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- Contact and information management
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by Allen Wyatt



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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 Pink

Business Development Representative:
Jackie Smith

Editorial Manager: Carol Sheehan

Composition Services

Project Coordinator: Kristie Rees

Layout and Graphics: Andrea Dahl,
Stephanie D. Jumper, Julie Trippetti

Proofreader: Dwight Ramsey

Special Help: Robert Burr,
Dustin Donaldson, Frank LoVasco,
Patricia Moran

Publishing and Editorial for Technology Dummies

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Introduction



Avaya is the recognized leader in mobile enterprise communications. We've helped thousands of organizations develop strategies to successfully meet the challenges presented by a rapidly changing work environment. Our enterprise solutions support more than 90 percent of the Fortune 500 companies, as well as organizations of much more modest expanse.

Obviously, Avaya is not the only company that offers solutions for mobile enterprise communications. But Avaya's position as a worldwide leader in enterprise telephony can offer you benefits that others cannot. Avaya has been ranked among the leaders in the "2004 METAspectrum for Enterprise IP Telephony" report. The Dell'Oro Group confirms that during the third quarter of 2004, Avaya held a solid lead — more than 35 percent — in the worldwide market share of IP PBX.

Gartner Inc., a prestigious research and advisory firm, listed Avaya in the Leaders quadrant in their "2004 Magic Quadrant Report for North American Corporate Telephony." The report positions vendors into one of four quadrants — Leaders, Challengers, Visionaries, and Niche Players — based on the company's vision and ability to execute on that vision. According to Gartner, vendors listed in the Leaders quadrant are performing well today, have a clear vision of market direction, and are actively building competencies to sustain their leadership position in the market. Avaya is one of those Leaders.

Our solutions have traditionally been built around the needs of our clients. Over the years, we've been handed some pretty big challenges, and we've been able to meet or exceed the expectations of organizations of all sizes. We focus on your existing systems (Avaya or non-Avaya) and help you migrate to the solutions you need. Unlike some solutions providers, we seldom propose solutions that require replacing your existing infrastructure.

The bottom line is that Avaya stands ready to help you develop the mobile communications strategy that your organization needs to confidently meet the challenges you face today. You don't have to do it alone. Our extensive portfolio of professional services and time-tested expertise delivers the results you're looking for. Visit www.Avaya.com to find out more.

About This Book

Regardless of whether you ultimately take advantage of Avaya's expertise or not, you can benefit by reading and implementing its suggestions. Your workforce is changing, and you need to come up with a strategy for meeting their communications needs — one that reflects well on your leadership and the competitive posture of your organization.

The fact that you are reading this book indicates that you need solid information to create your own mobile communications strategy — or that you are plain befuddled by all the jargon and hype surrounding mobile technology. Regardless of where you stand, this book can provide the answers you need to make confident decisions, helping to steer your organization through this rapidly changing world of mobile communications. *Mobile Workforce For Dummies* is a great place to begin your efforts to provide a solid strategy for the future.

This book explains why a mobile communications strategy is in the best interest of your business. By the time you finish Part III, you'll understand what needs to go into your strategy and understand how you can best put one together. This book doesn't do the work for you, but it helps you better grasp the work you need to do — and how to do it with the least downside.

You don't have to read this book from start to finish. If you browse through the table of contents and something catches your eye, feel free to jump right to that page. Don't worry; the rest of the book will still be here, ready when you are.

How This Book Is Organized

This book is organized by parts, and each part is designed to walk you through a different aspect of understanding mobile communications strategies. As I mentioned in the preceding section, you can read the parts in order, or you can skip to whatever one strikes your fancy today and read a different part tomorrow.

Part I: The Morphing Workplace

Part I examines ways in which the traditional workplace is changing. Here you discover why mobility is such a hot topic. (Hint: Workers are becoming increasingly mobile.) You'll uncover different classifications of workers and recognize how you can apply those classifications to your own workforce.

You also get a feel for the different networks, devices, and applications used by the different classifications of workers. Chances are good that many of these elements are already at work in your organization. Using the concepts in this part, you can better understand the key role that these elements play in the successful operation of your own business.

Finally, all the pieces and players are pulled together and examined from the perspective of your clients. You'll understand that if you don't meet your clients' needs, you expose a competitive weakness that can be exploited by others. Any mobility strategy that doesn't reinforce the perceived benefit to your clients is not a strategy that is in your organization's long-term best interest.

Part II: Meeting Your Needs

Part II provides a quick overview of the various solutions available to meet the needs of your changing workforce. You'll discover information about key technologies, products, and services that can expand your communications reach beyond your existing brick-and-mortar boundaries.

Tools as diverse as softphones, speech-enabled systems, and cellular services are discussed in a way that helps you clearly understand how they can benefit your enterprise. You'll also get some down-to-earth advice on how you can avoid costly mistakes in evaluating technology. As you learn to build your infrastructure on proven technologies and avoid fads, you build also for success in the future.

Part III: Defining Your Own Strategy

With an understanding of how the workplace is changing and a grasp of what solutions are available, you're ready to dive into creating your own mobile communications strategy. The information in Part III helps you gain the confidence you need to undertake this important step.

Here you'll find the advantages that a coherent strategy has to offer. You'll also discover that your strategy must focus on three areas: the client's experience, issues related to costs, and operational considerations. Each area is discussed in detail, with examples of what to avoid and what is important from a strategic perspective.

In finishing this part, you'll get clear advice on how to establish a solid business case for your mobile strategy. You find out how to evaluate and choose solutions, and how those solutions can affect your bottom line.

Part IV: Mobile Technologies at Work

When you build your own mobile communications strategy, you aren't plowing in a virgin field. Thousands of organizations before you have successfully developed their own strategies. In Part IV, you examine several case studies, pulled from successful Avaya clients, with an eye toward the solutions that best fit their needs. These are real-world examples of how meeting a mobile workforce head-on has helped organizations.

Part V: Top Ten Tips for a Successful Mobility Implementation

All *For Dummies* books are famous for their Part of Tens at the end of each tome. Here, in traditional *For Dummies* style, you'll find ten solid tips for implementing mobility in your organization.

Icons Used in This Book

From time to time in this book, you'll see an icon amongst all the prose. These were strategically placed to call your attention to something that I, well, thought you needed your attention called to.



This icon means that the associated text represents just the tip of the iceberg, and there is much more to cover. Not really — it means that the text includes a tip that can help you save time, effort, or money.



This icon indicates something interesting primarily to the geeks in the crowd. (Don't try to hide; I know you're out there.) If you don't have a geek-streak running through you, don't feel embarrassed if you just skip right over these technical items.



You should always remember and never forget. Well, never is a long time, but you will definitely want to remember these items as you are putting together your own mobile communications strategy.

Where to Go from Here

You know your business better than anyone else. You know that the world is changing, and that those who don't change with it are often left in the dustbin of history. You don't want your organization to become a relic of yesteryear, so you're seeking ways that you can adapt and grow.

You're in good company.

As you read this book, keep an eye out for tidbits of information that can give you the edge you need. However, this book can't be everything to everybody, so if you can't find an answer for your unique needs, ask the good folks at Avaya. Visit www.Avaya.com.

I hope the information in this book makes you think about how you can adapt to the world around you. If it does, I've accomplished my goal, and you'll be able to face the future with more knowledge and more confidence in your own success.

Now, flip the page and let the journey begin.

Part I

The Morphing Workplace

In This Part

- ▶ Categorizing workers based on their mobility needs
- ▶ Examining business networks
- ▶ Understanding how worker tools are used with networks
- ▶ Viewing the entire span of mobility
- ▶ Remembering the client's perspective

The only constant is change. Nowhere is this truism more evident than in the rapidly changing workplace. Faced with new demands and increased competition, organizations are driven to discover new ways they can adapt and meet those demands and remain competitive.

As organizations adapt, workers are faced with many challenges. While striving to achieve the organization's goals, they must evaluate emerging technologies, perfect recently adopted techniques, and use new methods of accomplishing their existing workload. This constant change, sometimes while in crisis mode, can be demanding, to say the least.

In Part I, you examine the changing workplace. You discover how new technologies and new demands have coupled to create a workforce that is more mobile than at any time in the past. With this understanding, you'll be able to catch a glimpse of how developing a meaningful mobility strategy for your organization — one that embraces the technologies and meets the demands — can help you fulfill the needs of both your workers and your clients.

Ever-Increasing Mobility

Gone are the days when workers lined up to enter the office, ready to punch the time card so they could schedule their breaks and their exodus based on the tick of the clock. Relatively recent changes in the tools used by workers have ushered in an era of increased mobility, one in which workers are no longer tied to a physical desk in a physical office.

Instead, workers travel near and far to perform their business tasks. They roam from office to office within the enterprise, or they hop on a plane and travel across the continent. Laptop computers, cell phones, and network-enabled PDAs are commonplace among an increasing number of workers.

Research shows that today's workers can be divided into four groups: deskbound workers, teleworkers, campus nomads, and road warriors. Most enterprises have most, if not all, of these types of workers.

Deskbound workers

In the traditional workplace, the deskbound worker is king. Often called traditional workers, *deskbound workers* each have a physical desk in an assigned office or cubicle. The workplace for these workers seldom changes, but their needs and expectations evolve nonetheless.

Deskbound workers are typically well equipped with the communications devices they require: a personal computer for data and a desktop phone for voice. Because such workers are not mobile, they are easier to plan for than those in other worker categories.

Teleworkers

In many ways, teleworkers are similar to deskbound workers. The only difference is that their desk is not at your enterprise building. *Teleworkers* (not exclusively telecommuters) include employees working from an office in their home, a hotel, a client site, or any other fixed location. They work from a distance, typically through a wired connection.

How connected are you?

When asked how they stay connected with their organizations, many workers point to their personal cellular phones. But how connected are you, when all you have is a cell phone? When you're on the road with a cell phone

- ✓ Can you transfer a client to another colleague to resolve a billing issue?
- ✓ Can you set up an impromptu conference call?
- ✓ Do you have call coverage when you can't answer the phone?
- ✓ Do you have call accounting for your professional calls, or do you have to voucher and bill clients individually?
- ✓ Do you have call recording so that you can take stock orders for your clients?
- ✓ Do you need to check multiple voice-mailboxes to get all your messages?
- ✓ Do you have access to the latest corporate directory?
- ✓ Can you hide your personal cell phone number from your clients?

These are the frustrations from the users' perspective. What about your organization?

- ✓ What happens when key revenue-producing employees leave to work for competitors? Do your clients end up calling the competition?
- ✓ What happens when a doctor calls a patient who has caller-ID? Will the patient call the doctor directly in the future?
- ✓ Can you ensure regulatory compliance in regards to call recording of stock transactions?
- ✓ Can you reduce international toll charges by bringing calls into the corporate network?
- ✓ Can you process clients' bills accurately and recognize revenue faster?

These are all problems caused by not having a truly enterprise-enabled mobility solution—one that seamlessly connects your nonmobile organization to your mobile one.



Don't confuse teleworkers with people in field offices; they are not the same. If you establish a field office, that office is still an extension of your main office — you control the infrastructure in that office, including the positioning of employees there. Teleworkers aren't in any of your physical offices; they are located elsewhere and work for you using an infrastructure that you don't control but must still manage in many regards.

