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How to Do *Everything* with Your

Pocket PC Second Edition

Play music, browse the Web, send instant messages, download games—and more

Personalize your Pocket PC to match your style and needs

Manage appointments, take notes, crunch numbers, and synch data with your desktop PC



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How to Do

Everything with Your POCKETPC **Second Edition**

What You'll Do in This Book	CHAPTER
Learn the hardware and software features of your Pocket PC	1
Work with information and run programs using the Pocket PC user interface	2
Change the appearance of your Pocket PC by selecting different themes	3
Change the settings on your Pocket PC to tailor it to your needs	4
Connect your Pocket PC with desktop computers	5
Synchronize your data with a desktop computer	6
Install programs onto your Pocket PC	7
Schedule appointments, manage contacts, and track tasks	8
Make phone calls using the Pocket PC Phone application	9
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How to Do with Your

Everything Pocket PC **Second Edition**



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About the Author

Frank McPherson is an avid user of handheld computers, starting with the Newton MessagePad in 1993 and later the Windows CE Handheld PC. Since 1993 he has been helping Newton, Handheld, and Pocket PC users online with Compuserve, the Microsoft Network, and Internet newsgroups. He developed and maintains the PocketPCHow2 website (http://www .pocketpchow2.com), which is visited by people from around the world seeking help using their Pocket PCs. Microsoft has recognized him as a Most Value Professional for his contributions to the mobile device community.

Frank has been a sports columnist and reporter for the Norway Current, a weekly newspaper in Norway, Michigan, and has also covered high school sports for the Iron Mountain Daily News in Iron Mountain, Michigan. Articles written by Frank about Pocket PCs have appeared in *Pocket PC Magazine*, *Brighthand.com*, and *PocketPC.com*.

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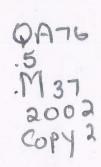
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How to Do with Your

Everything Pocket PC **Second Edition**



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Dedication

I was nearly halfway through writing this book on September 11, 2001. It was hard to write anything as the horror of that day's events, and the suffering of so many people, made writing books and Pocket PCs seem unimportant. Like many other Americans, I struggled with fear and uncertainty.

As the days passed with images of New York, Washington DC, and Pennsylvania constantly on television, I wondered what it is that I could do. All the people who died on that day did so enjoying the freedom the United States provides. Americans are free to travel anywhere within this great country, and earn a living doing work that provides personal satisfaction. In the United States everyone is free to practice any religion, go to any school, and voice their own opinions. Writing this book is one way that I enjoy my freedom, and in so doing bring honor to those who died on September 11, 2001.

This book is dedicated to those died on the planes, in the buildings, and on the ground in New York, Washington DC, and Pennsylvania. It is dedicated to our real heroes, the men and women of our fire and police departments, doctors, nurses, and emergency technicians, and members of our armed forces.

Let us never forget how precious all life is, and how truly blessed we are to live in a country in which we are free to seek out and fulfill our dreams.

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Introduction

When Microsoft launched the Pocket PC on April 19, 2000, few knew how successful it would be. There was some nervous excitement because the Pocket PC sported a more efficient user interface and performance improvements, but previous handheld operating systems from Microsoft achieved little market success.

Time has shown that there was good reason to be excited, as the Pocket PC became the most successful handheld running Microsoft software to date. By the Pocket PC 2002 launch in October, 2001, the Pocket PC gained significant share of the consumer and enterprise handheld markets. The Pocket PC is now the choice for people who want the most versatile handheld to manage their personal information.

The Pocket PC is the latest in a series of hardware devices that run the Microsoft Windows CE operating system and application software. Also included in the series are the Handheld PC, Auto PC, and embedded devices. Microsoft calls the series Windows Powered devices. The combination of Windows CE and application software is known as Windows for Pocket PCs.

Pocket PCs help you interact in different ways with a variety of information. Think about all of the information that is important to you. It might be appointments, addresses, bank account balances, or documents. It might even be voice recordings, web pages, video clips, or music.

Many people have turned to personal computers to help them keep track of all this different information. But, there is a problem with personal computers. Most sit on tables and desks at home, while we need the information they contain when we are sitting in meetings or out shopping. With a Pocket PC that information can be taken out of the computer so that it is with you at any time, and anywhere. And when you return home that information can be easily updated to your personal computer.

These are incredibly powerful little devices that you can use for work and play. In *How To Do Everything With Your Pocket PC, Second Edition* I show you how to use the latest Pocket PC software to create documents and spreadsheets, check off those items on your task list, and then relax to the sounds of your favorite musician. If there is something that you want to do with a Pocket PC, this book will show you how to do it.

Part I of this book provides the information that you need to get started with your Pocket PC. Chapter 1 provides an overview of the devices that make up the Windows Powered platform to help you decide which is right for you. Then starting in Chapter 2, I walk you through the experience of setting up your Pocket PC, followed by Chapter 3 where you will learn how to personalize your Pocket PC.

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One of the first things you will want to do is move information from your personal computer into the device. Chapter 5 shows you how to connect Pocket PCs with personal computers, and in Chapter 6 you learn how to use the ActiveSync software to synchronize data so that what is stored in Microsoft Outlook on your PC, also appears in Pocket Outlook on your device. As that information changes synchronization ensures that it is the same on both the PC and Pocket PC.

Part II, called "Make The Most of Your Pocket PC" focuses on how you will use your Pocket or PC every day. You will use Pocket Outlook to manage your appointments, addresses, and tasks, and Pocket Office to create documents and spreadsheets. I also provide tips for using your Pocket PC at the office, and when you are traveling. And when you are ready for a break you can install and play one of the many games available for Pocket PCs.

The Internet has become a very important tool for retrieving and exchanging information, and Part III, "Go Online with Your Pocket PC" provides all the instructions you need to connect to and use the Internet. Pocket PCs can connect to the Internet using landline and wireless modems, and directly via local area networks. Once the connection is made you can send and receive e-mail, chat with friends using instant messaging, and browse any web site. You can download Web pages to your device so that they can be read any time, even when you are not connected to the Internet.

Part IV, "Customize Your Pocket PC" shows you how to tailor your device to suit your tastes. You can expand the storage space on Pocket PC to install software from a library of thousands of programs available on the Internet. In Chapter 23 you will learn about some of my favorite programs that you can use to expand the functionality of your Pocket PC.

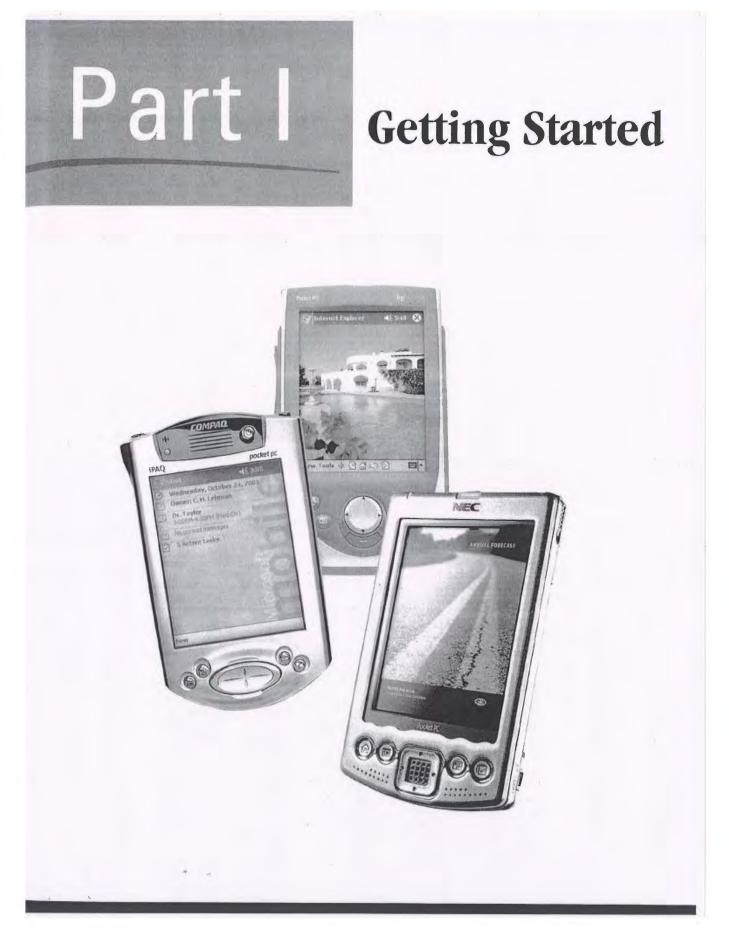
A number of special elements have been added to help you get the most out of this book:

- **How to** These special boxes explain, in a nutshell, how to accomplish certain tasks that use the skills that you learn in this book.
- **Did You Know** These special boxes provide additional information about topics relating to Pocket PCs.
- **Notes** These provide extra information or important things that you need to watch out for in certain situations.
- **Tips** These tell you how to do something better, faster, or in a smarter way.

Within the text you will find words in special formatting. New or defined terms are in *italic*. If there is a hyphen between two different keys, such as CTRL-B, that's a keyboard combination, and you should press each key while holding down the others, then release them simultaneously. Some instructions involve tapping on different buttons or menu items in sequence. An I-beam separates each step in the sequence, for example File | Open means tap the File and then Open menu options.

Technology changes at a break-neck pace, and undoubtedly you will have a question, or encounter a problem not covered in this book. One good source for information is the microsoft.public.windowsce Internet newsgroup, which is monitored by myself and my fellow Microsoft Mobile Device MVPs. You can also reach me through my web site, PocketPCHow2.com, at http://www.pocketpchow2.com, or via the e-mail address, feedback@fmcpherson.com.

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4 How to Do Everything with Your Pocket PC

How To...

- Recognize the different Windows Powered platforms
- Know what Windows Powered devices include
- Know the different parts of Windows for Pocket and Handheld PCs

In 1996, several companies—including Hewlett-Packard, Casio, Sharp, and Compaq—began selling a brand new device called a Handheld PC. Handheld PCs run Microsoft software that includes the Windows CE operating system and other programs for managing personal information and creating documents and spreadsheets.

The Handheld PC was only the first of a variety of different types of what Microsoft now calls Windows Powered devices. The devices continue to evolve and include the Pocket PC, which is the subject of this book. Each device is designed so that you can work with the information important to you, wherever it is needed, and in the manner you find most comfortable.

Windows Powered devices do more than just manage appointments, addresses, and task lists, though they do that very well. With a Windows Powered device, you can read your e-mail and surf the Web. You can write a letter, balance your checkbook, make voice recordings, read books, and listen to music. In the case of the Pocket PC, all these things are possible in a device that can rest in your hand and fit in your pocket.

Everyone's information needs are different, and the Windows software for Pocket PCs provides you with all the tools to meet your needs. This book is about how to use this software to make your Pocket PC your own personal information appliance.

