

By Erik Eckel

For better or worse, today's IT professionals often assume responsibility for selecting and maintaining an organization's cell phones and personal digital assistants (PDA). Anymore, the two devices constitute a single piece of equipment. In most cases, organizations today should avoid purchasing any cell phone for mobile employees that doesn't also possess strong PDA functionality.

However, the sheer number of choices quickly makes the process of selecting a cell phone complex. Which carrier will you use? Which OS should power the telephone? Which network technology (GSM, GPRS, EDGE, etc.) will traveling employees require? Here are 10 things to look for when selecting cell phones for IT department or organization-wide use.

1 Service network

The first consideration when reviewing cell phone and PDA options is the service network technologies a phone supports. T-Mobile, for example, predominantly relies upon GSM in the United States, whereas Verizon leverages a CDMA-based voice infrastructure and 3G-powered data network. Sprint/Nextel, meanwhile, utilizes a 3G wireless data network but is moving to the 3G EV-DO standard, whereas Cingular maintains a GSM network for voice service and GPRS and EDGE for data.

Thus, it's critical to ensure that the telephones you purchase are compatible with the carrier's network. If employees remain regional, you're not likely to encounter trouble when purchasing equipment from your local cellular provider. But if employees travel, particularly overseas, you'll want to make sure that their mobile phones are compatible with the service network infrastructure (often GSM overseas) in the locations where they'll be.

2 Call quality

Many phone and PDA manufacturers have squeezed innumerable features and functions into tiny handsets. From integrated MP3 players to streaming video and games, manufacturers have been working feverishly to add new features to their products. Unfortunately, voice quality--arguably a handset's most critical function--sometimes suffers.

Before you purchase a phone, do your homework. Read real-world reviews to help determine which models provide high levels of call quality. A great PDA will prove maddening, after all, if you can't hear callers when driving down an interstate. Two excellent review sources are [CNET's Cell Phone Buying Guide](#) and [Amazon's PDA user reviews](#).

3 Battery life

The never-ending battle to add powerful new features and functionality to cell phones has taken a toll on more than just voice call quality. Battery life, too, has taken a hit. Even though lithium ion batteries have essentially become standard equipment, they still have limitations.

Manuals and product brochures boast standby times exceeding several days. But enable Bluetooth connectivity with a hands-free headset and use the phone to actually make calls, and a handset's battery can deplete itself in just a few hours.

Consider battery life carefully. In many cases, it may prove prudent to ensure mobile executives travel with an extra.

4 Network bandwidth

Not all data networks are created equal. Carriers are all in the process of rolling out tweaks and enhancements aimed at improving their networks' data transmission speeds. Some phones, however, (such as the Samsung Blackjack and upcoming Apple iPhone, work on only one provider's network.

Cingular is working to deploy EDGE technology aimed at maximizing data transmissions. But Verizon Wireless and Sprint service data users via their faster EV-DO infrastructure. If you or your users must regularly download larger data files via cell phone, it will make sense to select phones compatible with the faster data networks. If simple text-based e-mail is all you require, most cellular providers' data networks should suffice, assuming the service areas meet requirements.

5 Groupware compatibility

Typically, the groupware application in use dictates which model cell phones are deployed. If Microsoft Exchange--and its accompanying contacts, calendar, and e-mail tools--powers the bulk of your organization's messaging infrastructure, take care to select cell phones and PDAs that not only mesh well with the messaging server but that can easily pass the required security and authentication credentials. Often, that means selecting Windows OS-based telephones.

Organizations leveraging Blackberry Enterprise Server will experience streamlined administration by standardizing on Blackberry handsets. Others may find that the Blackberry Enterprise Server provides perfect middleware for connecting Blackberry users with Lotus or Novell groupware servers.

Although third-party tools exist to help users synchronize cell phones and PDAs with other platforms and applications ([The Missing Sync](#) is but one example), organizations deploying large numbers of units will likely be best served standardizing on a common platform when possible. Maintaining fewer cell phone lines and fewer back-end groupware platforms greatly simplifies administrators' workloads and encourages higher uptime levels.