With the advent of high-speed networking into homes and hotels, the number of teleworkers has increased. DSL and cable broadband have made data sharing fast and easy, even though such high-speed connections are not necessary for all teleworkers. Technology has even made it possible for teleworkers with nothing more than a 56K dial-up connection to connect with your infrastructure and effectively work from a distance.

Campus nomads

As businesses get larger, it becomes harder and harder to physically house all employees in one location. It's not uncommon for organizations, after they outgrow one building, to lease space in a building next door or even build a second building. This growth has led to a campus approach, where the organization occupies two or more buildings in the same general proximity.

In some instances, it isn't even desirable to house employees in a single location. For example, a medical center may include a hospital in one or more buildings, a care center in another building, medical offices in another building, and support services in still another building. Each building in the campus is designed for the specific needs of the people using the building.

When a business grows into a campus environment, some workers require on-campus mobility. They may wander from meeting to meeting, group to group, or building to building. They often use cordless phones, cell phones, and WiFi networks in an effort to be mobile yet still connected.

Road warriors

Have you seen the old black-and-white movies showing the life of a door-to-door salesman, traveling from one town to another, seeking sales for whatever product he is hawking? This is the quintessential picture of a road warrior — the person who spends the majority of his or her time on the road, moving from place to place and client to client.

Road warriors have different needs than campus nomads. The nomad stays roughly within the confines of the enterprise campus, but the road warrior can be called upon to go anywhere, near or far, to transact business.

Most road warriors are equipped with a cell phone, but it's still easy for them to feel disconnected. Sales personnel are often in two or more locations per day. Field service personnel often visit five, ten, or more locations daily. Those in transportation industries are constantly on-the-go as they drive from place to place. In these cases (and dozens just like them), the road warrior is often out of touch with the organization's culture and environment.

Still, in today's data-centric world, road warriors can't rely on sporadic or periodic access to the organization's data. Instead, they need constant contact and communication. Traveling with cell phones, PDAs, and laptop computers, they expect to be able to tap into the organization's network and access data just as if they were in the physical office.

Network Overview

Businesses use two primary types of networks in day-to-day operations: voice and data. Such networks can be implemented in a number of ways.

Phone network

Phone networks are arguably the oldest networks that enterprises use. In virtually all businesses, phones have been ubiquitous for almost a century. During that time, people have grown accustomed to picking up a phone, hearing a dial tone, and placing their call.

Many organizations — even small ones — run their own private phone network. If the organization has their own phone switch or PBX, workers can make calls within the organization without ever tapping into the larger public telephone network.

Any phone user on the organization's communications network can tap into the larger public phone as necessary. Workers seldom think about the fact that when they place a call they are using multiple phone networks:

- ✓ The organization's internal phone network
- ✓ The local phone service provider's network

- ✓ The interstate/international phone network
- ✓ The destination's local phone service provider
- ✓ The destination's internal phone network

The exact networks used depend on the type of call being placed (wire-based or cellular), where the call is originating, and where the call is terminating. Such call routing is automatic and transparent.

Depending on the mobility of the worker, the type of phone network used can vary as well. Workers who are more stationary (such as deskbound workers and teleworkers) primarily use wired phones. These phones may go through the enterprise's phone switch, or they may go directly to the public phone network.

Workers who are more mobile (campus nomads and road warriors) are likely to use wireless phones. Calls placed on these devices are eventually routed through the public phone network; the calls simply travel a different path to access the same network capabilities.

Local area network

A local area network (LAN) is used to share data among an organization's computers. By definition, a LAN covers a local area, such as an office, a department, or an organization. LANs can cover a small group of buildings as well, such as a college. Most organizations have some sort of network in place that allows individuals to share files, printers, and messages, and to collaborate more effectively.



The generally accepted maximum size for a LAN is approximately 1000 square meters. This size limitation is largely due to technical considerations related to wiring and signal strength.

The exact type of network an organization chooses depends on many factors, including the operating system used by the computers on the network and the goals of the organization as a whole. Today's computing environment has only two common wiring technologies for a LAN: Ethernet and token

ring. In addition, wireless technologies convenient for mobile computer users are evolving rapidly. Figure I-1 shows an example of how a LAN may be configured.

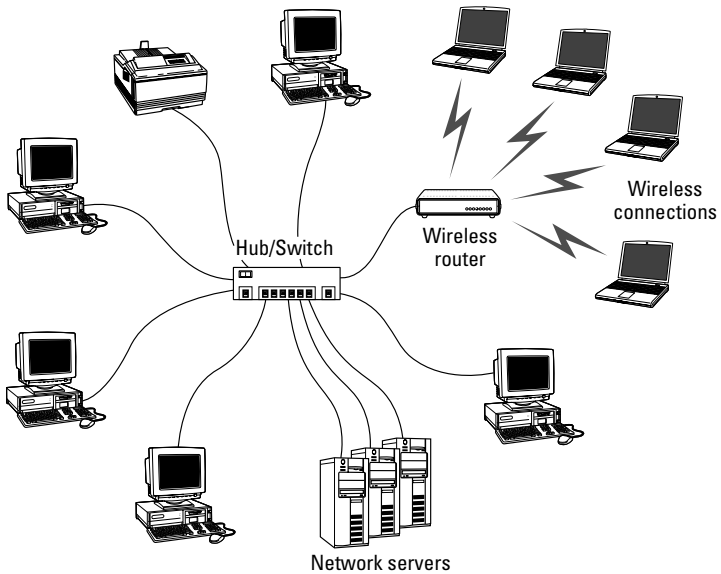


Figure I-1: Local area networks connect computing devices in close proximity.

Wide area network

A wide area network (WAN) is a computer network covering a wide or dispersed geographical area. If an enterprise has many far-flung offices that need to share data with each other, the traditional way of connecting them is with a WAN.

Generally, a WAN can be considered a network of networks, because it is the normal way of connecting different local area networks with each other. WANs allow personnel connected to one LAN to communicate and collaborate with personnel connected to another LAN. Various routers, hubs, and bridges are used to connect the LANs to leased lines that transport data between each LAN.

Internet

In some respects, the Internet can be considered a WAN because it allows different networks (LANs) to connect with each other. The history of the Internet is interesting and well-documented, so there is no need to delve into that aspect of computing here.

The Internet is a public network, meaning that it is accessible to almost anyone. To connect to the Internet, a computer (or LAN) needs at least one IP address. This address uniquely identifies the computer or network on the Internet. A router, positioned between the computer or network and the Internet, is used to route communications between the computer and the Internet as a whole.

To establish a connection to the Internet, LANs or computers generally connect through an Internet Service Provider, or ISP. An ISP essentially operates its own WAN, offering connections to computers or LANs on one side and connections to the Internet on the other.

Mobile workers who do not access the Internet through a local area network have two general ways to connect to the Internet: dial-up and broadband. Dial-up means that a modem is used to dial into the Internet through an ISP's computers. Dial-up speeds generally max out at about 56 Kbps, or about 56,000 characters per second.

Broadband connections are typically offered through full-time connections using either DSL or cable-modem technologies. Greater availability and higher data speeds are available, sometimes up to 1.5 Mbps, or approximately 26 times faster than the best dial-up connection.

Virtual private network

A virtual private network (VPN) is an encrypted private communications session established using a public network as the communications medium. Because connections to the Internet are so easy and economical these days, many enterprises are relying less and less on their own WANs. Instead, they establish their own VPN over the Internet by adding extensive encryption and security features that protect their communications while traveling over the public network.



Secure VPNs use cryptographic protocols (sometimes called *tunneling* protocols) to provide the necessary confidentiality, sender authentication, and message integrity to achieve the desired privacy. These safeguards help prevent others from snooping on communications, altering messages, or pretending to be someone they aren't.

VPNs can be implemented through software or hardware. A software VPN is typically used on a laptop to securely connect it back to the corporate network, allowing access to, for example, e-mail, an IP softphone, and corporate data.

A hardware VPN device can connect a small office or home office to the main corporate network. For instance, the hardware allows users to connect computers and other devices, such as a physical IP phone, to the network. Users are able to work from the remote location seamlessly, as if they were physically located on the network.

A well-designed VPN can provide a number of benefits to an enterprise, including the following:

- ✓ Connectivity over wide areas at a reduced cost when compared to leased lines
- ✓ Improved security and confidentiality of data communications
- ✓ Improved productivity between remote locations
- ✓ Simplified network hardware requirements and, therefore, reduced costs
- ✓ An economical, scalable approach to networking
- ✓ A framework for supporting a mobile workforce

Network convergence

Many enterprises are increasingly migrating their traditionally separate voice and data networks to a single network. Because voice can now be handled digitally, it is possible to introduce voice, as data packets, to the same local area networks traditionally used only for computing.

Blending your networks has great benefits in many areas, particularly in the face of an increasingly mobile workforce. A blended network is easier to implement physically, and it

can reduce costs because you no longer need to maintain and manage two separate networks. In many cases you can use your existing network infrastructure for your blended network. You can even use public networks — such as the Internet and the existing phone system — as integral parts of your blended network.

The tradeoff is that a converged network needs to give high priority to voice communications (over, say, Web surfing) because conversations are more sensitive to packet delay, jitter, and lost packets. Quality-of-service requirements ensure that voice packets are delivered on time and in the right order.

Networks and Your Workers' Needs

The network needs of your workers depend, in large part, on their mobility level. It may be sufficient for deskbound workers to access just the phone network and your local area network. However, these levels of connectivity will not suffice for other, more mobile workers in your enterprise.

If you consider the various networks available in most businesses, you can easily come up with a matrix that shows which of your workers need those networks. Table I-1 shows an example of such a matrix.

An enterprise moving toward a more blended network infrastructure may have an even simpler network matrix. If you move to a completely packetized voice system, which can route voice over whatever data network is available, you may be able to get rid of the entire first row in Table I-1.

Devices and Applications

For workers to take advantage of whatever networks are available to an enterprise, they need various devices and applications. Each device or application that can access the network provides the worker with some type of communication capability.

Table I-1 Mapping Workers to Networks

	<i>Deskbound Workers</i>	<i>Teleworkers</i>	<i>Campus Nomads</i>	<i>Road Warriors</i>
Wired phone network	✓	✓		
Cellular phone network			✓	✓
Wired local area network	✓			
Wireless local area network			✓	
Dial-up Internet		✓		
Broadband Internet		✓		
Virtual private network		✓	✓	✓

Workers may rely on any number of devices and applications, including the following:

- ✓ **Wired phone:** A traditional desktop phone is essential for anyone working at a desk or a workstation.
- ✓ **Cordless phone:** Campus nomads may find a cordless phone helpful while fulfilling their duties.
- ✓ **Cellular phone:** Essential for those on the move, cellular phones allow workers to roam without being tethered to the enterprise's physical location.
- ✓ **Personal computer:** A PC is the staple for workers with a fixed workplace, such as deskbound workers and teleworkers.
- ✓ **Laptop:** Absolutely essential for campus nomads and road warriors, a laptop allows people to take their familiar environment with them wherever they go.

- ✓ **Softphone:** Avaya's softphone (described in Part II) is an essential enterprise application that allows workers — regardless of their location and mobility level — to take advantage of the same communications network.
- ✓ **WiFi phone:** For those with access to wireless networking hotspots within the enterprise, WiFi phones can provide voice-quality phone support using existing wireless technologies. (A *hotspot* is an area where a wireless network signal is available.)
- ✓ **PDA:** For some workers, a personal digital assistant or a similar smart handheld device can be used for a variety of tasks previously performed on full-fledged computers.