Each component of Windows for Pocket PCs is covered in depth in the chapters of this book. It focuses on the current versions of the software that run on Pocket PCs. While older versions continue to exist, and much of what is contained in this book applies to those versions, the focus is on the newest software for this platform.

We begin here by laying the foundation—learning about all the different hardware platforms that, when combined, are the Windows Powered devices. This chapter also includes an introduction to Windows for Pocket PCs, all of which is explained in more detail in the remaining chapters of this book.

Information Appliances

In the 70 years since it was introduced, the television set has undergone a number of changes. From black-and-white to color images, and from simple 19-inch round displays to 35-inch flat panels, the television set has been improved and re-invented. Through it all, one thing has remained constant: each television set has a button; and when you press that button, the screen springs to life to display what we commonly call TV.

It is true of all consumer electronic devices that we expect them to work the instant we turn them on. Radios and CD players immediately start playing music and Gameboys start playing games. What about your personal computer? What happened the last time you turned it on? Did it spring to life and start computing?

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In offices all around the world, the following ritual is played out every morning (you might even find yourself doing it): After fighting through traffic and dragging yourself and the work you brought home into your cube or office, you hang up your coat, turn on your computer, grab your coffee mug, and head for the coffee machine. Sound familiar? This ritual has come about because of what is known as the *booting process* of personal computers. The booting process includes all steps that computers take from when they are first turned on until the computer is ready for you to use.

Perhaps your boss has heard that notebook computers can make employees more productive, so he or she buys you one. Despite the fact that you are now expected to work 14-hour days, that seems to be a small price to pay as you open the box of your brand new notebook computer. Who cares how much you are now expected to work? Your notebook is cool and nobody else in your department has one.

Over time, you stumble across the Outlook icon on the desktop and discover that it can store appointments, contacts, and tasks. In fact, you learn that it can be used for all of the same functions as the planner you carry constantly. You realize that if you use Outlook to manage your time, rather than your planner, you would have one fewer item to carry home every night. Plus, carrying it into meetings gives you a chance to show off your notebook to your envious coworkers.

So, you begin the task of entering all of the appointments, tasks, and contacts from your planner into Outlook. This works splendidly during the day, as everything is right there at your fingertips as you work on your computer. Then comes your business trip. As you enter the airport, your pager goes off. You seek out the nearest telephone booth to call your boss, who wants to know whether you are available the day you get back to attend an important meeting with a potential client. With one hand on the telephone, you unzip the bag that contains your notebook computer, fumble around to turn it on, and then wait for what seems an eternity while your boss grows impatient and you watch your PC boot-up. You wish you had the planner that you left on your dresser at home.

Wouldn't it be great if your computer were as easy to use as a television set and functioned from the moment you turned it on? That is the promise of information appliances. In his book *The Invisible Computer* (MIT Press, 1998), author Donald A. Norman defines the information appliance as "an appliance specializing in information: knowledge, facts, graphics, images, video, or sound. An information appliance is designed to perform a specific activity, such as music, photography, or writing. A distinguishing feature of information appliances is the ability to share information among themselves."

Information appliances have recently begun to receive a lot of attention, mostly from computer magazines writing about low-cost devices that connect to the Internet and replace personal computers. Most of these articles would have you believe that information appliances are new; but in reality, only the attention is new. The term was created in 1978 and trademarked by Jef Raskin, who was the creator of the Macintosh computer project at Apple Computer.

A newer form of an information appliance is the *personal digital assistant (PDA)*. During a speech at the 1992 Consumer Electronics Show in Las Vegas, former Apple Computer CEO John Sculley defined the PDA and announced Apple's intention to develop such a device. PDAs are information appliances that use computer technology to help manage personal information and assist with mundane tasks. Later in 1992, Sculley introduced Apple's PDA, the Newton MessagePad, at the Spring Consumer Electronics Show (CES) in Chicago.

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How to Do Everything with Your Pocket PC

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The Newton MessagePad may not have been the first information appliance, but it can be credited for being the first to draw attention to the concept. Its introduction at the CES captured the imagination of the press, who saw a demonstration of the device that performed handwriting recognition. From that point on, much was expected from this new device that was going to re-establish Apple as a technology leader.

From the time of its introduction in 1992 to its launch at the 1993 MacWorld Expo in Boston, a tremendous amount of hype was generated about the Newton MessagePad. Competitors also weighed in with their devices. Tandy and Casio jointly created their PDA, called Zoomer; General Magic created MagicCap; and Microsoft was rumored to be developing a Newton-killer called WinPad.

Unfortunately, the hype was short-lived; and during the life span of the Newton MessagePad from 1993 to 1998, sales never reached Apple's projected levels. Sadly, despite the technology of the Newton MessagePad, it may be best known in computing history for a series of Doonesbury comic strips that made fun of the results of Newton's handwriting recognition.

With the benefit of hindsight, one can look back at the Newton MessagePad and see its shortcomings. The handwriting recognition was not complete when it was first released, which resulted in the PDA being branded a failure. Even during the existence of the Newton MessagePad, Apple started referring to the device as a Personal Communications Assistant; and, even today, Palm Computing and Microsoft do not refer to their devices as PDAs. During its five years, Newton MessagePads grew larger in size and increased in price, conflicting with a market that wanted smaller devices at a lower cost. Finally, exchanging information between a MessagePad and a desktop computer was too difficult.

Despite these shortcomings, the Newton MessagePad leaves a legacy of creating the PDA market, and furthering the cause of information appliances. Lessons learned from the Newton MessagePad were applied to both Palm Computing devices and Microsoft PC Companions.

Microsoft PC Companions

During the summer of 1992, Microsoft began its version of the Newton MessagePad, which it called WinPad. At the same time, another project—Pulsar—was underway to develop a pager-like device. In 1994, senior management at Microsoft reviewed both projects and decided to combine the two into a new project that was given the code name Pegasus, which became Windows CE.

WinPad was designed to be a companion for business users and was based on Windows 3.1. Pulsar was to include an entirely new object-oriented operating system, completely unlike any other Microsoft product. In the end, Pegasus did not include the technology from either of these projects, but it did inherit the WinPad vision of being a companion for Windows desktop computers. That vision became known as the *PC Companion*.

A PC Companion is a small device that fits in the palm of your hand and is designed to exchange information with programs running on personal computers. A PC Companion enables you to carry all of the information you create on a personal computer, wherever it may be needed. And, equally important as its size and ability to communicate with personal computers, PC Companions use an operating system stored on a computer chip that runs continuously, eliminating the booting process. A PC Companion functions immediately when it is turned on, just like a television set.

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PC Companion is the old terminology for what Microsoft now calls Windows Powered devices.

The PC Companion changes the scenario described at the beginning of this chapter. All of the information is still entered into Outlook from a planner; but instead of carrying the notebook computer everywhere, you download the information to a PC Companion. If all you need is the information contained in Outlook, you can leave the notebook computer behind and only pack the PC Companion when traveling.

Now, when your boss pages you to ask whether you can attend a meeting, all you need to do is take out your PC Companion, turn it on, and look up the information—in no more time than it takes to retrieve and look up the same information in a planner. After you determine that you are available on the date and time of the meeting, you create the appointment on the PC Companion. When you return to the office, you connect the PC Companion to the notebook computer; the new appointment uploads to Outlook, eliminating the need to re-enter information, as might be the case if you were using a planner and Outlook together.

The process of exchanging information between a PC Companion and a desktop computer is called *synchronization*. Synchronization is actually a bit more sophisticated than simply uploading and downloading information because it has the ability to determine what has been added to both devices and to ensure that the information is the same on both, all in one step.

One can debate whether or not the Microsoft PC Companion is an information appliance. It specializes in information, yet it can perform multiple activities, rather than just one. Because there are many different ways for information to be expressed and used, PC Companions not only manage personal information like your appointments and addresses, but also documents, spreadsheets, web pages, voice recordings, and music.

Nor is information the only variable; how each person wishes to interact with that information is also different. Some people prefer using small devices with small keyboards, while others are comfortable with a stylus and handwriting recognition. Others prefer a larger device, closer in size to a notebook computer; and some prefer to have that information available in their car, which they can retrieve by using voice commands.

Over the years since 1996, when the first PC Companion was introduced, Microsoft has made changes to the Windows CE operating system and the software that it includes to continually support a wide range of information types. At the same time, new hardware has been introduced, targeted at the variety of different ways users want to interact with the device.

The results are subtle differences between operating system versions and application software, five different hardware platforms, and a confused market. Microsoft discovered that part of the confusion is all of the different hardware and software names. Therefore, in the fall of 1999, Microsoft introduced Windows Powered devices, and Windows for Pocket and Handheld PCs. These two terms are defined in the remainder of this chapter.

Windows Powered Devices

Ever since Microsoft launched the first Handheld PC, several different Original Equipment Manufacturers (OEMs)—such as Philips, Casio, Hewlett-Packard, and Compaq—have made the

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NOTE

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hardware while Microsoft creates the software. Included in the software is a new operating system and pocket versions of some Microsoft desktop software, such as Pocket Outlook (Calendar, Contacts, and Tasks) and Pocket Office (Pocket Word and Excel).

Unlike a personal computer, the software of the Handheld PC is stored on computer chips. Windows for Handheld and Pocket PCs is only available on Read-Only Memory (ROM) chips. It was necessary to use a ROM chip to store all of the software in a very small amount of space and to eliminate the booting process. The combination of the operating system, Pocket Outlook, and Pocket Office became known as Windows CE, even though Windows CE is really just the operating system. Today, Microsoft calls this combination of software on a ROM chip for Windows for Handheld PCs or Pocket PCs, and the hardware is Windows Powered.

NOTE

There have now been two releases of Windows for Pocket PCs using Windows CE. To distinguish between the two, we refer to the first release as Pocket PC 2000 and the current release as Pocket PC 2002.

The Handheld PC is only the first Windows Powered hardware platform; and since 1996, Microsoft has introduced four additional platforms: Palm-size PCs, Auto PCs, Handheld PC 2000, and Pocket PCs.

Handheld PCs

Handheld PCs are the result of the Pegasus project, which began in 1994. The device included the first versions of the Windows CE operating system, Pocket Outlook, and Pocket Office. The first version of Pocket Office only included Word and Excel. Microsoft also included a copy of their first Personal Information Manager (PIM), Schedule +, and Handheld PC Explorer, which provided synchronization between Schedule + and the Handheld PC.

A few months later, Microsoft released an upgraded version of the Handheld PC Explorer, which provided synchronization between Handheld PCs and Outlook. Even now, if you have a Handheld PC with Windows CE Version 1, you must use Handheld PC Explorer because the latest version of the software, called *ActiveSync*, does not work with your device.