6 Bluetooth

Wireless features place greater demand on a cell phone's battery. Time between recharges is drastically reduced when even a single Bluetooth accessory is paired with a PDA. But the convenience of a cordless headset and the ability to wirelessly synchronize a cell phone's information with a laptop or desktop system more than make up for the subsequent performance hit.

7 Simple controls

Most every manufacturer touts its new cell phone models as having revolutionary designs that forever simplify phone or PDA use. Unfortunately, the measure of simplicity is in the hand of the holder. In other words, one engineer's innovation is another user's torture.

Some professionals enjoy sliding a phone apart (such as with the [Cingular 8125](#)) to reveal a full keyboard. Others find it tortuous to have to do anything to reveal a keyboard. (Such users often prefer the exposed keypad such as is found in a [Treo 680](#) or [Blackberry 8800](#), instead.) Still others prefer a PDA that has no keyboard at all, such as [Apple's iPhone](#).

When selecting a cell phone/PDA, consider how it will be used. If mobile sales staff will be using the handset frequently in the field while driving, it's important the phone have one-handed operation. All [Windows Smartphones](#) are designed for single-handed use, leveraging a clickable mouse for performing most functions. [Windows Pocket PC](#) phones boast touch-screen displays and often a separate stylus. The Pocket PCs provide added functionality but typically at the cost of requiring a second hand.

8 Expandability

To keep unit prices attractive, manufacturers distribute cell phones with minimum RAM. As you add third-party applications, documents, spreadsheets, PDFs, and other files to a PDA, the device's memory limitations soon become problematic.

Verify that the model phone you're purchasing easily accepts upgrades. Common memory types supported in cell phones include mini SD, MultiMediaCard, and SD cards. Fail to plan for expansion and you could find your phone's service life severely limited.

9 Microsoft Office compatibility

Any PDA worth its weight should possess Microsoft Office compatibility. Not all cell phones can natively view or edit Word documents and Excel spreadsheets, and still others can't even access PowerPoint presentations.

By default, Microsoft Pocket PC PDAs boast excellent Office suite compatibility. Other phones ship with software (on accompanying CDs) that must be installed separately. Some models, meanwhile, can't open or edit Office files.

Before purchasing any PDAs be sure the models in question provide the compatibility your organization requires.

10 Voice dialing and recognition

Voice dialing may be the biggest unsung hero of a mobile warrior's workday. Whether driving, commuting by train, or walking to lunch, the ability to dial numbers using only your voice (versus having to navigate myriad menus to identify a specific contact and select the desired telephone number from the lengthy list that typically includes home, work, fax, and cell options) can be a lifesaver.

Unfortunately, not all cell phones ship with the feature. Some, such as the [Motorola Q](#), include voice recognition features, whereas others (the [Treo 650](#) is one example) require first that a separate software license be purchased, downloaded, and installed. Many models of cell phones simply don't offer voice recognition functionality. Help mobile employees make the most of their productivity tools; when possible ensure a cell phone supports such voice recognition features to simplify menu navigation, dialing contacts, and accessing other needed information. Any added expense is easily offset by virtue of the feature's timesaving nature and convenience--not to mention the safety considerations.

Additional resources

- TechRepublic's [Downloads RSS Feed](#) **XML**
- Sign up for TechRepublic's [Downloads Weekly Update](#) newsletter
- Sign up for our [IT Management NetNote](#)
- Check out all of TechRepublic's [free newsletters](#)
- ["10 steps to a sweet BlackBerry Enterprise Server \(BES\) deployment"](#) (TechRepublic download)
- ["10 ways to stay connected on the road"](#) (TechRepublic download)
- ["Pocket PC: Lock it down in 10 steps"](#) (TechRepublic download)

Version history

Version: 1.0

Published: March 5, 2007

Tell us what you think

TechRepublic downloads are designed to help you get your job done as painlessly and effectively as possible. Because we're continually looking for ways to improve the usefulness of these tools, we need your feedback. Please take a minute to [drop us a line](#) and tell us how well this download worked for you and offer your suggestions for improvement.

Thanks!

—The TechRepublic Downloads Team