The choice of which devices and applications to use depends largely on a worker's job function and level of mobility. For instance, deskbound workers may get by just fine with a phone and a PC connected to the local area network.

Viewing the Mobility Spectrum

As workers move along the mobility spectrum — from deskbound workers to road warriors — their needs change. You got a glimpse of workers' changing needs in Table I-1. That doesn't give the whole story, however, because it deals only with the network infrastructure utilized by various workers.

A more complete analysis must take into account not only the infrastructure but also the devices and applications used by an enterprise's workers. Table I-2 provides a different way of viewing the complete mobility spectrum.

Any enterprise strategy for mobility must take into account all the available networks as well as the tools that may be used by people on those networks. If you examine your workers' needs, their tools, and your business networks, you'll have a good idea of the building blocks available to you when you develop your own mobility strategy.

**Table I-2 Tools and Network Requirements
by Type of Worker**

	<i>Deskbound Workers</i>	<i>Teleworkers</i>	<i>Campus Nomads</i>	<i>Road Warriors</i>
<i>Networks</i>	Wired phone	Wired phone	Wireless LAN	Cellular
	Wired LAN	Dial-up Internet	VPN	VPN
		Broadband Internet		
		VPN		
<i>Devices and applications</i>	Wired phone	Softphone	Cordless phone	Cellular phone
	PC	PC	Soft-phone	Laptop
			WiFi phone	PDA
			Laptop	
			PDA	

Understanding Your Client's Perspective

You can end up with a myopic view of business if you focus strictly on workers, tools, and networks. It's important to remember that these three elements are in place to do one thing: serve clients.

If your clients' expectations are not met, it won't matter if you have the best infrastructure in the world. Your infrastructure should be closely matched to your enterprise's need to meet its clients' expectations.

For instance, as workers become more mobile, clients might begin feeling more disconnected from those workers. This can give the enterprise an impersonal feel, which does not help enhance the enterprise's brand or increase client loyalty.

A case in point: phone tag. It's not unusual for clients to call a central number for an enterprise or a specific department, and then be shuffled directly to voice mail. The worker may be out of the office, at a different location, or just plain inaccessible. When the worker is able to check his or her voice mail, it is often too late to call the client or the client may be unreachable. The result is phone tag, where the client and the worker communicate only through a series of messages.

Each time a client is unable to connect with a worker represents a lost opportunity for the enterprise. Ideally, the communication should take place on the client's schedule, preferably on the first attempt. The results of such an ideal are that the client is well served and the relationship between the client and the organization is enhanced.

By creating and implementing a dynamic, scalable, and workable communications strategy for your increasingly mobile workforce, you increase client satisfaction and continue to respond to their evolving expectations. This helps the organization achieve its goals faster and induces greater and more sustainable growth in the long run.

Part II

Meeting Your Needs

In This Part

- ▶ Avoiding costly mistakes
- ▶ Finding out what unified communications can do for your organization
- ▶ Getting solutions that can help with any mobile strategy

In Part I, you found out that both your workforce and the expectations of your clients are changing, and that you need to meet the needs of that workforce and your clients. In this part, you discover a few of the solutions available to help in that quest.

In the world of competing solutions, you may feel overwhelmed at times. If so, you'll find the information here helpful — you not only find guidance on how to select viable solutions but also get rock-solid suggestions for tools to help meet your mobile needs. These solutions will help your enterprise do the following:

- ✔ Simplify worker communications, so they can do more and get more out of their day.
- ✔ Help workers stay closely connected to clients, colleagues, and partners, no matter where they're located, for faster client response and reduced employee downtime.
- ✔ Give workers more control over their communications, empowering them to be more effective and satisfied at work.

The solutions presented here can help form a solid basis for your strategy. Keep them in mind as you read through Part III, where you discover how to develop your own strategy.



A solution isn't really a solution unless it helps you solve a problem without causing additional, larger problems. The solutions in this part solve problems presented to most enterprises by an increasingly mobile workforce. Even so, if these solutions don't fit into your overall mobility strategy, they may be just stopgap measures instead of real solutions. Review available solutions frequently as you develop your strategy, thereby making sure that there's a good fit between the two.

Avoid Fads

Every day it seems that some new solution is being offered for telecommunications, particularly mobile communications. Discerning the gems among all the new products can be difficult, and in some cases downright dangerous (from a business standpoint).

The leading edge of technology is often called the "bleeding edge" for a reason. Many organizations that adopted brand-new technology later regretted the decision. New, unproven technology is prone to circumstances that can make your purchasing decision risky:

- ✓ **Proprietary technology:** If the technology used in a product is unique to a single vendor, it may be here today and gone tomorrow. Vendors may make decisions that leave you with an "orphan product" in your business.
- ✓ **Limited service:** New technology may not have a knowledgeable service network in place to provide the support you need when (not if) you develop problems with your systems.
- ✓ **Large expense:** When a new technology is rolled out, the vendor seeks to recoup costs over the sales life of a limited number of products. If you purchase soon after a technology's release, you may pay more for the technology than if you were to wait and allow it to mature.
- ✓ **Limited track record:** Most new technologies have no in-field track record to analyze. Well-established, more mature, enterprise-class technologies often have clients and histories that you can look at to see what problems, if any, are inherent in the technology.

The bottom line is that you should carefully determine which technologies you want to implement in your mobile strategy. By doing so, you can avoid fads — solutions that seem like the right answer at the time but may end up being the wrong business decision down the road. Fads are costly not only monetarily but in other ways as well.



One way to avoid costly mistakes when looking for solutions is to work with a knowledgeable consultant. Part III provides strategic guidance that you can use with any consultant to help ensure the best results for your situation.

Establish Unified Communications

In any given workday, employees may transition through different modes as they perform their jobs. They may be road warriors as they commute to work, deskbound workers when they arrive in the office, and campus nomads in the afternoon. Another worker may smoothly transition between roles as a teleworker when working from home and a road warrior when visiting customers. Still other workers may be unexpectedly thrust into a situation where they need to take advantage of whatever mobile capabilities your organization has to offer.

Understanding the “mobility profile” of key employees is an important step in ensuring that your enterprise has the right communications capabilities, devices, and infrastructures to maximize individual productivity and effectiveness.

Although many office workers rely on communication functions such as voice mail, conferencing, and call transferring, many other communications applications are essential for performing their jobs and interacting with clients and colleagues. Extending communications tools such as departmental contact points, collaboration capabilities, interactive messaging, and other telephony features to your mobile workforce is where you generate real value for your organization.

Enterprise-class mobility gives you the ability to make all your communications tools available to all employees, regardless of their location or communications device, as if they were

sitting at their office desk. Equally important, your employees benefit by maintaining a higher level of connection with the enterprise as a whole.

Avaya believes that any robust mobility solution must include a unified approach to meeting common business communications needs. Thus, a key component in meeting the mobile needs of your organization is *unified communications*: the concept that the most common methods of communicating (phone, fax, e-mail, and more) should be managed and accessed through a single infrastructure.

Avaya's Unified Communication Center (UCC) uses voice recognition to access corporate information and communications tools from any phone. UCC provides the following features:

- ✓ Speech access to voice messages from Avaya messaging systems and e-mail messages from Microsoft Exchange or IBM Lotus Domino
- ✓ Ability to address messages by voice using the voice mail directory, Microsoft Exchange or Lotus contacts, UCC contacts, and a corporate LDAP directory
- ✓ Ability to play back voice mail; send, forward, reply to, and delete messages; and call the sender
- ✓ Integrated text-to-speech technology so you can hear e-mails read to you over the phone (so that they can be accessed anywhere); use spoken e-mail commands, such as reply, reply all, send, forward, delete, and save; and even call the sender of the e-mail (handy when you're listening to e-mail in your car)
- ✓ Ability to immediately conference with anyone from your corporate directory or personal contacts
- ✓ Single-number accessibility for users, regardless of their location
- ✓ Management of personal contacts, calendar, and tasks from any location
- ✓ Message navigation by message status (urgent, unread, read), media, and sender

With unified communications, historically separate communications methods can be accessed through a single ubiquitous interface — your voice speaking through the common

telephone! Users simply speak, and the system follows their commands and provides the information they request. Workers immediately become more accessible and more productive.

Implement VoIP

One of the most exciting developments in the world of communications is the convergence of voice and data in a common network infrastructure. Nowhere is this more evident than in the world of voice over IP, or VoIP. This technology was alluded to in Part I. Although a full discussion is beyond the scope of this book, a quick introduction is in order — after all, VoIP can be integral to any successful mobility strategy.

IP is an acronym for Internet protocol. Trust me when I say that the technicalities of what IP is and how it works would bore you to tears. You need to know a little about how IP works, however, because it's the basis on which the Internet works.

When you want to send something over the Internet, such as a message or a file, it isn't sent as a whole. Instead, the larger item is broken up into smaller units called *packets* and then sent over the Internet to a destination. (The route followed from you to the destination is not important.) The packets are reassembled into an entire message, file, or what-have-you at the receiving end.

Voice over IP allows audio to be sent over the Internet using the same technology that has been used for decades to send messages and files. This means that voice communications, which were the purview of phone companies, can be packetized and sent over the same networks already used for an organization's existing data.

Although VoIP is still relatively new, the technologies on which it is based are both mature and proven — key elements in building a cost-effective and robust strategy for your mobile workers.



For more information on VoIP, refer to *VoIP For Dummies*, Avaya Limited Edition (Wiley).

Explore Potential Solutions

As mentioned, when seeking to provide mobile solutions, you need to avoid those that are simply fads — here today and gone tomorrow. By sifting through the dross out there, you can find some gold that will help you create a solid basis for your mobile strategy.

This section highlights some of the more promising solutions available. A few are tried and true, and others are relatively new but based on solid technologies.

IP softphone

Ideal for campus nomads and teleworkers, the softphone (and a headset) lets you place and receive phone calls from your laptop, desktop, or PDA. Through a simple graphical user interface linked to your Microsoft Outlook or Lotus Domino contact lists and other directories, you simply “click to dial” to quickly reach important contacts and clients. Figure II-1 shows an example of Avaya’s softphone.

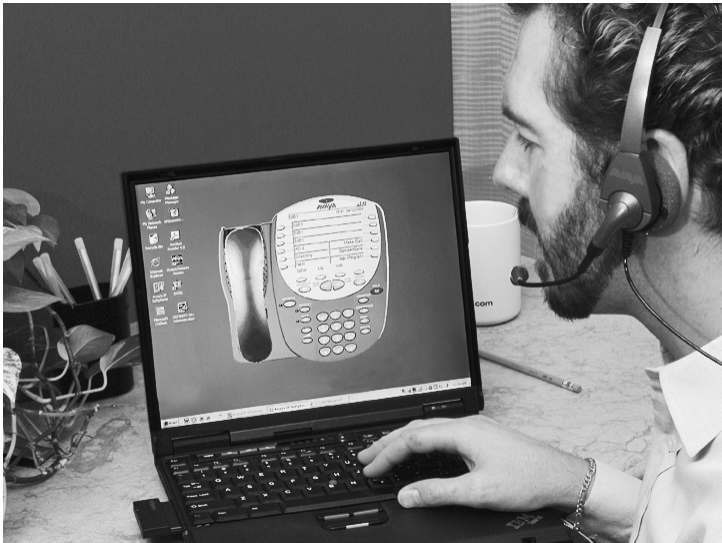


Figure II-1: Avaya’s softphone allows users to access regular telephone features through a computer network.