TIP

You can find Handheld PC Explorer Version 1 at http://www.microsoft.com/mobile/ handheldpc/downloads/hpcexplorer/hpcexp.asp

Along with the software, the following hardware specifications were typical for Handheld PCs:

- Clamshell design, approximately 3.5"W×7"H and weighing approximately 13 ounces.
- Powered by Alkaline batteries.
- **480**×240 resolution monochrome display.
- Keyboard for data input and a stylus instead of a mouse.
- At least 2MB of RAM for program execution and storage space. Many OEMs created 4MB devices. Casio also created a 6MB version of their device and Philips had an 8MB device.

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- At least a 4MB ROM chip to store Windows CE and other software programs. The software could be upgraded by replacing the ROM chip.
- One of several different RISC processors, of which the Hitachi SH3 was most commonly used, though NEC and Philips used MIPS-based RISC processors. The average processor speed was 40MHz.
- One PCMCIA, or PC card slot. Hewlett-Packard also included a CompactFlash slot, and Philips included a proprietary storage expansion slot called VModule.
- One serial port and cable to connect the Handheld PC to desktop computers.
- An IRDA-compliant infrared port to exchange information with other Handheld PCs.

In addition to these basic requirements, OEMs tried to differentiate their products by adding one or more of the following features to their device:

- Larger ROM chips with more application software. Many of the OEMs made deals with software developers to bundle additional programs with their hardware. Some of the software was included in ROM, while other software was provided on CD-ROM for installation onto the device.
- Backlighting for the screen that the user could turn on or off.
- An indicator LED for alarms.
- Cradles for connecting the Handheld PC with a desktop computer.
- Support for rechargeable NiMH or NiCAD batteries.

NOTE

Examples of the first Handheld PCs include the Casio Cassiopeia A10, the Compaq Companion C120, the HP 320LX, the NEC MobilePro 400, and the Philips Velo 1.

The Philips Velo was the only Handheld PC that included an integrated 19.2 modem and a microphone for voice recordings. LG Electronics and Hitachi provided modem and headset options for their devices.

TIP

For more details about the hardware specifications of Handheld PCs, and a listing of the different OEMs and devices, go to http://www.cewindows.net/wce/wcetech.htm.

Nearly one year after the first Handheld PCs began selling, Microsoft upgraded Windows CE and the application software. Windows CE Version 2 added support for color displays, direct printing, Ethernet networking, an improved web browser, and video output to external monitors. Pocket PowerPoint was added to the suite of application software.

NOTE

Examples of the color Handheld PCs include the Compaq 2010C, the HP 620LX, the NEC MobilePro 750C, and the Sharp Mobilon HC-4500.

Most of the OEMs sold ROM upgrades for their original Handheld PCs, which were installed by replacing the old chip with the new chip. At the same time, new hardware was introduced that had color displays, video output, faster processors, CompactFlash slots, and more RAM.

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Palm-size PCs

In 1998, Microsoft introduced two more Windows Powered platforms: Palm-size PCs and Auto PCs. Palm-size PCs are approximately 3"W×5"H and weigh around six ounces. The Palm-size PC screen has a portrait layout and the device does not include a keyboard. Instead, to input data, you use a stylus to either write on the screen using a character recognizer or tap on an onscreen keyboard.

NOTE

Originally, Microsoft wanted to call these devices Palm PCs, but Palm Computing filed a lawsuit against Microsoft. In an agreement with Palm Computing, Microsoft changed the name to Palm-size PC, which is a mouthful and is often abbreviated as P/PC.

Windows CE remained at Version 2, but the user interface was slightly altered to support the different screen layout and size. Significant changes were made to the software that Microsoft included with the P/PC. Pocket Outlook remained, as did Inbox and Solitaire, but Pocket Office, Windows Explorer, and Pocket Internet Explorer were not included. These applications cannot be installed separately; fortunately, several third-party developers have written programs to provide the functionality that was lost.

Microsoft added software to P/PCs that was not available for Handheld PCs. Included was the Mobile Channel Viewer, which replaced Pocket Internet Explorer. Mobile Channel Viewer is designed for viewing content that you download to your PC using Internet Explorer and then download to the device. Notetaker provides the ability to create files that can contain text, writing in digital ink, or drawings. The files can be synchronized to a PC and opened with Microsoft Word. Voice Recorder enables you to create, play back, and organize recordings made using the microphone of the P/PC.

Windows CE Services replaced Handheld PC Explorer and added support for mobile channels, Notetaker files, and synchronization across an Ethernet network. The hardware specifications for a typical P/PC include the following:

- RISC-based processors with a speed of about 75 MHz. P/PCs continue the support for MIPS and SH3 versions of the processor, though this time the majority of the OEMs chose MIPS for their devices.
- A monochrome screen with a 320×240 resolution and diagonal size of about 4"
- At least 2MB of RAM, though most OEMs created 4MB and 8MB devices, and some even sold 16MB devices
- An alarm LED that flashes to notify you of an alarm
- Microphones to make voice recordings, and headphone jacks to listen to the recording play back
- **IRDA**-compliant infrared ports for exchanging information with Handheld and P/PCs
- A CompactFlash slot for storage cards and peripherals such as modems and Ethernet cards
- A serial cable and a cradle to connect the device to desktop computers

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NOTE

Examples of the first P/PCs include the Casio E-11, the Philips Nino 320, and the Everex Freestyle Associate.

In February 1999, Microsoft announced a color version of the P/PC. Besides support for color screens, little was changed in Windows CE other than a version number change to 2.11. The hardware for these devices retained basically the same physical size, but some included faster processors and more RAM.

The most distinguishing feature between the different brands of color P/PCs is the technology used in the display. There are two types of color LCD (liquid crystal display) screens: *active* and *passive*. Active displays, such as thin film transistor (TFT), provide a sharper, clearer image by refreshing the screen more frequently than passive displays.

NOTE

Today's Pocket PCs are really the current version of P/PCs. The display technologies discussed here still apply to Pocket PCs.

An individual transistor controls each pixel of an active display, making it more expensive to make than passive displays that use a grid of horizontal and vertical wires. Because passive displays are cheaper, companies continue to research ways to make them better. Double-layer super-twisted nematic (DSTN) is a passive display that uses two display layers. Color supertwisted nematic (CSTN) is another passive display developed by Sharp that rivals TFT displays at about half the cost.

Another display issue is lighting, and again there are two types: *transmissive* and *reflective*. Transmissive lighting provides backlighting from a light source behind the screen. This type of lighting makes the screens very readable indoors, but virtually unusable outdoors. Reflective screens use external light, such as ambient light around the device, or a front-lighting system. Reflective screens are easier to read outdoors, but are not as bright indoors or under poor lighting conditions. The major benefit of reflective screens, however, is that they use much less power than transmissive screens.

NOTE

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The Casio E-100 was the most stunning of the P/PCs, with its TFT screen supporting 65,536 colors and stereo sound. Casio sold the E-100 and later the E-105, which has 32MB of RAM, as multimedia P/PCs.

While the TFT screens are beautiful indoors, they are practically unusable outdoors. Hybrid transflective TFT screens reflect ambient light but also use a backlight. This makes the screen easier to read outdoors, but also tends to make the screen darker indoors. Older Hewlett-Packard devices used a transmissive CSTN color screen, and Philips used a transmissive DSTN screen.

All the manufacturers of Pocket PC 2002 devices use hybrid transflective TFT screens.

Auto PCs

At the same time that Microsoft announced the P/PC, they also announced the Auto PC. An Auto PC replaces your car radio with a Windows Powered information appliance. The device

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is voice-activated, enabling you to retrieve information, such as driving directions, using spoken commands. Addresses that you have in the Contacts program on other Windows Powered devices can be transferred to the Auto PC by using infrared.

An optional component of the Auto PC is a wireless receiver with which you can receive traffic conditions, weather, news, stock quotes, and e-mail. The Auto PC voice synthesizer reads all of that information to you.

At the heart of the Auto PC is the Windows CE operating system—the same operating system that runs all other Windows Powered devices. The Auto PC demonstrates the modular design of Windows CE, which allows Microsoft to remove components, like the Pocket PC user interface, and replace it with other interfaces, such as the Auto PC voice recognizer.

Not many people bought Auto PCs; and today, this platform is no longer supported by Microsoft. However, all of the major automobile manufacturers are developing products similar to the Auto PC, and today these types of products are called *telematics*. For more information about telematics, read the Motorola FAQ at http://www.motorola.com/ies/telematics/htmls/faq.html.

Handheld PC 2000

In the fall of 1998, Microsoft announced the Handheld PC Professional. This platform retains the screen and keyboard combination introduced with the Handheld PC, but in a larger size. In the fall of 2000, Microsoft released the current version of this platform, called Handheld PC 2000. The largest Handheld PC 2000 device is 10"W×8"H, and the smallest is nearly 4"W and a little over 7"H.

NOTE

Handheld PC 2000 is the current release of Windows for Handheld PCs, and we will refer to the devices that run this software as Handheld PCs.

As you can tell from the physical dimensions, Handheld PCs can approach the size of subnotebook computers. With that size and a price hovering around \$900.00, you might wonder why you should buy a Handheld PC rather than a notebook computer. If you find yourself facing this question, consider the following:

- Handheld PCs turn on instantly and are immediately functional, unlike notebook computers that use a booting process like desktop computers.
- Battery life can be as long as 12 hours on a Handheld PC, whereas battery life on a notebook computer is usually only half as long, and sometimes shorter.
- The smallest Handheld PC weighs a little over one pound, while the largest is just under three pounds. Subnotebook computers tend to be in the three- to four-pound range, and notebook computers tend to be in the four- to six-pound range.
- Handheld PCs have no moving parts to break, whereas notebook computers have hard disks that can fail.
- Handheld PC 2000—and in particular, Pocket Office—does not support all of the features available in Microsoft Office. For some people, this is a major shortcoming; while for others, the simplicity provided by Handheld PCs is a plus.

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- Handheld PC 2000 includes Windows CE Version 3, and Version 3 of Pocket Outlook and Pocket Office. Also included are Pocket Access and InkWriter.
- The hardware specifications of Handheld PCs vary much more than any other Windows Powered device. Here are some highlights:
 - Screen resolutions vary between 640×240 and 640×480, and some even support a resolution of 800×600.
 - Diagonal screen sizes range from 6.5" to 10".
 - Monochrome, grayscale, and color displays. Color displays range from 256 colors to 65,536 colors.
 - Backlight displays
 - RISC processors running as fast as 206MHz
 - Either 16MB or 32MB of RAM
 - PC card, CompactFlash, and SmartCard slots
 - Integrated modems
 - IRDA-compliant infrared ports
 - Microphone for making voice recordings
 - Built-in speakers for playing back voice recordings
 - Rechargeable lithium ion batteries

Examples of Handheld PC 2000 devices include the HP Jornada 720, the NEC MobilePro 790, and the Intermec 6651.

Did you know?

