

Mobile Enterprise OUTLOOK™

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VOLUME 1, ISSUE 1

HIGHLIGHTS:

BECOMING
THE WIRELESS DATA
EXPERT WITHIN
YOUR CORPORATION

IS CONSOLIDATION
GOOD FOR THE
WIRELESS INDUSTRY?

2004:
AN INTERESTING YEAR

WELCOME TO THE PREMIER ISSUE OF *MOBILE ENTERPRISE OUTLOOK*,

a quarterly industry report. This publication is designed to help corporations and the IT professionals who are tasked with adding or optimizing wireless voice and data services to their information systems gain a better understanding of what is possible today and what lies ahead.

I am pleased that you will be joining us. We will be working diligently to bring you valuable information and analysis that we don't believe is available anywhere else. We hope to become a valuable resource for you, as well as for those within the industry who provide products and services to the IT market.

ABOUT THE AUTHOR

First, I'd like to introduce myself. I have been providing newsletters and reports on wireless and mobile computing products and services since 1991 through our "Outlook" organizations. Our first wireless publication targeted the wireless/computer community and was a spin-off of our computer-centric newsletter, *Andrew Seybold's Outlook on Professional Computing*. This newsletter, *Andrew Seybold's Outlook on Mobile Computing*, was published from 1991 until June 2000. We ceased publication of this newsletter when we entered into a joint venture with Forbes to publish a newsletter about the wireless industry aimed at the investment community. We published *The Forbes/Andrew Seybold Wireless Outlook* for three years.

Today, we publish an e-letter entitled *3GToday* (www.3GToday.com), which is a

monthly publication that focuses on the roll-out of third-generation networks, devices and services around the world. I also write a weekly commentary about the industry and articles for several industry publications.

Along with my partners, I provide consulting services to the wireless and computer industries and conduct training sessions through the Wireless Data University and The Wireless Experience. The first is a day-long, intensive course covering wireless data for those who are already familiar with wireless voice services. We have been producing the Wireless Data University for the past eight years in conjunction with the CTIA (Cellular Telecommunications Internet Association). The second endeavor is to train wireless network operators' sales staffs who call on IT professionals and others charged with implementing voice and data systems for their companies. For more information about our companies and me, visit www.4mobility.com.

When the publisher and Editor-in-Chief of *Mobile Enterprise* magazine first approached me about becoming involved with this project, I was very enthusiastic. I consider *Mobile Enterprise* to be the premier provider of information for our target audience and have found its articles to be well researched and written. It is a valuable resource. Our goal with this new publication is to augment *Mobile Enterprise* magazine with additional information and guidance.

THIS MONTH WE
START OUT WITH SOME
SIMPLE RULES FOR THOSE
WHO ARE CONSIDERING
IMPLEMENTING WIRELESS
EXTENSIONS TO THEIR
EXISTING IT SYSTEMS AND
PROVIDE ACCESS TO
THEIR MOBILE WORKFORCE.

WIRELESS

Wireless has come a long way since the first police vehicles were equipped with two-way radios in Bayonne, N.J., in 1933. The advances over the years have made wireless a “must have” for millions of people around the world. It has become a business tool that gives companies and their mobile workforces a “leg up” on their competitors, provides for better customer service and has been proven to save both time and money when implemented correctly.

Many mistakes have been made and many lessons have been learned. Our job is to help you avoid the pitfalls, turn you into “in-house” wireless experts and help you understand the complexities of the choices you must make as you move into the world of wireless.

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Each quarter we will feature articles designed to help you understand the components of successful wireless implementations, report on new developments and provide case studies. These case studies will include what each company accomplished, a look at mistakes made along the way and what they could have done differently. We will track their success over time and help you with return on investment issues (one of the major stumbling blocks when it comes to budget approvals for wireless systems).

Since this publication will be published quarterly, we won’t try to provide the latest news; we will leave that to *Mobile Enterprise* magazine and others. We will comment on industry trends and provide detailed information on the hows and whys of the various technologies and their applications for corporate wireless systems.

This month we start out with some simple rules for those who are considering implementing wireless extensions to their existing IT systems and provide access to their mobile workforce. We will address how to determine whether you should upgrade your existing private wireless system or begin making the transition to one

or more public wireless networks now in operation across the United States and around the world.

