapter gives you the essential and newest technology enhancements that will drive business value for midsize businesses. May I have the envelope, please. . . ?

## *VoIP*

VoIP is a communications technology that brings with it several new capabilities that have changed the meaning of the “telephone call.” VoIP means voice transmitted over a computer network and is often spoken in the same breath with another term, *IP Telephony*. IP Telephony makes use of the popular and familiar IP networking protocols to combine both voice and data in a single network. Simply put, your voice is converted into data packets and transmitted over a network. So what does this mean for you and your business? IP Telephony can help you lower costs by moving all your communications to a single manageable network. Site-to-site call costs are eliminated and teamwork is vastly improved. Management and administration get significantly streamlined and simplified. Overall, this forms the foundation for you to bring all applications together, enabling you to link people, products, office sites, and customers in more efficient, more effective ways.

## ***Conferencing***

With IP as your foundation and the growing trend to “virtualize,” the capability to host conferences, whether audio, data (that is, Web), or video, becomes that much easier and more powerful. Although the concept of collaboration has been around for many years, we can now add much more of a *Jetsons* flavor to what’s possible. Conference bridges can be used for meetings, presentations, internal or external training, or real-time working sessions. You can purchase conferencing solutions as a “pay as you use” service, or you can buy them outright to integrate with your existing network and applications. Videoconferencing can help you save on travel expenses and may also boost productivity by letting your staff collaborate on a live document and share data in real time over an IP connection.

## ***Skills-Based Routing***

Getting the right customer to the right person for every call (or e-mail or Web chat) not only increases customer satisfaction but also saves you money. It’s easy to see how customers will be happier if the agent helping them always seems to be the expert on their particular questions and has access to just the right information. But saving money, too? When an agent without the proper skill tries to handle a customer, the call takes longer, the customer is often forced to call back before the question is answered, and therefore your customer service costs are increased! *Skills-based routing* is a contact center technology that matches each incoming customer (identified by the customer’s phone number or e-mail address) and the customer’s need (identified through a voice/speech application or how the customer contacted you) with exactly the right agent anywhere in your organization.

## ***Screen Pop and Dynamic Scripting***

When you have the appropriate service agent talking to a customer, effectiveness is greatly increased by having the right information at the agent’s fingertips. This starts with a *screen pop* that automatically displays customer information and history gathered when the call was first answered. Next, dynamic

scripts are displayed that help the agent know what questions to ask and what recommendations to make. The script can be constructed in real time and derived from business rules based on the customer's identity, spending habits, and so on. This is the perfect time for the agent to make up-sell and cross-sell suggestions that can drive new revenue.

## *Multimedia Customer Contact*

Today's customers use all kinds of communications tools — the Internet, e-mail, home phones, and mobile phones. When a customer says, "I'm calling you today about my e-mail from yesterday concerning my Web transaction from last week," how do you respond? Multimedia customer contact center technology allows all kinds of customer interactions to be managed in one environment. That means that you can handle Web chats, e-mail, and phone calls, and see all of a customer's previous interactions across all media when you handle the next one. And if your customer base includes teenagers, the latest technology even allows you to play videos to their mobile phones while you talk to them!

## *SIP*

Ever try to get a quick answer from someone by first sending an e-mail and then calling the person's office number only to get voice mail? Next, you try his mobile phone. Or maybe you give up and wait for an e-mail response. Wouldn't it be great if you could see upfront which mode of communication was available and then just go there without wasting time? And wouldn't it be even better if all of these communication end-points could find and talk to each other? That's now possible with Session Initiation Protocol (SIP) technology. You don't have to use trial and error when contacting someone. SIP allows you to see whether the person is on the phone, in a meeting, or doesn't want to be disturbed. You get real-time answers and get work done without waiting!

## *FMC*

Fixed Mobile Convergence (FMC) is more of a trend than a technology and represents the coming together of the wired

and wireless worlds. FMC enables the cellphone to connect seamlessly to either network. No matter the location or device your workers are using, voice, video, and data transmit without the user having to log on again. Whenever possible, calls go through the wired network, which means savings for you.

## *Unified Communications*

Unified communications combines calling and conferencing with e-mail, voice mail, instant messaging, calendars, and directories into one place and makes it all accessible via a PC using Web-based clients, a telephone, or a mobile device. Unified communications enables you to get to information, people, and groups simply and quickly.

## *CEBP*

Avaya Solutions for Communications Enabled Business Processes (CEBP) can help your business transform the way it detects and responds to critical events by minimizing delay and creating a more agile, responsive organization. CEBP continuously analyzes information from a wide range of sources, detects important events, and manages the organizational response by selecting the appropriate people and tools based on expertise and availability. People from across multiple locations and functional groups can be brought together and receive information via voice, e-mail, text messaging, text-to-speech, and conferencing.

## *SOA*

Service Oriented Architecture (SOA) is a software methodology used to build and integrate applications of all kinds. SOA breaks applications into distributed *services* that can be connected in new and different ways by using open standards such as Web Services. Avaya innovations now make your communications capabilities available as reusable Web Services, enabling them to be easily integrated with other business applications within a SOA approach. SOA can help integrate your enterprise applications with many of the technologies discussed in this chapter, transforming your software applications into a killer environment that was formerly possible only with substantial amounts of cash and a legion of resources.



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AN URGENT EMAIL  
BECAUSE I HEARD IT  
ON MY CELL PHONE.**

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