NOTE

Handhelds Now Sold To Vertical Markets

Handheld PCs were first sold to consumers, but it never sold as successfully as originally anticipated. Today Microsoft and the manufacturers of Handheld PCs target the devices at the corporate market, where it has had its greatest success. Companies use Handheld PCs for specific functions, like inventory control, or customer relationship management. Such functions require the larger screens and keyboards that are part of Handheld PCs. Consumers can still buy Handheld PCs from online sources such as MobilePlanet at http://mobileplanet.com.

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Pocket PCs

know

The newest addition to the stable of Windows Powered devices is the Pocket PC. In April 2000, Microsoft released the first version of Pocket PCs, which is now called Pocket PC 2000. The most recent version of the Pocket PC software was released in October 2001, and is called Pocket PC 2002. Pocket PC 2002 refers to Windows Powered devices running Windows CE Version 3, Pocket Outlook, and Pocket Office.

Pocket PCs have the same physical specifications as P/PCs, but include faster processors, more memory, and better battery life. Casio, Compaq, Hewlett-Packard, Toshiba, Audiovox, and NEC manufacture Pocket PC 2002 devices.

There are hardware features that make Pocket PC 2002 devices different from Pocket PC 2000. These features are the following:

- The same Intel StrongARM processor in all devices
- A 32MB FlashROM chip for storing the Pocket PC 2002 software
- A minimum of 32MB of RAM
- A color transflective TFT display
- Some devices include multiple storage card slots

Did you **FlashROM Enables Device Upgrades**

Like ROM chips, software written on FlashROM chips is not erased even when the batteries in the device are completely drained. However, while software can only be written once on ROM chips, software can be erased and rewritten on FlashROM chips. FlashROM chips are more expensive, but they enable the hardware manufacturers to upgrade the Pocket PC software without having to replace the chip.

Only two Pocket PC 2000 device manufacturers, Compaq and UR There, sold Pocket PCs that use FlashROM chips. Consequently, only the Pocket PCs from these manufacturers can be upgraded to Pocket PC 2002. Both companies provide the upgrade on CD-ROM, however, because since these devices only have 16MB FlashROM chips, they cannot store all of Pocket PC 2002 in FlashROM.

Many updated programs of Pocket PC 2002, such as Microsoft Reader and Windows Media Player, can only be installed in RAM on upgraded Pocket PCs. The upgrade CD-ROM will include these programs or include instructions for downloading the programs, which you can install separately. The spell checker included in Pocket Word and Inbox with Pocket PC 2002 cannot be installed on upgraded Pocket PCs.

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The requirement for FlashROM in all Pocket PC 2002 devices ensures that they can be upgraded. Pocket PC 2002 uses only 24MB of the 32MB available on the FlashROM chip; so if the size of the Pocket PC software expands, the Pocket PC 2002 devices might be able to store all of the new software. In the meantime, some of the device manufacturers provide a utility that allows the extra 8MB of space on the FlashROM chip to be used as a storage card.

Pocket PC 2002 includes a feature Microsoft calls Update Execute in Place, or XIP. It allows them to provide updates to Pocket PC 2002 on the FlashROM chip, which you can download and execute directly from a web site. On previous devices, these types of updates have to be stored in RAM, taking away storage space that you would use for programs and data.

Looking to the Future

The Microsoft vision for mobile computing is that no one device will be the best fit for every person. As you have seen in this chapter, Handheld PCs meet the needs for vertical applications requiring larger screens and keyboards, while Pocket PCs meet the needs for people who want a portable information appliance. Smart Phones and Tablet PCs are two new mobile computing platforms that Microsoft plans to bring to market in 2002.

The Microsoft Smart Phone platform, which has the code name of Stinger, has been in development for two years. The goal of Stinger is to combine Pocket PCs with mobile phones and to create a device that appeals to people who prefer to use a small device in the form of a mobile phone. Stinger will have some of the functionality of Pocket PCs. For example, Stinger will have an Inbox and a version of Internet Explorer, along with Pocket Outlook, but it will not support stylus input like Pocket PCs.

Tablet PCs appear to be a big brother to Handheld and Pocket PCs, but they are in fact totally different devices. A Tablet PC is a fully functional personal computer that runs Windows XP Professional Tablet PC Edition, and full Windows applications. The key features the Tablet PC provides is handwriting recognition, long battery life, high-resolution displays, and wireless connectivity. The Microsoft vision for Tablet PCs is that they will be used to take notes like pen and paper, to annotate and read digital documents, as well as be used easily during meetings.

Windows for Pocket PCs

Windows for Pocket PCs includes the Windows CE operating system and application software (such as Pocket Outlook and Pocket Office) that run on Pocket PCs. All Windows Powered devices will include the Windows CE operating system, but some may have different combinations of the application software. For example, some devices may include all the software, while others may only include Pocket Outlook.

This section provides an introduction to the different components that make up Windows for Pocket PCs.

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Windows CE

In the simplest of terms, an *operating system* manages the interaction between application software and the hardware on which it runs. As a user, you should not be concerned about how the operating system works, only that it can run software at acceptable performance levels and remain stable.

One may be tempted to look at Windows CE and decide that Microsoft simply transferred Windows 95 to handheld devices. The truth is that Windows CE is a completely new 32-bit operating system, built from the ground up to run on embedded devices. The following are things that you need to know about Windows CE that affect you as a user:

- Windows CE implements a subset of the Win32 API, which was completely rewritten for embedded devices. This makes it easier for software developers to write programs using familiar tools, which speeds up the software development process.
- Windows CE is portable and can run on a variety of different processor types. That means that OEMs have a variety of processor manufacturers to choose from, enabling them to implement the latest processor technology at a lower price.
- Windows CE is a real-time operating system, which means that certain actions performed by the operating system occur within bounded times. To you, this means that the operating system should run faster.
- Windows CE is modular, so a system can be built using only the components needed for a particular platform. This means that a variety of different devices, such as the Pocket PC and the Auto PC, can be built from the same core operating system, decreasing product development life cycles.

The Windows CE user interface, or what is called the *shell*, is also a separate component. As such, Microsoft can create separate shells for the different hardware platforms that run the operating system. Separate shells have been created for the Handheld and Pocket PC platforms,

Did you know?

Windows CE Stands For Nothing

Ever since it's introduction, there has been debate about what *CE* stands for in Windows CE. Two of the most popular theories are that it stands for Compact Edition or Consumer Edition. However, Microsoft says that CE does not stand for either of these, nor anything else. Microsoft has announced that Version 4 of Windows CE, which has the code name of Talisker, will be officially called Windows CE .NET.

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resulting in a different look between the two devices. The Auto PC shell is not graphic based, but instead uses a voice command system.

The Windows CE modular design means that it can be used in a wide range of devices. In fact, you might be surprised to know that Windows CE is also used in devices such as gas pumps and point-of-sale terminals.

ActiveSync

It is important that information appliances easily exchange information with other devices; otherwise, the information is on a virtual island and not accessible everywhere it is needed. All Windows Powered devices come with infrared ports that can be used to exchange information with other devices, but they also communicate with PCs running ActiveSync.

ActiveSync runs on PCs that use the Windows 98, Windows NT, Windows 2000, or Windows XP operating systems. It synchronizes information between Windows Powered devices and Outlook. During synchronization, the software compares information between the device and the PC, determining what has been added to both. Then, the two are updated so that the information is consistent on both devices.

The primary purpose for ActiveSync is to synchronize appointments, contacts, and tasks, but it also synchronizes Outlook Notes, Mobile Favorites, and AvantGo content. Synchronization can be done using infrared, serial, USB, and Ethernet networks for communication. You also use ActiveSync to install programs on the device and to back up and restore the device. Chapters 5, 6, and 7 provide all the details for using this important program.

Pocket Outlook

There are many ways to make a Windows Powered device your personal information appliance, but chances are good you will start by using the Pocket Outlook programs to manage your personal information. You use the Calendar program to schedule appointments and all-day events; you use Contacts to store addresses; you use Tasks to manage your projects; and you use Inbox to send and receive e-mail.

ActiveSync synchronizes the information in each of these programs with their counterpart folders in Outlook. When you read Chapter 8, you will learn how to use Calendar, Contacts, and Tasks on Handheld and Pocket PCs. Chapter 20 shows you how to use Inbox.

Pocket Office

When you are traveling about with your Pocket PC, you may need to write a letter, read a report, or determine how much it will cost to remodel your kitchen. Chapter 10 shows you how to create documents using Pocket Word. Included in Chapter 13 are instructions for creating written and verbal notes using the Pocket PC Notes program. In Chapter 11, you'll learn how to use Pocket Excel to crunch numbers and how to use the Calculator program to make quick calculations.

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NOTE

Pocket Office does not include versions of Microsoft Access or PowerPoint. Several different software developers have written database programs for Pocket PCs, which you will learn about in Chapter 15. Likewise, there are also several programs for viewing and giving PowerPoint presentations, which are presented in Chapter 14.

Microsoft Money

Quicken and Microsoft Money are two very popular financial programs that run on desktop computers. In Chapter 12, you'll learn how to synchronize financial information in Money 2002 on a PC and with Microsoft Money on Pocket PCs. Microsoft Money also provides you with the ability to download stock quotes to your Pocket PC by using an Internet connection.

Play Music and Games

The Internet is becoming a popular way for distributing music in the MP3 (MPEG Audio Layer 3) or WMA (Windows Media Audio) file formats. You can download these files to a Pocket PC and play them using the Windows Media Player introduced in Chapter 18.

A beautiful color display and stereo sound make Pocket PCs great for playing games. Included with all Windows Powered devices is that hallmark of Microsoft game software, Solitaire. Other game software is available, including the Microsoft Entertainment Pack and several games that you can download from the Internet. All of this information about games for Windows Powered devices is also provided in Chapter 18.

Read Books

Windows for Pocket PCs is the first Microsoft product to include Microsoft Reader, which uses their ClearType display technology. This technology significantly improves font resolution on LCD screens, making it easier to read text on the device. Microsoft Reader provides tools for bookmarking, highlighting, and annotating books that you purchase and download from the Internet. Chapter 18 provides the instructions for using this program.

Connect to the Internet

The English poet John Donne wrote in *Devotions Upon Emergent Occasions (Meditation XVII)*, "No man is an Island, entire of itself; every man is a piece of the Continent, a part of the main. .." Today the Internet connects people from all walks of life around the world, reinforcing the idea that no man, or woman, is an island.

Connecting to the Internet is no longer optional for computers because people expect them to connect. And for many, the Internet has become very personal; with it they grow, develop relationships, share a few laughs, and buy their favorite author's book. The Internet has become the location for much personal information, to which a personal information appliance must provide access.