You use the same phone number for the softphone and your desk phone. This means callers can reach you using a single phone number, thereby reducing frustrating phone tag.

A softphone has all the same controls and features as a regular desk phone, plus more. For example, you can automatically maintain a log of your calls on your PC as well as personalized notes for each call in your call history — even if you have a non-IP desk phone.

The latest IP softphones support instant messaging, presence, and video applications, which let users find and contact the right person virtually instantaneously through a phone call, video call, or an instant message. (See the “Presence and availability” section, later in this part.)

Voice over WiFi

WiFi stands for wireless fidelity, a linguistic play on the old term HiFi, which referred to high-fidelity audio recordings. WiFi is a generic term relating to any number of technologies used to implement a wireless local area network.

By combining VoIP with WiFi, vendors are quickly starting to develop voice over WiFi technologies, which essentially provide the ability to have cordless phone conversations utilizing an existing wireless network within an enterprise. Phone calls are automatically routed through the data network to the organization’s phone system, where they are seamlessly connected to the regular phone system or to an extension within the corporate phone system.

For some products, voice over WiFi is only part of the solution. Employees on-the-go can even utilize dual-mode wireless telephony solutions. These devices operate on both WiFi (in-building) and cellular (out-of-building) networks. As you can see in Figure II-2, these integrated phones look just like regular cell phones.

This great new technology automatically and transparently switches calls between networks, reducing costs and giving workers untethered mobility. As you walk from your office to the parking lot, for example, your call moves seamlessly, mid-conversation, from one network to the other.



Figure II-2: An integrated cell phone/WiFi phone.

Presence and availability

One of the most popular applications for the Internet (besides e-mail and the Web) is IM, or instant messaging. Instant messaging programs, such as AOL's AIM and Windows Messenger, allow users to establish instant text-based contact with a "buddy list" of friends and acquaintances.

In the mobile workplace, the concepts of presence and availability help extend the buddy-list idea even further. With *presence*, the network instantly knows that you're online, what devices you have, and how to best reach you. Because the network knows your devices, your buddies know which media (text-messaging, e-mail, phone, or video-phone) you are available through. Co-workers can then choose the most effective medium for reaching you, and you know the best way to reach them.

Availability gives you control over who knows whether or not you are available. Thus, you can control whether you are out of the loop during certain parts of the day, allowing you to focus without interruption and making your day more productive.

Together, presence and availability features give everyone in the enterprise a “peek over the cubicle wall” capability. The result is better accessibility, lower response time, and easier mobilization of team members.

IP applications for contact-center agents

Teleworking is finally coming of age, thanks to specialized IP softphones integrated with contact-center software. This powerful combination enables communications workers, such as reservations agents and help-desk personnel, to work from remote locations — even from their homes.

Due to IP softphone capabilities, remote workers enjoy access to the same data and communications tools they would have if situated together in an expensive, centralized contact center. Managers can still manage far-flung personnel, because they retain the same monitoring capabilities they would have in a central location, such as monitoring the status of inbound calls, outbound calls, and which workers are handling which calls.

The bottom line for the enterprise is that they get cost-effective contact-center performance, a larger labor pool to draw from, and tremendous operational flexibility.

Cellular integration

In an increasingly mobile workplace, you can’t always count on workers to be near their desk phones. A new crop of communications applications allows calls to be transparently bridged from a desk phone (or an organization’s phone system) to any digital cell phone or wireless service provider. These applications show great promise for providing workers with a single universal phone number for connectivity.

Cellular integration also allows the mobile worker to transfer calls, conference with additional parties, and place and answer calls on multiple lines, just like at a desk phone. Access to these common desk-phone communications tools allows workers to increase productivity even while on the road. It no longer matters whether workers are in or out of the office — even if they are in a car, at a hotel, or at a client's location — as long as they have access to a cellular signal.

Unified voice, Web, and video conferencing

Several solutions described so far allow you to extend helpful communications tools, such as conference calling, to mobile workers. Using any of those tools, your worker can lead or participate in a conference call, regardless of where he or she is physically located.

You can conference in other ways, however. Many new applications also allow you to use your data networks to initiate Web conferences. In these, users can see, on-screen, what each other participant is seeing. Thus, you could demo a new product, share ideas in a collective document, or evaluate a Web site. Each participant can “mark” something on-screen, and the other participants see the mark and can add their own.

Advancements in video technology have also made video conferencing over existing data networks a reality. Gone are the days when video conferencing required dedicated facilities and expensive usage charges. Using inexpensive Web cams, users can conference so that each participant can see the other participants. The result is a face-to-face meeting where the “faces” are in different rooms, in different buildings, or in different places around the world.

Part III

Defining Your Own Strategy

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In This Part

- ▶ Understanding the advantages of a mobile communications strategy
 - ▶ Focusing on your clients' needs
 - ▶ Accounting for cost-related issues
 - ▶ Dealing with operational issues
 - ▶ Developing a solid business case for a mobile communications strategy
-

After you recognize that the workforce — your workforce — is changing, it is imperative that you plan for that change and manage your enterprise's response to it. To fail to plan is a sure-fire way to allow your competition to gain the advantage. (Conversely, if your competition fails to adequately plan for the changing workforce, you can gain competitive advantage over them by implementing your own coherent strategy.)

In this part, you'll find guidance and advice on how you can confidently create the best strategy for your circumstances. Although there is no "one-size-fits-all" blueprint for mobile communications, general guidelines can help the process go more smoothly and make the outcome more beneficial.

Gain Advantages with a Coherent Strategy

Have you ever wondered whether a mobile communications strategy could really help your organization? You're not alone; many executives and managers wonder the same thing. The

important thing to remember is that change is going to come — in fact, is coming — whether you plan for it or not. If you make plans, you can meet the future with some confidence, rather than feeling overwhelmed.

Consider these real-world examples of how a coherent strategy could help your organization:

- ✓ Recent bad weather has prevented your employees from getting to the office, and now several major business deliverables are in jeopardy.
- ✓ Several important clients have been complaining that key employees in your organization are inaccessible when they are out of the office, and several important requests made through e-mail have gone unanswered.
- ✓ One of your best salespeople resigned to work for the competition, and since she was using her personal mobile phone for business calls, two important clients are now calling the competition.
- ✓ Your Human Resources department has reported that it will become more difficult to attract good employees in the local market unless your organization can offer a better balance between work and personal life.
- ✓ Your at-home workers feel isolated from their peers and need the same productivity tools that their colleagues have back in the main office.

Chances are you're seeing one or more business situations like the ones just listed. An enterprise that has a mobility strategy in place can quickly adapt to the challenges presented by these situations without the need to disrupt workflow or change worker habits.



There's a "gotcha" in developing any mobility strategy. The wide range of mobile technologies available today can offer tremendous opportunities. But these technologies can also fall short of expectations if they aren't integrated with the organization's current workflow, can't grow with the organization, and can't be implemented and managed in a strategic manner.

A complete enterprise mobility solution should address the needs of your employees, whether they are teleworkers, campus nomads, or road warriors. The strategy needs to

ensure that consistent capabilities and services can be provided regardless of access modes.

Simply put, enterprise-class mobility is an approach to give consistent, equivalent communications empowerment and control to all your workers, whether they are at their desk or home office, moving around the enterprise campus, or out on the road.

To develop a coherent strategy, you need to be concerned with three areas: the client's experience, costs, and operations. Each of these major focus areas are examined in the rest of this part.

Focus on Your Client's Experience

In dealing with changing work habits and new technology, it's easy to forget that the primary focus in any business strategy — including one for mobility — is your client's experience. Clients keep the doors open, and helping clients have a good experience with your organization builds loyalty and fosters repeat business.

Fortunately, a positive client experience is measurable. When it comes time to implement your mobility strategy, consider measuring how satisfied your clients are when communicating with your organization. Then continue measuring as you roll out the strategy. A successful strategy should result in a quantifiable increase in satisfaction.

As you put your mobility strategy together, focus on the following elements related to client satisfaction:

- ✓ Where and how are clients contacting your organization?
- ✓ How could your mobility strategy help clients get the answers they need, when they need them?
- ✓ Would a reduction in telephone tag improve client satisfaction?
- ✓ Will our mobility strategy improve brand awareness and client loyalty?

Identify client contact points

An important step in creating your mobility strategy is to identify the places where clients make contact with your organization. Most people think of client contact points as their brick-and-mortar buildings, where people walk in and talk to a salesperson or a receptionist. But this is only part of the story. Chances are good that most of your client contacts occur through other means, such as phone, fax, and e-mail.

Identify the places where people make contact with your organization and all the places where you expect them to make contact over the next three years. Then identify the people associated with those contact points. For instance, who among your personnel is likely to receive calls, answer faxes, or accept e-mail? These personnel are the contact points for your organization.

After you identify those individuals, you can get a good idea of the scale of your mobility strategy. If you have sixty or seventy people engaged in client contact, and these people are mobile in any way, your strategy must account for their mobility. In reality, your strategy must *anticipate* their increasing mobility and provide ways for them to remain in contact with your clients.

Another benefit of identifying client contact points is that you can create an inventory of the communications applications and devices in your organization. You should identify inconsistencies in how these tools are deployed and used, because these inconsistencies can hamper collaboration and communications.

Get answers for clients

Two scenarios invariably leave a sour taste in a client's mouth: auto-attendant hell and passing the buck. Unfortunately, these two scenarios are all too common in organizations that have an incomplete mobility strategy.

Auto-attendant hell occurs when clients call your main number, only to be greeted by your automated attendant (for example, press 1 for billing, press 2 for sales, and so on). Buttons are pushed, transfers are made, and eventually the

clients grow weary of making no progress in talking to someone who can answer their questions.

(I experienced this scenario just this morning with a large software company. I gave up trying to contact a living, breathing human after fifteen minutes and twelve button pushes. The company has no idea that a potential client walked away because of the way they implemented their communications system.)

Passing the buck occurs when a client actually does get to talk to a human being, but it's the wrong human being. In trying to find the right person, the client is passed from department to department. If the client is lucky, an answer is found after several transfers. More often, however, one of those transfers dead-ends at the desk of a person who is unavailable and the client ends up in a voice mail queue.

A properly implemented mobility structure can help clients find the answers they need faster and easier than before. Clients are less likely to end up in dead-end voice mail because mobility solutions can automatically route communications to wherever the worker is located. In addition, fax and e-mail communications can be just as easily routed to the individuals in your organization who'll have answers for your clients.

Reduce telephone tag

Do you like playing telephone tag? I don't know a single person who does. It frustrates clients and, in many cases, gives clients the opportunity get answers somewhere else — most likely from your competition.

Any mobility strategy should seek ways to put clients in touch with those who can satisfy their needs, when they need them satisfied. If clients can get answers quickly without the need to wait for return calls, they are more likely to make the decisions that reward your organization.

If your mobility strategy includes unified communications (see Part II), phone tag can be reduced by putting clients in touch with the right people, no matter where they are. No longer are workers tied to a desk awaiting a call, and no longer do clients need to second-guess whether a real person will answer their call.

