Chapter 1: Introduction to PDAs

This chapter provides a brief history of the evolution of mobile wireless databases and introduces the Personal Digital Assistant, or PDA, and typical PDA environment. The purpose is to detail all the pieces of this technology at a high level. For those with no knowledge of PDAs, this chapter is an absolute necessity.

The Basics

The PDA environment and units can be very simple or quite advanced, depending on your level of technical expertise and usage. The term *PDA* is highly used, but it should really be *handheld computer* or *handheld PC*. PDA was initially used because the units mainly contained a daily calendar, personal address book, calculator, to−do list, perhaps a currency exchange program, and usually an international time zone map. In this respect, these units were indeed personal digital assistants, as people would forgo their usually big personal calendar and to−do agendas for these little electronic machines. I remember back in the early 1990s when I received my first PDA, a Texas Instruments digital assistant. I entered all the telephone numbers for all the people I knew, along with their addresses and whatever comments I could find such as birthdays, anniversaries, and upcoming special events. It was fantasticthe calendar would sound an alarm on the days I marked for notification. In meetings, I could take brief (very brief) notes and was a whiz with my fancy calculator that really couldn't do much more than just the basic functions. We're obviously still using the term *PDA*, as per its embedded use in the name of this book, but we really mean a handheld personal computer whenever we refer to it here.

A funny thing about the term PDA is that no vendor really uses it. When people are asked what a PDA is, they usually reply "Palm Pilot" (if they remember these), and recognize Pocket PC devices in the same category, but no vendor actually calls their devices "PDAs." "PDAs" was coined back in 1992 when introduced by Apple's Newton MessagePad, which really didn't take off. Microsoft also had their hands in these PDAs with WinPad, but had the same problem. Microsoft poured on the research and development and came up with quite a number of new product releases, including PC Companions, Windows CE, Handheld PCs, Palm−size PCs, Auto PCs, and Pocket PCs. Whenever we refer to PDAs in this book, we are referring to Palm devices such as the m500, and Pocket PC devices such as the Compaq iPaq.

As previously mentioned, the PDA's basic functions were quite simplistic. Palm's devices have expanded upon the PDA base with handwriting recognition, and enhanced memoryit used to be 64K at best, and now we're into megabytes and gigabytes. Along with these, PC synchronization, expansion slots for additional memory, and email have been added. Today's users can even buy added−value packages of memory with embedded programs for many uses. By far, the most popular added functionality is games. One of the latest Palm devices is the m500 model, which we'll be using throughout this book, compliments of Sybase, one of our main sponsors.

Palm opened their operating system, allowing thousands of developers the opportunity to create sophisticated and diverse programs specific to Palm. This really allowed the broadening of Palm's operating system, and hence device usage, that sent the PDA market skyrocketing. New units have color screens, modems, and the capability to wirelessly synchronize data and applications almost anytime and anywhere via modems and the wireless Internetmore on these possibilities later in the book. We'll show you how we built a simple application with its own database, and how we keep its data on the PDA unit and on the PC synchronized.