Microsoft Windows for Pocket PCs includes the software needed to connect to the Internet, and Chapter 19 provides instructions to help you get connected. Once online, you can use Pocket

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Internet Explorer to view your favorite web site, use Inbox to send and receive e-mail, and use MSN Messenger to send and receive instant messages. You learn how to use Pocket Internet Explorer in Chapter 22, Inbox in Chapter 20, and MSN Messenger in Chapter 21.

Wrapping Up

Windows Powered devices provide a fast and simple way to manage all types of information. Over the course of six years, Microsoft has improved their software for Windows Powered devices, which results in products with many features and integration with Windows desktop software. Today, the Microsoft mobile device strategy recognizes that no one device will meet all the needs for handheld computing: Companies need devices with larger screens and keyboards, which Handheld PCs provide. Consumers want devices for storing personal information, for entertainment, and for connecting to the Internet, which Pocket PCs provide. The remaining chapters of this book provide all that you need to make the most of your Pocket PC. In the next chapter, you'll get acquainted with all of the Pocket PC hardware and software features.

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Chapter 2 Get Acquainted with Your Pocket PC



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How To...

- Identify hardware components
- Set up your Pocket PC
- Find information
- Use the Start menu
- Use common program elements
- Use Online Help
- Configure storage and program memory
- Organize files and folders

All great athletes master the fundamentals of their sport. They have tremendous physical and mental gifts that set them apart; but if you analyze their performances, you often find that the fundamentals are performed flawlessly. This mastery does not come by chance; it is the result of years of practice and coaching. By the time an athlete becomes a professional, the fundamentals have become habit.

To master your Pocket PC, you need to learn the fundamentals of how they work. This chapter provides the coaching you need to understand and use these skills. First is a review of the hardware components that come with the Pocket PC. Second is a review of the setup procedure for Pocket PCs.

After the device is set up, the first thing you'll see on the Pocket PC is the Today screen. The Today screen is covered before moving on to the Start menu, common application components, organization of files, and Online Help. This chapter finishes with an overview of a very important part of your device—the memory used for storing files and running programs.

Meet Your Pocket PC

Your Pocket PC is a powerful little device that is capable of meeting your needs for an information appliance in a number of different ways. Throughout this book, you'll learn how to make a Pocket PC your own appointment book or checkbook; but to best use the device, you need to understand its fundamental parts.

Each Pocket PC looks slightly different, but has options found on every device. The Today screen is the closest thing to a desktop on the Pocket PC, and provides a summary for appointments, e-mail, and tasks. You enter information using the onscreen keyboard; character recognizer; or handwriting recognition, which let's you write anywhere on the screen. Like your desktop computer, information is stored in files, which you manage using File Explorer.

You will use all of these items, which are covered in this section, as you use your Pocket PC. If you have difficulty, remember that Online Help is available, which you can access by tapping Start | Help.

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Review the Pocket PC

In this section, we take a tour of a typical Pocket PC, starting with the front of the device and ending with the back of the device. Along each stop of the tour, I will point out parts commonly found in each location; but keep in mind that there may be slight variations between Pocket PC brands. Some parts will be used more often than others, but all parts are important to know when using the device.

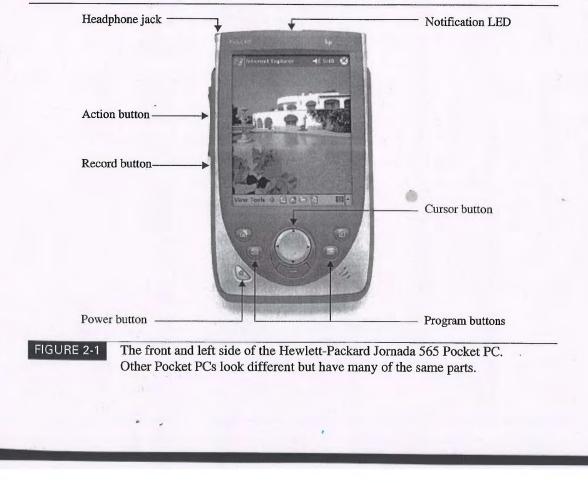
Review the Front

Our first stop is at the front of the device. Chapter 1 describes the typical Pocket PC that is 3 by 5 inches and weighs 6 ounces. The biggest part of the Pocket PC is its screen. The 4-inch diagonal LCD (liquid crystal display) Touch screen has a portrait layout, and is used for viewing and entering information.

TIP

To help understand the difference between portrait and landscape, think of a standard 8.5-by-11-inch sheet of paper. The portrait layout of that sheet has the 8.5-inch sides at the top and bottom, and a landscape layout has the 11-inch sides at the top and bottom.

As you can see in Figure 2-1, the buttons below the screen are assigned to different programs. If the Pocket PC is off, you can press one of these buttons to turn it on and start the assigned program in one step.



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Usually, two of the buttons are assigned to Calendar and Contacts, with the third and fourth buttons assigned to Tasks, Inbox, or other programs provided by the hardware company. The assignments of each of these programs can be changed using the Buttons icon in the Pocket PC settings; Chapter 3 provides these instructions.

Casio was the first company to place a Navigational button on the front of their Pocket PCs; and since then, all Pocket PC brands include this feature. The Navigational button provides a way for you to scroll through screens and menu options without using a stylus.

TIP

TIP

Many Pocket PC games use the Program and Navigation buttons for controlling game play. Older Compaq iPAQ Pocket PCs have problems recognizing two button presses at the same time, which can cause problems when playing some games.

Some Pocket PCs have the Power button and microphone on the front. It is important for you to know the location of the microphone on your Pocket PC to make the best voice recordings. When you make a recording, the microphone should be placed as close to the source as possible.

So far, only Hewlett-Packard has designed Pocket PCs that have a flip-top cover to protect the screen. The cover makes it easier to carry the device in your pocket because it takes up less space than the case provided by other manufacturers.

Review the Bottom

Our next stop is at the bottom of the Pocket PC, which is where the Pocket PC serial port is located. The port does not look like the serial ports that you find on desktop computers, and, unfortunately, each Pocket PC brand has a different port style. Because the ports are different, you cannot share peripherals, such as cradles, between different Pocket PC brands.

NOTE

Do not confuse the serial port at the bottom of a Pocket PC with the USB port that is available with some Pocket PC cradles. USB and serial ports are different, and it is not possible to connect USB devices, like keyboards and mice, to a Pocket PC.

How to ... Clean Your Pocket PC Screen

The Pocket PC screen can get dirty very quickly through daily use, and some dirt particles can even scratch the screen when they come in contact with the stylus. In my experience, products designed to clean the lenses of glasses work well.

Fellowes sells a PDA Screen Clean kit that includes a soft leather cloth for cleaning the screen throughout the day, and packets of wet-dry cleaning cloths for more intensive cleaning. They also sell the WriteRight screen protectors, which are clear plastic overlays that fit right on top of the Pocket PC screen. You can find more information about both of these products at http://www.fellowes.com.

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How to ... Connect Your Pocket PC to Devices Using a Serial Cable

The serial cable that comes with some Pocket PCs is a special version of a cable, sometimes called a *null modem cable*. These types of cables are designed to communicate with other personal computers rather than peripherals, such as modems. To use the serial cable to connect to a serial peripheral device like a modem, you will need a *null modem adapter*. The adapter will convert the cable into a standard RS-232 cable that provides communication with serial devices.

You can find null modem adapters at your local RadioShack; you will need a DB9 femaile-to-male DB9 adapter, part number 26-264B. Most peripherals have female ports, so if the peripheral you are connecting to has a 9-pin female port, you will also need a DB9 male-to-male DB9 serial gender changer, RadioShack part number 26-280B.

The serial ports are designed to plug the Pocket PC into a cradle, which has a cable that connects to the serial port of a desktop computer. The port may also be used to provide power to the Pocket PC, and is also used to recharge the battery. Some Pocket PCs also include a port for plugging in an AC power adapter, which can be useful for recharging the device without having to carry the Pocket PC cradle.

Review the Left Side

We move next to the left side of the Pocket PC, which, next to the front, is the second most important location on your Pocket PC. Along the left side are buttons designed for using the Pocket PC with one hand. The buttons that you'll find on the left are Action Control and Voice Recorder.

Action Control is used in two ways: Rotating the button up or down performs operations similar to the up and down arrows on a computer keyboard. Pressing the button performs an operation similar to ENTER on a computer keyboard. One way to use Action Control is to scroll through the Start menu items by rotating the button up or down, and then pressing the button to start the program that you select.

NOTE

Some Pocket PCs have Action Control on the left side and a Navigational button on the front. On these Pocket PCs, you can use both buttons to scroll up and down.

To make voice recordings on your Pocket PC, press-and-hold Voice Recorder and begin speaking after the device beeps. Use the Notes program, as explained in Chapter 13, to play back and manage voice recordings. You can configure Voice Recorder in Notes to also switch to the Notes program and start recording, or to stay in the current program and start recording.

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Review the Top

Our next stop is at the top of the Pocket PC. Here, you will find the alarm notification LED and either a CompactFlash or Secure Digital card slot. The LED will flash whenever an alarm occurs, unless you turn the LED notification off in the Pocket PC settings. This same LED may be used to indicate that the device is charging (the user manual includes information about how the LED is used).

Most Pocket PCs have slots that support Type II CompactFlash cards. Type II cards are made a little thicker than most so that they can support additional functions. In Chapter 23, you'll find information about a number of different cards that work in these slots. The newest Compaq iPAQ Pocket PCs have Secure Digital card slots. Secure Digital cards are significantly smaller and thinner than CompactFlash cards, and have built-in support for encryption.

NOTE

@migo Pocket PC from UR There is unique because it is the only Pocket PC that provides a PC Card slot rather than a CompactFlash or Secure Digital slot. More information about this Pocket PC is available at http://www.urthere.com.

The final item that you will find at the top of some Pocket PCs is an infrared port compliant with the Infrared Data Association (IrDA) standard. Infrared is a form of light, or radiation, beyond red light that cannot be seen. An infrared transmitter sends data to a receiver using pulses of infrared light. Every Pocket PC has software that is capable of using the infrared port as either a transmitter or a receiver; and in order for communication to work, the ports must be lined up with each other. As Chapter 5 shows, the infrared port can also be used with a desktop computer for synchronization.

Review the Right Side

The right side of a Pocket PC houses the stylus, which you use to interact with the Pocket PC. Some Pocket PCs also place a speaker along this side of the device.

Review the Back

Our final stop on our tour of the Pocket PC is at the back of the device. The most important item that you'll find on the back of the device is the Soft Reset button, which is recessed so that it is not accidentally pressed. A soft reset is similar to rebooting a desktop computer because it restarts the Windows CE operating system, and data in the program memory is lost. However, any data in storage memory and all settings are retained. An explanation of program and storage memory is provided in the "File Storage and Program Memory" section later in this chapter.

The back of some Pocket PCs may include covers for the main and backup batteries, and possibly a cover for a memory expansion slot. Because the back of each device varies, consult the user manual for details about your Pocket PC.