Enhance your brand and image

Does your overall business strategy include strengthening your brand? Everyone wants their organization or product name to be instantly recognizable, and most strive to become a household name. If you sell widgets, you want people to think of your company first when they think of widgets — this is the heart of the brand awareness concept.

A simple business axiom is “better service enhances your brand.” If people have a good experience communicating with your organization, they will remember it and spread the word. If people have a bad experience, they will spread that word. Your mobility strategy must seek to enhance your brand awareness and improve your organization’s image. A strategy that works against your image or, worse yet, no strategy at all can erode client satisfaction and limit your growth.

Focus on Costs

Every enterprise needs to be concerned with the bottom line. By running a tight ship — financially — a business can remain on a solid footing and meet whatever challenges the future may hold.

This is especially true when it comes to your mobility strategy. Mobility, as part of your overall communications strategy, often represents a huge cost center for any organization. Properly implemented, your mobility strategy can help you get a handle on costs and more effectively budget for your future needs.

When you take a look at the costs related to your mobility strategy, keep the following points in mind:

- ✓ Costs based on the origin of your outgoing communications may be hidden.
- ✓ As you assess your mobility needs, be realistic and avoid overengineering any solution.
- ✓ Support costs can vary significantly and add to the overall cost of your strategy.
- ✓ Your strategy’s total cost of ownership consists of more than just purchasing some new hardware.

Identify the origin of telecom charges

Not all cost issues are immediately apparent. For instance, many organizations spend countless thousands (or millions) of dollars every month on cellular service for their mobile employees. What they fail to take into account is that a good chunk of this service bill could be lopped off if the organization analyzed where the calls were originating.

For instance, if campus nomads are away from their primary desk, they may choose to share their cell phone number with clients, who now always use the cell number. Such usage, while understandable, is inherently more expensive than using a different communications device.

As part of your mobility strategy, you may want to consider equipping eligible employees with dual-capability phones. If the phone is used within your facilities, the calls could be made using wireless VoIP. The phone would automatically detect the availability of the network and transparently route the call through the proper equipment. Only if the network is unavailable would the call be routed through a regular cellular service. Such a strategy could significantly reduce cellular charges if you have employees who use their phones within your facilities.

Similarly, if the employee is at home or in a hotel with his or her laptop computer and access to the Internet, a cell phone may not be the most cost-effective communications device. Instead, your mobility strategy may provide for a softphone, a software application that works through the laptop's networking connection. Voice calls could be routed through your communication infrastructure, resulting in lower costs for cellular service without degradation of service quality.

Assess realistic needs

Any mobility strategy must make assumptions about your current and future communications needs. If you fail to make realistic assessments, you stand a good chance of overengineering your systems, essentially wasting money that may be better spent elsewhere.

The best way to assess your needs is to perform an inventory of your current systems and procedures, and then compare that inventory to what is necessary to implement your desired mobility strategy. This will allow you to determine not only which solutions will meet your current needs but also which ones can work best with your existing systems.

In any needs assessment, you also must consider growth. Businesses seldom remain unchanged. As your business expands or contracts over the next few years, your solutions must take that change into account.



It's a good idea to realize that you may be too close to your situation to effectively evaluate your needs. Many enterprises find it beneficial to work with outside consultants who can analyze existing networks and identify missed opportunities for reducing costs, while itemizing realistic needs for the short- and long-term.

Ask your consultant (perhaps as part of a potential vendor's team) to help assess your users' needs and demonstrate solutions that can extend your communications, providing seamless solutions to all workers. The consultant might also perform an assessment of wireless LAN performance and its ability to handle voice traffic. (This is particularly important if you envision your strategy including wireless VoIP.)

Manage support costs

When considering which vendors can help you successfully implement your mobility strategy, you need to consider ongoing support costs in your decisions. In some cases, after-sale support costs can significantly add to the overall cost of your strategy. If the support costs are too high when compared to the services actually rendered, your return on investment can suffer dramatically.

Another thing to keep in mind is that if you choose multiple vendors for your solution, you have to deal with multiple support issues. Multiple support sources may frustrate your efforts to keep your solutions operating at all times.

Also consider the hidden costs of support: personnel costs and downtime. Every hour that your personnel spend with

support issues adds to the overall cost of support and may represent opportunity costs that aren't readily apparent. In addition, if ongoing support makes your solutions either periodically unavailable (for routine maintenance) or immediately unavailable (for unexpected failures), you have costs associated with covering those downtimes.

Determine the total cost of ownership

Your mobile communications strategy consists of two major elements: systems and service. With the exception of maintenance fees or support costs, systems tend to be a one-time cost, easily identifiable and budgeted for.

What is harder to anticipate and budget for is ongoing service. For instance, how much will your carrier charges vary over the short term? What will local access providers charge for tapping into their networks? What about cellular service? How about network access fees?

An enterprise may need to account for any number of service fees to transport their data and communications over other organizations' networks. These costs often vary, based on the bandwidth required and the desired availability of the services. When it comes to a comprehensive mobility strategy, these costs become part of your total cost of ownership.

As much as possible, you need to nail down your costs. In many cases, a successful mobility strategy may result in reducing your total costs, based on what you are currently paying without such a strategy in place. For instance, many organizations have slashed their long-distance charges by 60 to 80 percent just by implementing VoIP as part of their strategy.

Another thing to keep in mind is that you can often reduce your total cost of ownership by working with fewer vendors. Make sure you examine all the services that a vendor can offer, and then see whether the cost of having the vendor provide multiple services is cheaper, in aggregate, than having multiple vendors provide the same level of service.

Focus on Operational Issues

Inevitably, a mobility strategy will affect the way your organization operates. This means that, as part of your strategy, you must focus on operational issues that you will encounter.

Most operational issues come into play after your strategy is implemented, but that doesn't mean that you can't think through them ahead of time and make appropriate plans. As you develop your strategy, you'll need to take the following issues into account:

- ✓ Set a goal to implement a two-pronged, one-number model for your organization.
- ✓ Look for ways to train users on how to proficiently use your mobility solutions.
- ✓ Implement technical support for end-users.
- ✓ Create accessibility policies that indicate when employees need to be available and how.
- ✓ Put security measures in place that help ensure the availability and integrity of your networks.

Your industry niche may require that you address other operational issues not listed here. Make sure that you discuss all issues, beforehand, with your key personnel — both those responsible for implementing the strategy and those responsible for making sure it continues to work.

Aim for the one-number model

In Part II, you discovered how unified communications can provide solid benefits for your organization. An integral part of the benefits offered by a proper mobility solution is the ability to establish a one-number model. This model has two facets, both of which benefit the organization and the client.

The first facet is what your clients see. With a one-number model, clients dial a single number to communicate with your organization or main contact people. Your automated attendant can use a speech-synthesis system to route calls to the desired department or individual. Implemented correctly, such a system would allow clients to talk to a real person with

only one or two commands. Transactions are accelerated, and the client has a great experience with the organization.

The second facet has to do with phone numbers used to contact employees. With a mobile workforce, a one-number model means that the number follows the employee, wherever he or she goes. A proper mobility solution would know where to forward the employee's calls to make the connection. Instead of playing phone tag, employees are only a single call away, through a single number.



employees on employee-owned cell phones, the phone number leaves the company when the employee does. With a one-number solution, however, the phone number belongs to the company, not to the employee, and is directed to whomever the company decides. This means that customers stay with the company, not the employee.

Train users

Any investment in a new or an expanded communications infrastructure carries the responsibility of training employees in how to better use the system. With a comprehensive mobility strategy, training users properly results in greater productivity and better use of the infrastructure. In other words, you get better utilization, which means a faster return on investment.

How training occurs depends, in large part, on how extensively your strategy modifies your current infrastructure. It also depends on how intuitive your new communications tools are. For instance, Avaya's Unified Communications Center (discussed in Part II) utilizes speech synthesis and verbal command recognition. Users can simply "call the system" and give voice commands as to what they want to do. This intuitive approach means less training — and increased productivity — than a system that relies on pushing buttons on a telephone keypad.

Remember, as well, that your mobile strategy needs to provide two different training programs: one for current employees and another for future employees. Your training may also not be able to be in-person; with a mobile workforce, you may have employees who are never near a physical training center.

Trainers may also be called on to educate users about which tools are best for the job at hand. For instance, some people use a PDA for keeping track of addresses. Although this is one possible use for a PDA, more cost-efficient tools can be used for the same purpose, and those tools can be part of an overall mobile strategy.

Provide technical support to users

Some organizations consider technical support to be just another form of training. Although technical support personnel may need to train people on how to use equipment or systems, they also need to utilize skills that trainers may not get to exercise all that often. (Tech support people need to be experts at identifying the specific problem at hand and responding, on point, to that specific problem.)

As part of your mobile strategy, you can provide technical support either by in-house personnel or by outsourcing to others. If you use in-house personnel, they will probably need special training so that they can become experts in how to use your specific devices and applications. In addition, they should have general knowledge about telecommunications, vendors, and networks.

If you outsource technical support, the best place to turn is to your vendors. Look for a vendor that can provide, as part of their continuing service to you, technical support for either end-users or key contact personnel in your organization, who in turn provide support to users.

Create accessibility policies

One potential drawback to a well-implemented mobile strategy is that your employees may feel like they're constantly tethered to the organization. This is particularly true if you've achieved the one-number method described earlier in this part. If personnel can always be reached — wherever they are — by dialing a single number, they may feel overwhelmed by being in constant contact with others.

The solution to this potential problem is to make sure that you develop clear accessibility policies that define when employees

should be accessible and when it is permissible for them to be “off the grid,” inaccessible to others.



Make sure that any accessibility policies are developed as part of the mobile strategy itself. These policies are important to the well-being of all your personnel.

Ensure security

One final operational issue is easy to overlook when planning for the future: security. The effect of your mobile strategy is to create an operational system that offers concrete cost and performance benefits for your enterprise. Like any similar system, a mobile communications system is susceptible to security breaches.

Make sure that your strategy includes a security component. Indicate what steps you will take to make sure that the infrastructure is open only to those with the proper clearance. You'll need to think through how you handle user accounts, passwords, and similar safeguards that limit access. Pay particular attention to how you'll limit access — especially remote access — by past employees and temporary workers.

If your mobile strategy involves the merger of your voice and data networks, you'll need to redouble your efforts to ensure that the security of those networks is not compromised. Make sure that you allow for additional hardware and software (especially firewalls) to segment your network and thereby limit unauthorized incursions.

The right hardware and software for your mobility solution can go a long way toward implementing a powerful accessibility policy. For instance, solutions from Avaya can allow or disallow specific calls based on the time of day or who is calling. For example, if Carmen receives a call from her mother or her boss, the call is put through regardless of the time of day. But if she receives a call from someone else during her downtime, that call may be automatically routed to a different destination, such as voice mail or a calling pool.



Most people looking at implementing a mobile strategy express the greatest security concerns about VoIP. If you are in this category, you may be interested in reviewing a report entitled “Security Considerations for Voice Over IP Systems.” Published

by the National Institute of Standards and Technology, the report is available for free at

<http://csrc.nist.gov/publications/nistpubs/800-58/SP800-58-final.pdf>

The report is technical, but it provides an excellent in-depth look at important security issues.

Build Your Business Case

In some enterprises, part of creating a successful mobile strategy is building a business case for that strategy. Business analysts consistently look for the financial benefits of implementing any major strategy.