We just completed a major project for a company facing this decision. It has a fleet of vehicles and its private voice and data networks are 15 to 20 years old. We reviewed its current network and dispatch operations and made recommendations regarding upgrading its existing voice and data networks or switching to one or more of the public networks (Sprint Nextel, Cingular Wireless, T-Mobile, Verizon, Aeris.net or Velocita Wireless).

We spent a great deal of time examining all of the aspects of the company’s existing operations and working with public wireless providers to determine the status of their existing services and offerings. We put together a report for the top executives on the status of the company’s existing wireless networks and reviewed the pros and cons of staying with (and upgrading) its private networks versus moving to public-sector networks for voice and data services.

There is no single solution for companies in this situation. Many factors must be taken into account, and there are a variety of public network options available today. We will share some of our observations with you later in this issue.

Thanks for joining us for this first issue, and please feel free to provide feedback, comments or suggestions for future issues. If you have a wireless success story and would like to share it with us for possible inclusion in a future issue, contact me at andy@MobileEnterpriseMag.com.

BECOMING THE WIRELESS DATA EXPERT WITHIN YOUR CORPORATION

Part One of Two

Every time you turn around you read or hear about another company that has

YOU NEED TO
UNDERSTAND WHO NEEDS
WHAT TYPES OF
DEVICES, RUNNING WHAT
TYPES OF APPLICATIONS,
HOW OFTEN YOUR
USERS NEED TO BE ABLE
TO ACCESS YOUR
CORPORATE INFORMATION
AND FROM WHERE.

taken the “wireless plunge” and outfitted its mobile workforce (sales, service, delivery or other workers) with wireless voice and data devices. There are many case studies that describe in great detail the success of many of these wireless rollouts, how they provide a return on investment in a matter of months and how they provide major productivity gains for those in the field.

Your VP of sales or VP of service has been reading and hearing these reports, too, and is bugging you to hop on the wireless bandwagon. Or perhaps one of your senior executives read an article about wireless deployments in other companies and has started asking questions.

However, you have heard how difficult it is to implement these systems, how long it takes and how much it costs. Perhaps you have even heard of companies that tried and failed to implement a wireless strategy. But you also know that wirelessly extending your enterprise applications to your mobile workforce makes sense and that you will have to find out more about what it will take sooner rather than later.

Where do you start? Do you simply call the wireless company that provides your wireless voice equipment and services and ask its representative to come in and talk to you about your data requirements? Do you hire a wireless-savvy consultancy? Do you rely on a wireless systems integrator and follow its advice and counsel? Do you burden your already overworked IT staff with the task of implementing a wireless system?

All of these options and more are available to you, but knowing a little about what is involved before making these calls can help you make the right decisions from the start and continue making solid decisions as you progress. It is the intent of this article to walk you through the steps that you will have to complete in order to successfully implement wireless as another mode of access to your corporate e-mail, calendars, contact lists, databases and other types of applications that your company uses on a day-to-day basis.

WHERE TO START

Too many times an IT manager starts the process by trying to determine which of the various public networks to employ. This list is long and includes the five nationwide wireless network providers as well as a number of second- and third-tier providers. It could also include looking at the use of Wi-Fi hotspots, one or more of several data-only wireless network providers, or a combination of some or all of these resources.

The investigation of which network to use takes many months to complete and then dictates the design of your wireless data system, including the types of devices as well as the richness of the mobile versions of your applications.

A better way to start the process is to first perform an internal assessment of wireless voice and data requirements. You need to understand who needs what types of devices, running what types of applications, how often your users need to be able to access your corporate information and from where.

You also need to understand that the most important aspect of your system is the information that will flow over whichever wireless network(s) you choose, how that information is presented to your mobile workforce and how users can interact with that information.

Because wireless technology is changing so rapidly, you should consider the process you are about to undertake as being the same as what you have followed over the years with dial-up remote access. If you have been around for a long time, your mobile workforce started out accessing your corporate information using low-speed dial-up modems. Over the years, these modems became faster and the information flow and access became easier. We quickly went from 300 baud up to 56K modems and now live in a world made up of DSL and cable modems with data speeds in the range of hundreds of Kilobits per second.

As data speeds increased, the amount

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of data that could be transferred and the types of information that could be accessed grew. This is the same in the world of wireless. Ten years ago, data systems that permitted us to access e-mail and other corporate information were slower than 10 Kbps. Today, depending on the system, we have choices ranging from 20 to 30 Kbps to DSL and cable speeds.