Set Up Your Pocket PC

When you turn on your Pocket PC for the very first time, a series of steps are initiated to set up your device, which Microsoft calls the Welcome wizard.

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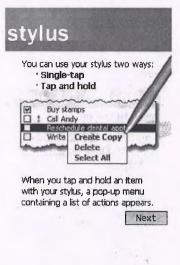
Before turning on your Pocket PC, it is very important that you charge its main battery so that settings and data are not lost. When you charge the batteries on most Pocket PCs, an LED either blinks or illuminates a certain color. The Pocket PC is fully charged when the light stops blinking or stops changing colors. The first charge of the Pocket PC battery may take several hours. Consult the user manual of your Pocket PC for specific instructions on charging the battery.

The first screen that you see is shown in the image on the right. Tap anywhere on the screen to continue.

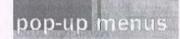
On the next screen, you align the Touch screen so that it properly recognizes any text or taps that you enter on the screen. Use the stylus to tap the center of the cross as it moves around the screen.

> Align the screen at any time by tapping Start | Settings. Tap the System tab and then tap the Align Screen icon. Some Pocket PCs also provide a series of hardware buttons that you can press to start the Align Screen program; consult the user manual for instructions on how to use buttons for this purpose.

The next two screens introduce you to the tap-and-hold process, which is new on the Pocket PC. Tap-and-hold is used throughout the Pocket PC user interface, and is similar to right-clicking on a Windows desktop. It opens a pop-up list of commands that can be executed on the object you select with tap-and-hold.



On the first screen, as shown in the image on the left, you are instructed on how to use tap-and-hold. The second screen, as shown next, provides an opportunity to try the tap-and-hold procedure:



Use pop-up menus to reschedule the following appointment:

Tap and hold the 9 A.M. dental appointment, and then tap Cut on the pop-up menu.

9	Dr. Johnson's	office
10	Cut	nt
11	Сору	Same di lang
12	Paste	a nov north
2	Delete	THE SYNC

ahaakla Evhibit Na Ev. 4440

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TIP

NOTE



welcome

Pocket PC.

Tap the screen to set up your

For Pocket PCs

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locat	ion	
Select your	city and time zone:	
City:	Detroit, MI (USA)	-
Time zone:	GMT-5 Eastern US	-

After you tap Cut, the third screen automatically appears. Tap-and-hold on the 11 A.M. time slot and then tap Paste on the pop-up list.

After you successfully complete the tap-and-hold procedure, a Congratulations screen appears. Tap Next to move on to the Location screen, as shown in the image on the left.

On this screen, specify your local time zone by selecting a time zone or location in the drop-down lists. If you are in the United States, select a time zone; otherwise, select a city. If the city that you live in is not in the list, select the name of a city in the same time zone. When a city is selected, the Time Zone field is automatically set; but in case the entry is not correct, you can select another time zone from the Time Zone drop-down list.

Next

After you specify a location for your Pocket PC and tap Next, the final screen displays, as shown on the right.

Tap anywhere on the screen to end the Welcome wizard and display the Today screen.

The Welcome wizard sets the basic information for your Pocket PC, but you should perform some additional steps to complete the setup of your device. To set the date and time, tap Start | Settings, tap the System tab, and then tap the Clock icon. Follow the instructions provided in Chapter 3 for changing the date and time using the Clock settings.

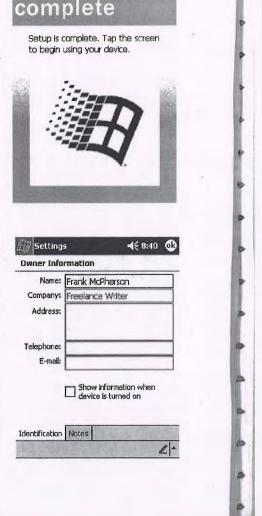
About			
Your device use tself to other co starts with a let tharacters _, A-	imputers. E	nter a name th	
Device name:	Pocket_F	PC	
Description:			-
fersion Device	ID Control	able	
ersion Device	ID Copyri	ghts	3144
			1 4

If you synchronize multiple Windows Powered devices with the same desktop computer, each device must have a unique name. To change the name of your Pocket PC, tap Start | Settings, tap the System tab, and then tap the About icon to display the Settings dialog box, as shown in the lowerleft image.

Tap the Device ID tab, enter a name and description for the device, and tap OK.

Each Pocket PC can store information about you, such as

your name and address, which you enter on the Owner Information screen, as shown in the lower-right image.



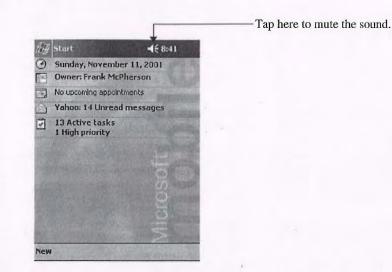
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If you want the information to be displayed every time the Pocket PC turns on, tap Show Information When Device Is Turned On. Additional information can be stored on the Notes tab.

One of the first things you'll want to do after becoming familiar with your Pocket PC is synchronize it with your desktop computer. During the first synchronization, you establish a partnership between the device and the desktop computer, and you download data in Outlook to the Pocket PC. The entire synchronization process is explained in Chapter 6.

Meet the Today Screen

When the Welcome wizard completes, you end up at the Today screen, as shown in the following image:



The Today screen serves a purpose similar to the Outlook Today folder in Outlook 2000. It provides a summary overview of personal information, including the owner's name and telephone number, upcoming appointments, the number of unread and unsent e-mail messages, and the number of active tasks.

When you tap a section of the Today screen, the associated program starts. For example, tap the appointments section to start the Calendar program. The Owner Information settings display when you tap the owner name on the screen. You can also start Inbox and Tasks from the Today screen.

To change the date and time from the Today screen, tap the date to open the Clock Settings dialog box.

The Today screen displays System Tray icons, and the Today screen is the only part of the Pocket PC that displays these icons. Tap the icon on the System Tray to execute a particular function; for example, when you tap Mute, you turn the Pocket PC sound on or off.

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TIP

You can select different themes that change the appearance of the Today screen, as well as select which items should display on the screen, by changing the Today screen settings. Chapter 4 provides the instructions for changing these settings.

Use the Pocket PC Start Menu

One change that has been made to the Pocket PC user interface is the location of the Start button. All prior versions of the user interface followed the approach defined by Windows 95, which placed the Start button in the lower left-hand corner of the screen. That same interface is still used on Handheld PCs, where tapping the button expands the Start menu from the bottom up.

Three things are different about the Start button on Pocket PCs. First, as you can see in the image on the right, the title changes to display the name of the current program visible on the screen.

🖅 Pocket Word	-1÷1	3:43 🐼
Personal -	Claim .	Name 🗸
now this is a test	11/10/01	432b

1-

New - Tools

The second change is that when you tap the Start button, the menu expands from the top down, as shown in the following image:

	57 Start	4 € 8:44
This is the ———		r 11,2001
Shortcut bar.	C Today	herson
	(3) ActiveSync	ments
	Calendar	messages
	nbox	
	Internet Explorer	
	M5N Messenger	I State -
	Notes	0
	Tasks Windows Media 8	OS
	Programs Settings	ici.
	Find P Help	

When the menu expands, the title also changes to Start.

The third new item on the Pocket PC Start menu is the Shortcut bar. The Shortcut bar provides an easy way to switch between frequently used programs. Each time you run a program on the Pocket PC, its icon is added to the Shortcut bar, which displays icons for the last six programs you started. After six icons are added to the bar, the next time you run a program that is not on the bar, the oldest icon is removed.

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Pocket PC 2000 allows you to add every single program to the Start menu. When more than 11 applications are added to the Start menu, it moves to the middle of the screen and arrows appear at the top and bottom of the menu. Pocket PC 2002 limits the number of programs on the Start menu to nine.

TIP

While it is nice that Pocket PC 2000 does not have this limitation, adding too many programs to the Start menu slows things down. I recommend placing no more than eight programs on the Start menu, and not to put any programs assigned to hardware buttons on the Start menu.

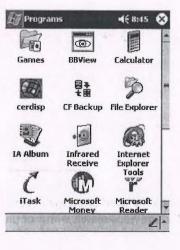
Another change made to the Start menu is that the Programs and Settings menus do not cascade as they do in Windows. Instead, when you tap either item, a separate program window displays, such as the Programs window, shown at right.

1-

Menus	
Checked items appear in the Sta	art menu.
Others appear in Programs.	
☑ ① ActiveSync	-
BBView	
Calculator	=
Calendar	
Cerdisp Cerdisp	0.000000
CF Backup	THE LEP
Contacts	THE REAL PROPERTY.
File Explorer	
Games	
Solitaire	

If a program shortcut is not on the Start menu, it will be found in the Programs window. Start a program by tapping its icon.

To change the location of a shortcut between the Start menu or the Programs window, tap Start | Settings | Menus to display the dialog box shown in the image on the left.



Tap the check box next to the items that you want on the Start menu. The items not selected will appear in Programs.

TIP

One of the shortcomings of Pocket PCs is that you cannot create a shortcut on the device unless you use a third-party program. You can use Explorer from ActiveSync to add a shortcut to the \Windows\Start Menu\Programs folder on the device. One third-party program that you can use to create shortcuts on Pocket PCs is Scott Seligman's NewShortcut, which you can find at http://www.scottandmichelle.net/scott/ cestuff.html.

Launching a program from the Start menu on a Pocket PC uses the same process as all other versions of Windows. Tap Start, and then tap the shortcut of the program that you want to run.

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Search for Information Using Find

On a Pocket PC, you can perform a search on a word or phrase that is stored in any of the Pocket Outlook and Pocket Office data files, as well as Notes. To search for information, tap Start | Find to open the following dialog box:

€j] Find		-(€ 8:45	
Find:	< >		P
Type:	All data	-	Go
Result	s in the second	S. Constant	

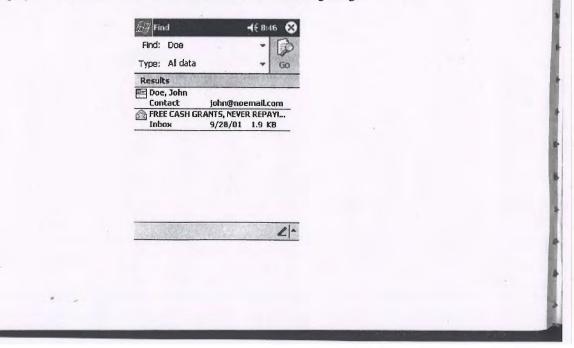
Tap here to select from a list of previous search words.



Enter the word or phrase in the Find field, and select the type of search from the Type drop-down list. Previous search words or phrases are saved and available in the Find drop-down list.