If you choose the right vendors to help implement your mobile strategy, you'll find that it's much easier to build your business case. Look for vendors that offer the following:

- ✓ **A way to leverage your investment in existing communications infrastructure:** Most organizations have invested heavily in communications tools and software. If the vendor's solutions can take advantage of that investment, your capital outlays will be significantly less than what other vendors may offer.
- ✓ **A simple method of administering and using the solutions:** It stands to reason that the easier a solution is to use, the lower your overall costs. Simpler solutions require less money for training and support and result in greater productivity for workers.
- ✓ **Consistent capabilities regardless of location or device:** In a mobile workplace, not all of your workers will have access to the same tools (nor should they). However, those users should have access to the same features and functionality, regardless of the tools they are using.
- ✓ **The ability to integrate stationary communications with mobile communications:** Not all of your workers will be mobile. The vendor should be able to seamlessly integrate the tools used by deskbound workers with those used by the more mobile parts of your organization.

- ✓ **The ability to integrate new processes with existing processes:** Although some changes to your business methods are inevitable as you adopt new solutions, your vendor should be able to help minimize those changes by examining the way you currently conduct business and adapting the solutions to fit your existing methods.
- ✓ **Powerful security hardware and software to protect your networks:** You have enough problems meeting the demands posed by today's rapidly changing business environment. Effective security is a complex subject that demands competent answers from a knowledgeable vendor.

The many considerations of an enterprise mobility strategy may seem daunting, but the potential payoff is too great for most enterprises to ignore. Avoid vendors who advocate a “forklift” approach to solutions. (A forklift approach is one that seeks to replace your existing infrastructure with an entirely new infrastructure.) It's better to migrate your existing systems to achieve your business goals. And you can do this without compromising performance.

For most enterprises, a powerful business case can be made for a competent, comprehensive mobile strategy. The importance of providing your workforce with the competitive tools of mobility will only become more acute in the coming years.

Part IV

Mobile Technologies at Work

In This Part

- ▶ Providing a competitive advantage to a remote call center
 - ▶ Equipping road warriors with powerful communications tools
 - ▶ Leveraging an existing data infrastructure while streamlining communications
-

Sometimes the best way to understand what a coherent mobile communications strategy can do for your enterprise is to see what it has accomplished for others. This part examines ways in which Avaya mobile technologies have been put to work in real-world situations.

This part presents three case studies. In each instance, a mobile solution factored significantly into the overall communications strategy for the company. You'll discover how mobile workers became more connected, responsive, and productive through the effective application of currently available mobile technologies.

These case studies are just a sampling of the success enjoyed by many Avaya clients. For more case studies, visit www.Avaya.com.

Call-Center Mobility

In the highly competitive contact-center outsourcing industry, advanced technology can be a key competitive differentiator. Reliability, meanwhile, is paramount. That's why Amicus

Outsourcing, one of the United Kingdom's leading contact-center providers, entered the market with the backup of a solid solution from Avaya.

For most businesses, employing proven cutting-edge technology can reduce operating costs and improve worker productivity. But for some, it can mean the difference between profitability and bankruptcy. Amicus is one such business. The mobile communications portion of its contact-center strategy is pivotal to delivering high-quality services to compete with offshore contact-center outsourcing companies in countries such as India.

Amicus required a solution that would differentiate them from their competition from the very start. Their contact center had to offer not only outstanding reliability but also versatility and functionality, particularly the ability to work with existing applications. By providing a wide range of capabilities, they would make whatever solution they implemented more usable for their employees, thereby improving productivity, increasing job satisfaction, and reducing turnover.

Amicus also wanted to find a platform that allowed them to take advantage of VoIP, enabling them to deliver maximum efficiency, and hence maximum value, to their clients — something that few of their competitors were in a position to do.

The Avaya advantage

Amicus turned to Avaya, and that choice was sufficient to win the trust of some customers. “Just having an Avaya solution gets us more customers,” explains Charles Burns, Commercial Director at Amicus. “Certain clients will work with you only if you have an Avaya telephony infrastructure. It's as simple as that. Nowadays, our clients and potential clients understand outsourcing. They acknowledge that Avaya provides probably the best and most reliable contact-center platform out there. From our perspective, that makes it a low risk solution.”

Managed by Avaya Communication Manager, the contact center runs across a network of Avaya Cajun network switches and an Avaya media server. What's more, all on-site agents have been provided with Avaya IP telephones. Avaya's Unified Messenger for Microsoft Exchange allows Amicus to effectively manage all communication, be it e-mail, voice mail, or fax.

About Amicus Outsourcing

Amicus (www.amicus-outsourcing.co.uk) has a clear objective: to be recognized as the leading United Kingdom outsourced partner for multichannel customer contact and fulfillment solutions.

Sister company to dabs.com, the U.K.'s leading online retailer of IT and technology products, Amicus Outsourcing Ltd. commenced trading in early 2003. Since its launch, Amicus has established a number of blue-chip client relationships in the

utility, IT, retail, and financial services sectors.

By using the latest technology from Avaya and implementing a sound mobile communications strategy, Amicus is able to leverage their outsourcing knowledge to offer powerful client solutions, each designed to meet a specific need. Amicus's multichannel environment encompasses the full cycle of customer acquisition, care, and retention.

Profiting from VoIP

The decision to implement a VoIP solution revolved largely around reducing costs, but it was also a question of practicality.

"Four years ago, I considered VoIP, but it's amazing how it has moved on," says Charles Burns. "We are based in a grade 2 listed building, so cabling presented us with a challenge. We couldn't just start drilling holes all over the place. By going with a VoIP solution, however, the amount of cabling and drilling required was literally halved." What's more, because everything runs over IP, the infrastructure can be extended with wireless LAN capability as the need arises.

More importantly, perhaps, the VoIP contact center plays a key role in the company's mobile communications strategy — a strategy that, in the medium to long term, should lead to increased revenue. Amicus started using teleworkers, working from their homes. Avaya software allowed the remote workers to use the same communications technology as the personnel in the office. Amicus's mobile needs are growing, with an increasing number of agents slated for off-site work.

All teleworkers at Amicus are connected using an Avaya virtual private network (VPN), which provides the level of security

needed when working with potentially sensitive corporate information. Plans are for agents to use the Avaya IP softphone as a way of standardizing the desktop environment across the entire company and ensuring consistency of features. The softphone enables remote workers to use their laptop or PDA as a phone, saving additional expenditures on separate phones. Also, softphones route calls across the corporate network at a lower cost than through the public network.

Increased mobility at a lower cost

These cost savings provide Amicus with a more competitive business position. “Our mobile strategy should allow us to compete with India and South Africa as far as cost is concerned,” Charles Burns explains. “On average, outsourcing companies are able to charge \$8 per agent hour in those markets in contrast to the U.K., where costs are typically three times as much. That’s why so many U.K. businesses end up outsourcing there. With our IP-enabled teleworkers, we can offer a far more competitive, U.K.-based service.”

What’s more, Amicus’s cost-effective mobile strategy should prove invaluable as the business continues to grow. “It will not be long before we outgrow our physical facilities. At that point, our mobile strategy will make the business more flexible and scalable. It will enable us to employ more staff, including those who have difficulty leaving home, such as disabled workers and single parents. Potentially it will offer increased flexibility within the working environment.”

Setting the standard

Ensuring adequate staffing levels is obviously crucial to delivering a high standard of customer service. Answering 90 percent of its inbound calls in just 10 seconds, the company exceeds the industry standard, which is 90 percent of calls in 15 seconds. This high level of service is also due to the close integration of Avaya products within the workplace.

For example, thanks to the call-blending capability of Avaya Computer Telephony (ACT), agents can switch between campaigns for different clients quickly and effectively as the need arises. When the volume of incoming calls can’t be handled by the assigned agents, call blending automatically redirects some of the calls to outbound agents so overflow is absorbed

and customers are ensured a high level of service. Crucially, it makes sure Amicus can maintain the service levels their customers demand.

At the same time, Avaya software ensures that all agents automatically receive the relevant campaign or customer information for all calls through screen pop-ups. This reduces the average call duration and provides better customer service.

Quick off the mark

The close integration of Avaya products also enables Amicus to react quickly to clients' demands, thereby providing a huge competitive advantage. "Because everything is integrated, we're generally able to get campaigns up and running in a matter of days. And that gives us a massive competitive advantage," says Charles Burns. "Last week a client came to us on Wednesday, and we had his campaign ready to go by the end of the day Friday."

Standing out from the competition

Amicus's comprehensive contact-center solution enables the company to differentiate its services from its competitors in a number of ways. Their mobile strategy allows the company to use teleworkers and keep operating costs to a minimum. The result is highly competitive pricing and the flexibility to increase staffing levels as the business continues to expand.

At the same time, with a number of Avaya products working in tandem, Amicus continues to improve the efficiency of its call handling and its ability to respond to unique customer demands. It's all a way of helping to ensure that Amicus continues to stand out from the competition. With Avaya solutions throughout its contact center and business, that's exactly what Amicus is doing.

More Time for Road Warriors

It's always refreshing to see a vendor use the same solutions they're selling in the marketplace — in essence putting their money where their mouth is. The Avaya global sales force is using one of the company's newest tools to communicate faster, collaborate more easily, and respond more effectively

to customers. In the process, they're adding productive minutes to their day, equal to 15 additional days each year.

By providing a single interface where global users can access voice and e-mail messages, check calendars, create conference calls, and dial any of their contacts — all by voice command — Avaya Unified Communication Center (UCC) helps these road warriors make the most of their busy days.

"UCC is an incredibly valuable tool," says an Avaya client executive who travels the length and breadth of Arizona to serve his customers. "I can be in my car for a three-hour trip, and I use the speech-access feature to hear my voice and e-mail messages. That makes those hours absorbed by travel time highly productive for me and the other members of my team. And I can respond to my customers the day they message me, instead of later that night."

Driving productivity

To receive a go-ahead, every Avaya information technology project must deliver tangible benefits. One of those go-ahead benefits is enhanced productivity. The Avaya IT organization developed a business case showing how UCC, when used by the company's highly mobile workers, would deliver both productivity gains and enhance the global Avaya sales team's speed and flexibility in responding to customers. And using Avaya UCC would showcase the company's commitment to the power of converged communications.

Convergence can happen in two ways, explains a senior project manager for messaging technologies. Convergence of the communications infrastructure — sending both voice and data over a single path — provides substantial cost savings, yet it is transparent to the end-user. UCC, on the other hand, enables a convergence of communication functions that are quite visible and valuable for the end-user. The user now benefits from convergence by working faster and more productively.

Creating the most powerful cell phones on earth

Avaya began the UCC rollout starting with some of the company's most dedicated road warriors: the global sales team.

Today, some 1700 salespeople and executives are logged into Avaya UCC throughout the U.S., Europe, Australia, the Middle East, Africa, Singapore, and Canada. The company is preparing to extend the benefits of UCC to more than 7000 users — half of the entire Avaya workforce — this year.

Deskbound users can gain productivity by using UCC speech access and a unified mailbox for managing all e-mail, fax, and voice messages. A 30-minute commute turns into an opportunity to catch up on voice and e-mail messages. Office workers who travel infrequently can benefit from easier access to information and faster collaboration with work groups.

For highly mobile workers, Avaya's Unified Communication Center can put communication and productivity into hyper drive. It gives traveling workers the most powerful cell phones on earth. For one senior director, the workday frequently includes a two-hour round trip from her office to company headquarters. She uses UCC during the drive to manage a steady stream of messages and information.