Therefore, the most important first determination is what types of data services are needed in the field and what types of devices provide the best possible display and interaction with the data. Device choices run the gamut from fully functional laptop computers to small handheld phones and everything in between. After a careful review, you will probably find that your implementation may not be a one-size-fits-all solution but rather the right devices for the right groups of users.

There are several ways to categorize devices for use on wireless networks. One is what we call "work creation vs. information access." That is, if your user community needs to create work in the field, file reports, fill out forms, interact with e-mails with attachments and perhaps be able to download large documents and make changes to them, you will want to equip these workers with laptop computers. They will need the large screen and near-full-sized keyboards available on today's laptops.

However, if your users' requirements are to gain access to information such as e-mail, calendars, company address books, order status and/or current financial information regarding a customer, they can probably use one of the many wirelessly enabled PDAs, BlackBerry-type devices or even the new breed of smartphones such as the Treo 650 from palmOne.

Some of your user community, usually the executives, may have no need or desire for data in addition to voice services. If they have administrative assistants who manage their e-mail, calendar and other daily business functions, perhaps a simple voice phone or a voice phone with short mes-

saging capabilities is all that they will need.

As an aside here, one of the reasons that RIM's BlackBerry devices are so popular is their ease of set-up and deployment. Good Technology has a similar solution. Both of these are great ways to become familiar with wireless technologies, and the beauty of these systems is that they can work across various networks. As you will see later in this article, being able to provide wireless services in multiple regions of the country does not mean that you have to use the same public wireless network in each region. Because many devices are available on many different networks, it is possible to standardize on a device while using different networks in different areas of the country.

PUBLIC WIRELESS NETWORKS

This brings us to the task of "fitting" the data requirements and the devices to one or more of the public wireless voice and data networks. This is perhaps the most difficult part of the task. If you are working directly with a network provider, it will try to convince you that its network is the only one worth considering and that you will be able to do everything you want to do, wherever you need data services. The reality is that there is no single "perfect" network in the United States. Public wireless network coverage has expanded in recent years, but there are still gaps, and some networks suffer from congestion in major cities during busy hours or commute times.

The public wireless network operators continue to build out additional tower sites around the country, but many communities have made the permit and approval process either extremely time-consuming or nearly impossible. The general rule of thumb for choosing one or more networks is to talk to others with similar coverage requirements and to run tests on the various networks. Even so, you cannot assume that where there is voice service there is also data service.

For the most part, data services are

IF YOUR WORKFORCE IS
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TO CHOOSE A COMMON
NETWORK FOR ALL USERS.

being added to existing voice networks so you need to understand that there may not yet be data coverage across the entire network or that the data speeds will be different. For example, when AT&T Wireless announced its GPRS and then EDGE data services, it stated that everywhere it had GSM voice services it would have both GPRS and EDGE services. AT&T Wireless has merged with Cingular now, which is still in the process of building out its GSM/GPRS/EDGE network, so this may no longer be true.

Another example is that Verizon Wireless is building out a broadband or high-speed data service known as CDMA2000 1xEV-DO, which today is available in fewer than 20 of the top 100 major cities, as well as 20 major airports. Where EV-DO is not available, Verizon Wireless customers can use CDMA2000 1X data, which provides a slower-speed connection that is sufficient for most business applications.

Here's a sneak peek at the rest of the issue:

- DATA SPEEDS TODAY:
CHOOSING A WIRELESS
NETWORK
- COST PER USER
- IS CONSOLIDATION
GOOD FOR THE WIRELESS
INDUSTRY?
- THE DATA SIDE
- 2004: AN
INTERESTING YEAR
- WHAT ALL THIS MEANS
- CONCLUSION

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NEXT TIME

In our next issue we will continue this article and look into security issues for both the networks and the devices, the true cost per user and how to plan for success and expandability. We will go into more depth concerning devices for business applications, special considerations your company may have and how to make sure that once your system is installed it works, it provides the level of service you expected and it was installed on time and within your budget. We will also spend time on that elusive topic, return on investment, or ROI, which is perhaps the most difficult part of the deployment equation but one that can be tamed. We will end this two-part article with a list of 10 rules for successfully implementing your wireless data network.

Until then ...

ANDY SEYBOLD
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