You can narrow the search to a specific program by selecting the program name from the Type drop-down list. The default is All Data, which will search through all Pocket Outlook, Pocket Office, and Notes files on the device.

After you enter the item to find and select the Type, tap Go to begin the search. The search results display in the middle of the screen, as shown in the following image:



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How to ... Search for Files

The Pocket PC search functionality is designed to search for information stored in Pocket Outlook, Online Help, Pocket Word, and Pocket Excel. It does not search for other file types or for files on storage cards. If you want to expand searches to include files on storage cards, you will need to download and install a third-party program. Two programs that provide this functionality are Pocket File Finder at http://www.portable-software.com/ and Kilmist File Quest at http://www.kilmist.com.

The search was on the word Doe, which returned a John Doe contact and an e-mail message. You can tap any entry in the Results list to open it. When you tap OK to close the item, you return to the results listed in Find.

Work with Applications

The Pocket PC user interface has a flat design that is simple and easy to navigate. At the top of the screen is the Navigation bar, which displays the name of the active program and the current time. Tap the Start icon on the bar to switch the name on the Navigation bar to Start, and to expand the Start menu.

Pocket PC programs display on the entire screen, and do not appear in separate windows like on desktop computers. At the far top-right corner, you'll see a round button with either OK or an X. OK appears within dialog boxes or screens of a program. For example, when you start Contacts and display a contact, you will see an OK button, as shown in the following image:

The Navigation bar —	Jim Kumpula Manager	4 € 8:49 @	——Tap here to close the dialog box.
	(425) 555-1212	Home tel	
	Summary Notes Edit Tools	21-	
• •			

Facebook's Exhibit No. Ex. 1112 0054 Snap Inc. Ex. 1112 Page 0054

When you tap OK, the Contact screen closes, but you remain within the Contacts program IN the Contacts list view.

From the Contacts list view, you see an X, such as shown in the image to the right.

When you tap X, the Contacts program disappears, and you see the program started prior to running Contacts. The X appears to exit programs, but instead it simply closes the program screen. The program is still running in memory, which makes it faster to switch between programs.

NOTE

The Windows CE operating system manages the memory on Pocket PCs, and automatically shuts down programs if it starts to run out of program memory. You may prefer to shut down programs manually like you do on a personal computer, which you can do using the Memory setting on your Pocket PC, or by using a program task manager. Chapter 3 has instructions for using program task managers to shut down programs.

Contacts	- € 8:49	
All Contacts -		
#ab cde fgh ij	k Imn opg rst uvv	v жу
Anderson, Ray	(906) 555-1212	h
Brown, Derek	(425) 555-1212	w
Brown, Derek	(425) 555-1212	w
Bush, Steve	(425) 555-1212	-
Doe, John	john@noemail.co	.e
Dunn, Jason	(425) 555-1212	-
Goza, Beth	(425) 555-1212	₩
Hersey, Chris	(425) 555-1212	w
Kumpula, Jim	(425) 555-1212	h
McPherson, Fr		
Moraska, Sue	susie@nomail.com	e
Palmer, Steve	(906) 487-1234	h

New - View Tools

Use the Start menu to switch between programs running on the Pocket PC. At the very top of the Start menu is the Shortcut bar that displays the icons of the last six programs you ran, and it makes the process of switching between these programs a matter of tapping Start and then the icon on the Shortcut bar.

	1
°4 ♠ 4	2-
	4 € 8:50

Located at the bottom of the screen is the Command bar, which has menus and buttons that provide commands for programs. The Command bar in the image on the left shows menu items that you commonly find with Pocket PC programs:

Every program that creates something, such as a document or an appointment, has a New button on the far left side of the Command bar. To create an item, tap New on the Command bar.

The Edit menu provides commands used to edit data that you enter on the Pocket PC. It usually includes commands such as Undo, Redo, Cut, Copy, Paste, Clear, and Select All. Certain programs provide additional commands, such as Format in Pocket Word.

The View menu provides commands that change the appearance of the screen. This may include different input modes, such as the Writing and Drawing modes found in Pocket Word, as well as Zoom, found in many programs, for magnifying the display.

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The Tools menu provides additional commands available in the program, such as Insert Date and Beam Document, which you find in Pocket Word. If a program includes an Options dialog box, which is used to configure the program settings, open it by tapping Tools | Options.

View List Views

Programs that create files, such as Notes and Pocket Word, have a List view that displays all of the files you created using the program. When you start the program, the first screen displayed is the List view, such as you see in the following image for Notes:

	<i>By</i> Notes	-{ € 8:	50 😵	
Tap here to open	All Folders -	and in the second	Name -	—— Tap here to sort items
different folders.	Notel	9/30/01	2k	in List view.
	Note2	9/30/01	1k	
	Note3	9/30/01	6k	
X	Note4	9/30/01	5k	
	Personal1	9/30/01	1k	
	Recording1	9/28/01	0.8s	
	4;Recording1(1)	9/30/01	4.85	
	at woman-demo	4/17/01	3.0s	
	New - Tools	War asper-	2-	

From List view, you can navigate through different folders on the Pocket PC, and sort the items in the list. Tap an item name in the list to open that item in the program, or tap New to create a new file.

NOTE

List view will only display when a file associated with the starting program is found on the device. If no file is found, the Program window opens, rather than List view.

View Pop-Up Lists

The Pocket PC has a feature that provides the same function as right-clicking an object in Windows on desktop computers. When you tap-and-hold the stylus on an item on the screen, a pop-up list appears with commands that vary depending on the program.

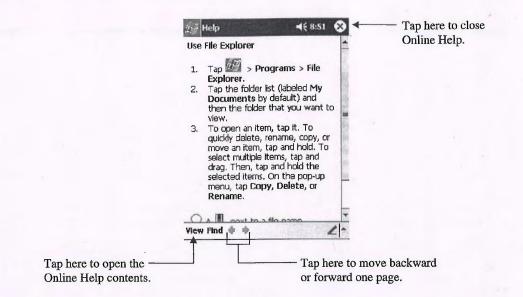
After the menu appears on the screen, lift the stylus and tap the command on the menu that you want performed. For example, to create a copy of a note, tap-and-hold the stylus on the item to be copied in the Notes List view to open the pop-up list, as shown in the image on the right.

Create	Сору
Delete	
Select	All
Send v	ia E-mail
Beam I	ile

Then tap Create Copy to create a new copy of the note you selected.

Get Help

Online Help is available directly on your Pocket PC; to open Online Help, tap Start | Help. The information that appears on the screen, as shown in the following image, will relate to the program window currently open:



Use Online Help

The Online Help Command bar has a View menu item and buttons for navigating through the help pages. View has two options: Contents and All Installed Help. Tap Contents to display a Table of Contents of Online Help for the current program, or tap All Installed Help to display all Online Help for the device.

Some help pages include hyperlinks, which you can tap to open another page of information. To return to the previous page, tap Back on the Command bar. Tap OK to close the Online Help window.

Receive Help on the Internet

Online Help is a great source of information on your device, but it may not provide an answer to your question. While this book provides enough information to answer the majority of questions, technology changes at a blinding rate and only the Internet seems able to keep up.

On the Internet, you can find pages of frequently asked questions (FAQs) that provide answers for a variety of topics. Over the last four years, I have created and maintained the

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PocketPCHow2 website at http://www.pocketpchow2.com, which provides hundreds of links to information that answer many questions about Windows CE and Pocket PCs.

The website is organized into three areas: How, What, and Where. How provides links to information about how to do things with Pocket PCs, such as *How do I display Adobe PDF files* on my Pocket PC? What provides definitions, such as *What is Windows CE*? Where provides links to locations for more information or files, such as *Where can I find the Mobile Channel wizard*?

My website is only one of several websites on the Internet that are dedicated to Pocket PCs. Included on my website are several pages of links to other websites that provide FAQs, News, Forums, Reviews, and Software.

Print Documents

Windows for Pocket PCs does not have the ability to print documents. Fortunately, Field Software Products sells PrintPocketCE, which is a program you can install to print on Hewlett-Packard- and Canon-compatible printers. You will find this program at http://www.fieldsoftware.com.

File Storage and Program Memory

Pocket PCs do not have built-in hard drives like desktop computers. Instead, Random Access Memory (RAM) is used for built-in file storage. However, like desktop computers, your Pocket PC also uses RAM for running programs. Every Pocket PC comes with a certain amount of RAM that is used for file storage and program memory, and it includes a setting for configuring the amount of memory allocated to each.

Using storage cards can increase the total storage space of a device. Storage cards are available in the CompactFlash, Multimedia Card, Secure Digital, and PC Card formats, and come in a variety of different sizes. IBM even sells a microdrive that uses the same type of technology as your PC hard drive, but it is in the CompactFlash size and holds up to 1GB of files.

TIP

See Chapter 23 for an explanation of how CompactFlash, Multimedia, Secure Digital, and PC cards differ.

Storage memory is differentiated between internal storage memory and storage cards. Internal storage uses the RAM installed inside your device. Storage cards are cards that you insert into the Secure Digital card or CompactFlash slots.

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How to ... Add More Program Memory

Storage cards cannot increase program memory; until recently, program memory could not be increased at all. However, three companies now sell internal memory upgrades for Compaq iPAQ Pocket PCs. Times2 Tech at http://www.times2tech.com/ and PCE2000 at http://www.pce2000.com/ sell 64MB and 128MB upgrades. LearLogiX Corporation sells a 64MB upgrade. Due to limitations in how the iPAQ uses memory, only 64MB of the 128MB upgrade is available for program memory. Times2 Tech and PCE2000 provide a special driver that allows you to use the remaining 64MB as an extra internal storage card.

Configure Memory

To configure memory, tap Start | Settings, the System tab, and the Memory icon to open the dialog box shown on the right.

The left side of the slider represents internal storage memory, and the right side of the slider represents program memory. To adjust the amount of memory allocated to either, move the slider left or right.

At the bottom of the screen, you see the amount of memory Allocated, In Use, and Free for storage and program memory. Tap the Storage Card tab of the Memory Settings dialog box to see the size of the storage card and the amount of space in use and free.

🛃 Settings	4 € 8:52 0 k
Memory	
Memory is managed autor temporarily adjust the allo and program memory, mo	cation of storage
Total main memory:	31.27 MB
Storage	Program
Allocated: 15.65 MB In use: 11.61 MB Free: 4.04 MB	Allocated: 15.62 MB In use: 8.85 MB Free: 6.77 MB
Main Storage Card Run	ning Programs
Remove programs to free Find large files using stora	
TELEPHONE AND AND	1-

How to ... Conserve Storage Space

Internal storage in Pocket PCs is finite, and it can be important to use a strategy that conserves internal storage space while installing programs. It helps, therefore, to know what must be stored internally, and what can be placed on storage cards.