"The most useful thing for me is having almost a demand pull on information that's coming through my e-mail," she says, "and the ability to transform that information into actions for my team and myself, to stay ahead of the curve. That's something I don't ever want to give up."

A new workflow method

Avaya's UCC features an advanced voice response and control capability that gives users the power to conduct a multitude of messaging, communication, and task-management activities over the telephone — all through voice commands.

When users log into the UCC by phone, they step into what the senior IT manager calls "a new way of conducting your workflow."

Managing messages

Users can listen to voice mail headers and messages and, using UCC's text-to-speech capability, listen to fax headers, e-mail headers, or entire e-mail messages. They can then reply to those messages, forward them with or without voice comment, save or delete them, and create and address new voice and e-mail messages.

Even in the midst of a message, a user can interrupt message playback and call the sender or anyone in the user's contact list or the corporate directory. It's all accomplished with voice commands. When the "side call" is finished, the UCC returns the user automatically to the place where the original message was interrupted, down to the exact word where you left off.

"I use UCC for everything it's designed for — listening to messages, replying to messages and making outbound calls," says a sales director who travels a five-state mid-Atlantic sales territory. "I have my cell phone with a headset. When I get back to the office, I've usually knocked out all the messages and all the reactive stuff — I've handled all that on my way back in. UCC makes me a lot more efficient and productive because my time in the car is no longer dead time."

Managing messages has never been easier for commuters. Gone are the days of arriving at work with a message-light burning, e-mails stacked up, and customers waiting. The regular morning backlog can be disposed of before you even arrive at the office, during traditional commuting downtime.

Making calls and conferencing

Unified Communication Center users can dial anyone in their contact list or corporate directory simply by saying the person's name. Users have extensive call control options, such as transfer, hold, merge, or drop call. And they can create instant conference calls, using voice commands.

"I use UCC for calling from the road because I don't want to be fooling with my PDA, looking up a telephone number, while I'm driving," says a client executive. "I don't even have to touch my keypad — I just talk to it. I am truly hands — and eyes — free while driving, which is much safer than fumbling with a cell phone directory or PDA."

Managing contacts and tasks

Users also have the ability to manage personal contacts, calendar entries, and tasks in Microsoft Exchange. They can manage "reach me" options such as Find Me, screen incoming calls, and set Microsoft Exchange reminders while they are mobile.

A major productivity payoff

For Avaya, the payoff came in the form of significant productivity gains. UCC enabled Avaya users to turn unproductive hours into time well spent.

“I’ve been playing in this space for eight or nine years now,” says an IT manager. “In the surveys we’ve done, we find that just unifying e-mail and voice mail alone saves the serious road warrior about 30 minutes a day. They don’t have to do a separate logon session through their PC, and most importantly, they can respond to customers or co-workers much more quickly and efficiently. That’s tangible.”

Thirty minutes a day is more significant than it may seem. The numbers add up to impressive potential productivity gains. A half hour saved per day equals 15 days of additional productive time per user per year. When all 1700 salespeople reach that usage level, Avaya will have increased the potential productivity of the sales team by the equivalent of 25,500 person-days per year — a productivity boost of more than 6 percent.

“How do you apply that productivity?” the IT manager asks. “That depends on your organization. You could drive sales with existing customers, focus on prospecting to gain new customers, or strengthen customer satisfaction because you are more responsive.” Those are choices any executive would enjoy.

By fostering more productive internal collaboration, speeding responsiveness to customers, and turning downtime into productive time, UCC helps Avaya salespeople work more effectively and efficiently. UCC gives mobile workers more control over their work and their time, and gives Avaya more effective feet on the street.

Investment Protection

The San Francisco Museum of Modern Art (SFMOMA) updates its communications infrastructure frequently to ensure that employees and members enjoy the benefits of the most advanced technologies. When the five-year lease on the museum’s Siemens PBX telephone system neared expiration in 2004, IT Director Leo Ballate had several reasons to

radically improve the existing communications infrastructure. His group was wasting too many hours managing basic moves, adds, and changes. The voice mail system failed continually. In addition, annual maintenance costs in the neighborhood of \$65,000 far exceeded the value of the existing system.

“Not only did we have to manage separate directories for the phones, the call accounting, and voice mail, but we also had to manage and maintain the copper infrastructure,” says Ballate. “It was a huge drain on productivity, and it was costing too much money.”

Manageability and affordability were not the only reasons Ballate was eager to steer the museum toward a new approach to communication. With 50,000 members, an elite Board of Directors, and a wealth of private donors, the institution relied heavily on the functionality of its three call centers for its success as a midsize nonprofit organization. Unfortunately, the current voice infrastructure could not handle the demand.

“Toward the end of our lease,” Ballate recalls, “we literally had no voice mail system — and no support from our vendor — during our busiest three months of the year. No one could get a live person on the phone. People were telling me that the phone just rang and rang. We really don’t want to be hearing that from our high-profile donors.”

SFMOMA faced a critical decision. “Either we would spend hundreds of thousands of dollars to keep old technology from a vendor that let us down on numerous occasions,” says Ballate, “or we would scan the industry for new technology and find a solution more in line with the goals of our business, something less expensive to operate that didn’t compromise on scalability.”

Over the past few years, VoIP technology had advanced enough that Ballate felt the museum was ready to streamline communications by merging voice onto the data network. His reasoning was straightforward. “We believed a converged network would minimize our management activity, help us regain lost productivity, and help reduce our recurring costs. And by tackling these challenges, we could better serve the needs of our employees while ensuring more personalized relationships with our patrons and donors.”

About SFMOMA

Founded in 1935, the San Francisco Museum of Modern Art was the first museum on the West Coast devoted solely to artwork from the 20th century. The museum's painting and sculpture collection is distinguished by major works by artists associated with the American Abstract Expressionist School, notably Clyfford Still, Jackson Pollock, Philip Guston, and Richard Diebenkorn. It has strengths in American Post-Minimalism; German Expressionism; Fauvism, particularly the works of Henri Matisse; Mexican painting; and the art of the San Francisco Bay Area. The museum is also widely known for its

collection of southern California art; for the important gifts and promised gifts of works by Paul Klee from Dr. Carl Djerassi and the Djerassi Art Trust; and for its active contemporary art acquisitions program.

As its collections continue to showcase a commitment to contemporary creativity, the institution has achieved international renown. Yet even while it enriches its global reputation, the museum works hard to earn the respect of its local Silicon Valley community through a unique combination of avant-garde culture and cutting-edge technology.

Factoring trust into the solution

For SFMOMA, the search for the right VoIP solution was about more than selecting an easy-to-use, manageable array of hardware and software — it was about building a relationship with a cooperative vendor. The museum's previous experience had clearly highlighted the importance of combining effective technology with superior vendor support and trust.

Chief among SFMOMA's requirements was the need to leverage its existing data infrastructure from Extreme Networks. The IT group had time and resources invested in managing and administering their existing technology, and Ballate wanted to get the biggest return possible from that expertise. The logical answer was to select a VoIP solution that could interoperate well with Extreme.

Initially, Ballate investigated Cisco technology, but when representatives encouraged him to drop Extreme in an effort to promote Cisco hardware, Ballate backed down. "I wasn't thrilled with that approach," he recalls, "so I went to Extreme and asked who they would recommend."

After reviewing a handful of case studies and watching demonstrations firsthand, Ballate learned about a more powerful horse in the running: Avaya. Extreme felt that the Avaya solution was the optimal choice for its network in terms of performance and reliability. And unlike Cisco, Avaya offered an application-based model, which Ballate considered a compelling advantage. SFMOMA's IT group could simply plug in the phones, assign them IP addresses, and manage them as appliances.

"Cisco had us headed toward a rack full of Windows 2000 servers, which meant more to manage as far as critical updates, security, and vulnerability were concerned," says Ballate. "Our objective was to decrease the management burden. We were much more interested in going with an appliance model, so we chose Avaya."

Concrete business benefits

From day one of deployment, the new Avaya solution has had a positive effect on the museum's daily business.

Easier network management

With only a single converged network to administer and the advantages of IP telephony at hand, Ballate's team is no longer spending valuable time managing repetitive line changes.

"Finally," he praises, "no more cross-connects. No more visits to the closet. We just plug in a phone, configure it, and take it out to the employee's desk. And often, it doesn't even need to be a telecom person that installs the phone. My administrative assistants can say, 'I'm taking this phone to Mary's desk,' plug it in, and it's ready to go. That's a tremendous timesavings."

The Avaya Communication Manager software also contributes greatly to the solution's enhanced manageability. To begin with, deployment of Avaya Modular Messaging is practically self-service. Virtually all of the museum's employees have been able to keep up with the gradual rollout of applications by downloading and installing various components on their own, from their own desks. Additionally, Avaya Communication Manager includes a built-in feature called Avaya Expert Systems Diagnostic Tools that, in many instances, enables the software to self-heal should errors occur.

Cost savings soar

Streamlined management of the communications infrastructure is dramatically decreasing SFMOMA's maintenance expenses. Whereas the museum was spending an average of \$65,000 per year on its previous system, Ballate now estimates the annual bill at only \$30,000. This savings is also due to a contract for Product Support Services with Avaya Global Services that enables even faster troubleshooting and administration of all the museum's IP-telephony-related devices.

Furthermore, the museum is getting a better return on its investment now that IT staff spend less time managing user endpoints and more time on core business tasks.

"I would say each IT staff member saves an average of three hours weekly thanks to the Avaya solution," says Ballate. "Roughly translated, that's about \$9000 a month that our team now redirects toward tackling more vital business challenges. Combine these figures with our substantially decreased maintenance bill, and the Avaya solution will pay for itself easily within about 24 to 36 months."

Enhanced productivity

Since deploying an IP-based system, SFMOMA significantly simplified communications usage, so employees gain valuable information faster, direct greater attention to business tasks, and increase overall productivity. For example, thanks to straightforward prompts and more reliable technology, callers are no longer lost in voice mail. Speed dial is actually speedy now that employees push fewer buttons to call frequently dialed numbers. And with the ongoing implementation of Avaya Modular Messaging software, users are able to access their voice, fax, and e-mail messages at any time from a diverse array of devices, including cell phones and soft-phones. As a result, employees can respond with accuracy and agility to each other, as well as to members and donors.

"Everything about the Avaya solution is easier to use," says Ballate. "IT people usually only hear when things go wrong, but since deploying the Avaya solution, we are being stopped in the hall by employees who have to tell us how much they love their new phones and their increased functionality. In my ten years at SFMOMA, I have never had users come up and tell us how great our technology is until now."

Better services and applications

SFMOMA employees are enjoying the benefits of an advanced communications infrastructure that puts greater control in their hands, even when they're away from their desks.

Ballate's team, for example, is currently test-driving the Avaya IP softphone, which allows users to place and receive phone calls from a laptop or PC through integration with Microsoft Outlook contact lists and other directories. "I feel like I don't even touch my phone anymore," Ballate says. "I just do it all on the screen."

Next on the agenda is a built-in "meet me" conferencing feature that automatically facilitates group calls of up to six participants and eliminates the need to spend money on a third-party service. Also high on the priority list is the implementation of Avaya Unified Communication Center, which allows both office-based and mobile users to retrieve critical information through any telephone using basic, intuitive speech commands. Workers in the field will find productivity further boosted with the addition of Extension-to-Cellular capabilities, which seamlessly bridge calls from Avaya Communication Manager to any cellular phone. "Our curators travel all the time," says Ballate. "These mobility solutions will be perfect for them, and our donors will no doubt appreciate the easier accessibility to our staff."

Furthermore, Ballate feels SFMOMA now has the critical partnership behind its communication infrastructure that was sorely needed. "Avaya has been here for us through everything," he states. "I did a lot of research before making this decision, but at the end of the day, it wasn't that hard. Everything pointed towards Avaya as the clear leader in IP telephony, and we are happy to have this solution help drive our business forward."

Part V

Top Ten Tips for a Successful Mobility Implementation

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In This Part

- ▶ Understanding the characteristics of your workforce
 - ▶ Figuring out what your employees need to communicate effectively
 - ▶ Putting yourself in your client's shoes
 - ▶ Making the most of your existing infrastructure
 - ▶ Seeking ways to converge existing networks
 - ▶ Using proven technologies
 - ▶ Achieving single-number connectivity
 - ▶ Adding powerful management tools to your arsenal
 - ▶ Asking for help when you need it
 - ▶ Embracing change
-

Let's face it — you need a mobile communications strategy. Given the changing nature of the workplace and the technologies available, there is no reason to not create your own strategy, unless you want to give up your competitive advantage.

Only you know your business well enough to know what is best for your organization. You know where your organization is now and where you want it to be.

Just as your vision is different from that of other people in other businesses, so your mobile strategy will be different. The differences that make your enterprise unique mean that there is little chance that I can exactly define what your strategy should include. I can, however, provide tips that you can profitably use to create your own strategy. The ten following tips, if heeded, will help you create a successful mobile communications strategy in short order.

Create a Worker Snapshot

The first tip for creating a mobile communications strategy is to examine what your employees do and where they do it, and use that information as the basis for your plan.

If your organization consists of deskbound workers, located entirely within a single building, you probably don't have much need for a mobile communications strategy. However, fewer and fewer workplaces of any size fit this single-location definition. You may have

- ✓ Salespeople in distant cities
- ✓ Development teams in major technology centers
- ✓ Workers who spend all or part of their time working from home
- ✓ Workers who spend a large amount of time commuting
- ✓ Vendors and clients who need secure access to your networks

After you know your workforce and where they are working, you will be better able to understand the communications challenges that they face. Your mobile communications strategy can then help meet their needs.

Determine Your Workers' Needs

Different employees need different tools to accomplish their work. Many of the tools they need have a communications aspect to them, such as phones, cell phones, PDAs, and laptop computers.

Your mobile communications strategy will help shape which tools your workers use. If your strategy implements an infrastructure that accommodates different tools and provides a consistent number of features across those tools, your workers will be more productive.

With the right strategy, employees can accomplish more work, more easily, by using the tools they already have. For instance, if your strategy calls for implementing a voice-command unified communications system, employees can use the voice tools they already know (phones) to intuitively manage all their communications media: e-mail, voice mail, phone, and fax.

Focus on Your Client

Organizations who fall into the trap of not meeting clients on their own terms run the risk of losing their market share to other organizations.

With that in mind, make sure that you put yourself in the position of your client. If you have a mobile workforce, does your mobile communications strategy help the client reach the proper person in your organization, regardless of where that person is? If not, your client's experience isn't as good as it could be or should be.

Leverage Existing Infrastructures

Every business has a communications infrastructure already in place. It may not be fancy, and it may not be as efficient as it could be, but good money was spent on hardware and software to help your business communicate.

An effective mobile communications strategy should not include the necessity to scrap your existing infrastructure. Instead, a good strategy helps you leverage your existing investment. With the right solutions, you can add hardware or software that works with — instead of against — your existing phones, computers, networks, and application software.

Make sure that as you develop your strategy you avoid solutions that replace your existing systems lock, stock, and

barrel. Instead, look for migration solutions that can help your current systems evolve to a point where they will do exactly what you want.

Converge Networks

Most businesses utilize two major networks: voice and data. When you converge these into a single network, you can reduce overall costs immediately.

The concept of converged networks has applicability outside the walls of your physical office as well. If you have more than one location or if you have teleworkers, you can use common networks — such as the Internet — to route both your data and voice traffic. Utilizing an existing network structure in this way can significantly reduce your overall costs.

You'll also find that your mobile communications strategy is easier to implement, manage, and maintain if you use a converged network. Most solution vendors can provide you with equipment that allows you to merge your existing networks easily.

Utilize Proven Technologies

Technologies for mobile communications, both data and voice, are mature enough that you should resist the urge to try unproven technologies. If you lock yourself into a newly developed proprietary technology, you run the risk of your investment becoming obsolete (if the technology is abandoned) and committing yourself to expensive replacements and support.

You can ask potential solutions providers a few questions that will help remove much of your risk:

- ✓ How long has their technology been in the field?
- ✓ How many organizations have adopted their technology?
- ✓ What is the service record of their technology?
- ✓ Will their technology work, out of the box, with equipment from other vendors?

Use the answers you receive to help make the best decisions for your mobile strategy.

Shoot for One-Number Connectivity



As discussed in Part III, the concept of one-number connectivity has two facets. The first is the number clients use to contact your organization, and the second is the number used to contact individual employees.

One-number connectivity for your clients allows you to provide a single, manageable point of entry for communications with your organization. Your clients call one number, and they immediately have easy access to all parts of your organization. The single number is easier to advertise and easier for your clients to remember.

One-number connectivity for your employees means that the employee can be reached by dialing a single number. It shouldn't matter where the employee is physically located; a good mobile solution can route calls wherever necessary to reach the person. (Systems can even map cell phones or IP phones so that they automatically ring if someone dials the employee's desk phone number.)

When you achieve one-number connectivity, you improve the experience of your clients because they can get the information they need easily. In addition, employee productivity increases because important calls are less likely to be missed. And, for both clients and employees, telephone tag is reduced — a great benefit no matter how you look at it!

Implement Powerful Management Tools

Any mobile communications solution that you implement should provide you with a rich suite of management tools. With the proper tools in place, you should be able to easily

make configuration changes, such as assigning phone numbers to different employees or adding new equipment or services.

In addition, your management tools should provide reliable methods of tracking down potential network problems, such as failure points and bottleneck areas. That way, you can quickly find ways to get your network functioning again or add capacity to alleviate the bottlenecks.

Finally, an important part of any management suite is the ability to generate a variety of reports. Management reports should indicate vital metrics such as network usage, equipment usage, system availability, downtime, and even carrier usage.

In some industries, your management tools may include the ability to record phone conversations. For instance, you may want to record client support calls or telemarketing calls, either for training or remediation. Regardless of whether your workers are local or remote, your mobile communications solution should be able to handle recordings in a flexible manner.

Seek Expert Help

We can't be experts in all things at all times. Chances are good that you are an expert in your business field. But, unless your business field is mobile communications, you may not have all the answers you need to make informed decisions for your mobile communications strategy.

Don't be afraid to seek help when you need it. The fact that you're reading this book is a good indicator that you're interested in more information. When you're considering solutions providers, don't be afraid to ask questions — seek their help. If they are truly experts in their field, they should be able to get you the answers you need.

Also, don't hesitate to hire an external consultant, if necessary. Many times, consultants can help you recognize opportunities or identify areas of exposure that may not be immediately evident to you. A consultant with a broad understanding of mobile technologies can help you confidently make choices that are in your best interest.

Don't Be Afraid of Change

Change can increase anxiety and be downright scary. For those trying to run a business, the pace of change in the communications industry is astonishing. At times it may seem like implementing new technologies is like trying to hop onto a rushing train.

The biggest thing that you need to guard against is allowing the fear of change to immobilize you. Some organizations find themselves in this situation, with management knowing they need to make changes but unable to come to grips with exactly how to do so.

Change need not be that scary. If you apply the information in this book, you'll find that you have a better grasp of how to effect change than you might have thought. Remember that change is going to happen whether you plan for it or not. But if you do plan for it, you'll find yourself in a stronger business position.

One other word about change: You have to be ready to change your mobile communications strategy — even during implementation — if you discover that the assumptions on which that strategy was based have changed. Fortunately, if you apply the tips presented earlier in this part, you'll find that your strategy is flexible and adaptable.

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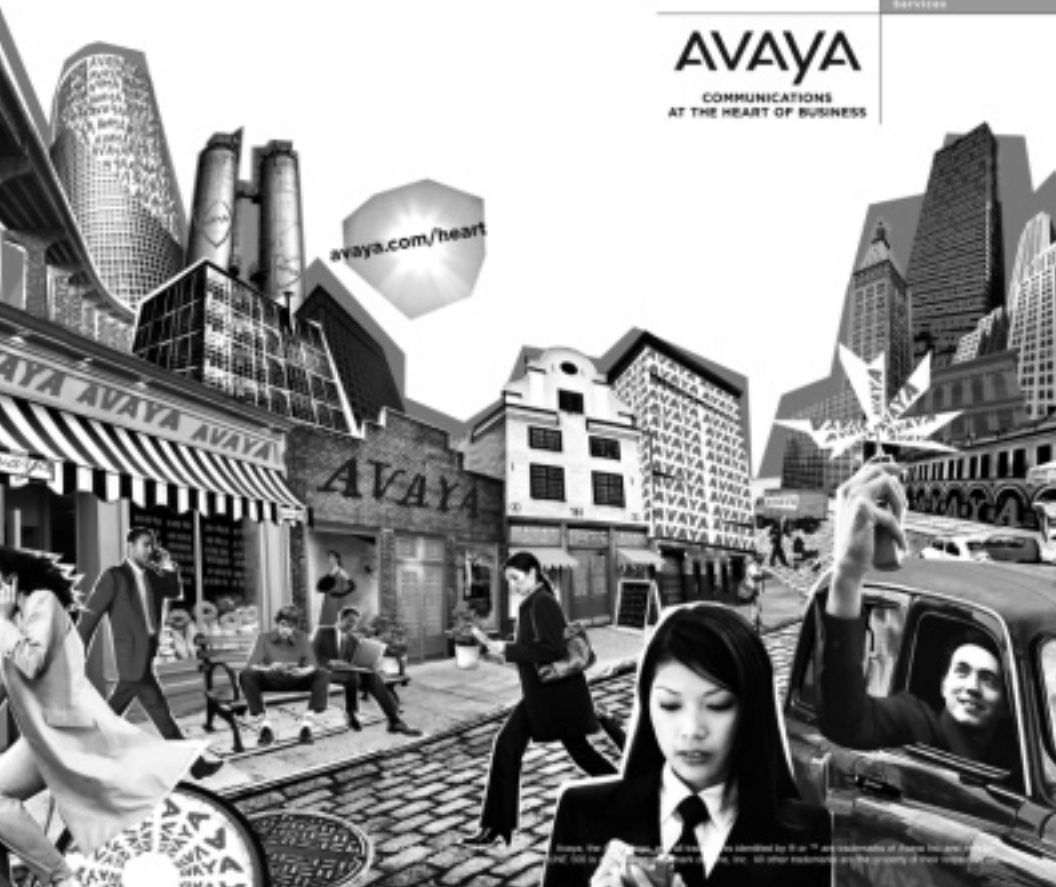
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