All data in Calendar, Contacts, Tasks, and Inbox is in databases that are in internal storage. These databases are part of what is called the *object store*, which is limited to 16MB. Over time, you'll want to remove items in these programs, and the best way is to configure

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2

Outlook on your PC to automatically archive data. The auto-archive process removes items from the main Outlook folders; and during the next synchronization, those items will be removed from the Pocket PC.

Data files, such as Pocket Word documents and Pocket Excel spreadsheets, can be easily stored on storage cards or internally. Both programs automatically check the storage cards for files to display in the File List view. However, files on storage cards are not backed up by ActiveSync or by any of the backup programs provided with Pocket PCs. You may want to only store noncritical files on storage cards, or use Windows Explorer to manually copy files from storage cards to the hard drive on a PC.

You can install most Pocket PC programs on storage cards. The instructions for installing software to storage cards are in Chapter 7. Some programs execute immediately when the Pocket PC turns on, and you may have problems running those programs from storage cards. The reason for this is that there is a slight period of time when the Pocket PC first turns on when cards are not available. Most programs include README files that specify whether the program must be installed to internal storage.

I recommend installing system files to internal storage. If your Pocket PC only has one slot, you will need to install programs internally that you would use while peripherals, such as modems, are in the slot.

Manage Files with File Explorer

With File Explorer, you can browse the contents of folders on the Pocket PC to locate, open, copy, move, and delete files. You also use this program to create new folders on the Pocket PC, and to transfer files to other devices using infrared.

The My Documents folder is particularly important on Pocket PCs because it is the storage location for data files. If you synchronize files between a Pocket PC and a desktop computer, the entire contents of the My Documents folder will appear on the desktop computer. Most Pocket PC programs, such as Pocket Word and Pocket Excel, only work with the My Documents folder or its subfolders, while files stored in any other folder on the device will not appear in the program List view.

If you create a My Documents folder on a storage card, the contents of that folder are combined with the contents of the My Documents folder on the device by programs that have a List view. This feature is particularly important for Windows Media Player, which plays music stored in large files that you will want to keep on storage cards. Chapter 18 provides instructions for playing music using Windows Media Player.

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Locate Files

autorun2

🗑 mdmlog0

🗑 mdmlog2

📰 mdmlog5

🗑 mdmlog6

pclog-main

pklog-main ParketPCM

Edit Open 🔺

To start File Explorer, tap Start | Programs | File Explorerand the program will open, as shown in the image on the right.

When File Explorer starts, it opens the My Documents folder, and lists the files and subfolders stored in My Documents. The contents of a Folder view can be sorted by Name, Date, Size, or Type by tapping an option in the Sort drop-down list located at the top-right side of the Folder view.

Expand the drop-down list on the top-left side of the Folder view to open a parent folder. The Pocket PC root folder is called My Device and contains the My Documents, Program Files, Temp, and Windows folders. If a storage card is in the device, it appears in the My Device Folder view, as shown next on the right:

4/1/01 38

10/13/01 43B

9/16/01 54B

11/10/01 54B

10/17/01 228

10/28/01 2248 10/28/01 2538

OB

0/28/01

By File Explorer	-	€ 8:53	۲
My Documents	a Colorado	Nam	ie -
Annotations		-	*
🔁 Business			1
🛅 IA Album Sa			-
🗎 Microsoft Skins			1
Personal			
Templates			
America	9/23/01	84.1K	
a baby-demo	1/16/01	12.9K	
Book1	10/8/01	306B	
demo	11/3/01	5.26K	
Face	6/16/01	25.9K	
IA_Album	10/13/01	184B	
A III19-001	10/14/01	225K	-
518119-002	10/14/01	225K	1
Edit Open - 🚺 🛄			- 1

€ 8:53

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	Name
This folder contains everyth	
on the storage card.	
on the storage card.	
	1 134B
	1 3B
	1 43B
R# File Explorer	1 54B
	1 548
My Device - Name -	1 22B
My Documents	1 2248
🗁 Program Files	1 2538
Storage Card	1 08
Temp	L
🗁 Windows	
autorun2 4/1/01 134B	
	1 1

File Explorer

On the Command bar, there are three buttons, as shown in the image on the left, to switch between. These include*/ internal storage, storage cards, and network shares.

Network shares

Storage cards

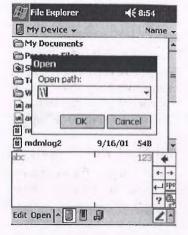
Internal storage

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Network shares are storage locations on file servers or workstations that share files among users on a network. When you tap network shares, or the Open command, the Open dialog box shown on the right appears:

Enter the full path to the network share using the Universal Naming Convention (UNC), which has the form \\[server name]\[share name]. For example, to open a share with the name Music on a computer named Fred, enter \\Fred\Music.

You cannot directly open a file on a network share. Instead, you must first copy the file to the Pocket PC, and then open it. However, you can create a shortcut to a file on a network share and paste it on a Pocket PC, which does not copy the entire file to the Pocket PC. Because shortcuts only point to files, when you open the shortcut, you actually open the file across the network. To create a shortcut, tap-and-hold on a file and then



tap Copy. Switch to the destination location on the Pocket PC and tap Edit | Paste Shortcut. The only way to open a shortcut is by using File Explorer. You will not see shortcuts in the various program List views, such as Pocket Word.

The process is the same for opening a file or folder in Folder view; all you do is tap the item. When you tap a file, it will open in its associated program on the Pocket PC. File Explorer does not display file extensions, but an icon appears with each filename to indicate the file type.

Organize Files with Folders

Typically, you will not use File Explorer to open a file; instead, you will start a program, such as Pocket Word, and then open a file from its List view. You will, however, use File Explorer to move files between folders and to create new folders.

A folder can be created in two ways: you can tap-and-hold the stylus on an open space in Folder view and tap New Folder on the pop-up list, or tap Edit | New Folder. When you do, a new folder appears with its name selected so that you can enter a new name, as shown here on the right.

To move or copy a file into a folder, you use Cut, Copy, and Paste. File Explorer does not support drag-and-drop, but tap-and-hold makes the process much easier. To move a file to another folder, tap-and-hold the stylus on the filename, tap Cut on the pop-up list, open the destination folder, tap-and-hold the stylus on the folder, and then tap Paste on the pop-up list.

🖅 File Explorer	4	€ 8:54	-
My Documents	+ 80 F YO D	Nar	ne 🗸
outro-demo	2/18/01	13.4K	-
Recording1(1)	9/30/01	7.66K	1.5
Recording1	9/28/01	1.44K	
RegKing	10/28/01	152K	
Welcome	7/2/01	27.4K	
Welcome	6/11/01	82.1K	
📾 woman-demo	1/16/01	22.6K	
	4/17/01	64.6K	8
🗃 New Folder			-
abc	1	123	+
		1	
		+	_ spo
	1		? 鬥
Edit Open 🔺 🚺 🔳	9		1 -

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To paste a file into a folder, tap Edit | Paste.

Copy a file by using the same process, except tap Copy on the pop-up list instead of Cut. If you paste a copy of a file into the same folder, File Explorer will automatically change the filename by adding Copy of to the beginning of the filename.

To delete a file, tap-and-hold on the filename and then tap Delete on the pop-up list. To change the name of a file, tap Rename on the pop-up list, and then enter the new filename.

Send Files with E-Mail

TIP

You can send any file as an e-mail attachment from File Explorer. Tap-and-hold on a filename, and then tap Send Via E-mail on the pop-up list. Inbox starts and creates a new e-mail message with the file attached, as shown in the following image:

Inbos

To: < ... >

d€ 8:55

5	Send public >		*
		÷	
This is the file attachment ———	► 🐗 woman	_	No. Con
sent from File Explorer.	abc	1	123 🔶
			+-+

Complete and send the e-mail message as instructed in Chapter 20.

Beam Files with Infrared

Files can be transferred to another Pocket PC from File Explorer by using infrared. Line up the infrared ports of the two devices and set up the receiving device. To send a file from File Explorer on a Pocket PC, tap-and-hold on a filename and then tap Beam File on the pop-up list. A message box appears on the screen of both devices to indicate that the file was transmitted.

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How to ... Receive Files via Infrared with Pocket PC 2000

Before a Pocket PC 2000 device can receive files with infrared, the infrared port must be turned on and set to receive files. Tap Start | Programs | Infrared Receive, and then line up the infrared port with the device that is sending the file. A message will appear on the screen indicating that communication has been established and that a file is being transferred. After the file is received, it is stored in the My Documents folder.

The infrared protocol that Pocket PC 2002 uses is different than the one used by Pocket PC 2000. If you want to use infrared to transfer a file on a Pocket PC 2000 device to a Pocket PC 2002 device, you have to use the legacy infrared support on the Pocket PC 2002 device. To receive the file on the Pocket PC 2002 device, tap Start | Programs Infrared Receive, and then line up the infrared port with the device that is sending the file.

Wrapping Up

Pocket PCs have features that are similar to Windows running on desktop computers. You use the Start menu to start programs and to switch between running programs. Files are stored in folders in a hierarchical manner in the same way as on desktop computers, and you use File Explorer to browse and manage files and folders. The Today screen is the closest thing to the Windows desktop on Pocket PCs, but the purpose of the Today screen is to provide an overview for your information rather than display program shortcuts. The Today screen also provides a way for you to personalize your Pocket PC by selecting different themes, which display pictures on the screen and change the colors of the Navigation and Command bars. In the next chapter, you'll learn how to personalize your Pocket PC for your preferences and tastes.

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Chapter 3

Personalize Your Pocket PC



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How To...

- Change the Pocket PC personal settings
- Use the Pocket PC input methods to enter information
- Manage running programs using a program task manager
- Change the Pocket PC appearance

It is easy to overlook the second *P* in Pocket PC, the one that stands for *personal*. Yet of all the computers made, Pocket PCs may be the most personal of all. The information they store—appointments, addresses, and tasks—is very personal for most people, and rarely will more than one person share a Pocket PC. So it makes sense for you to want to configure your Pocket PC to conform to your needs and tastes.

The Pocket PC software provides several ways to personalize your device. There are settings for entering owner information, setting passwords, programming hardware buttons, and configuring input methods. In fact, there are four different input methods for you to chose from, enabling you to pick the one that works best for you. If the input methods included with your Pocket PC do not work well for you, there are others provided by third-party companies.

Many people find the Start menu and the methods for starting and closing down programs cumbersome. There are several programs available that help manage the programs running on a Pocket PC. If you prefer a simple menu of icons to launch programs, you can use one of the many Today screen plug-ins that provide such a menu. In fact, the Today screen is one of the most customizable parts of the Pocket PC, and a variety of plug-ins exist that change the appearance of the screen, as well as add functionality.

As you can see, there are several ways for personalizing your Pocket PC—making it reflect you, its owner. In this chapter, we'll go over the personal settings in detail and show you how to enter data into your Pocket PC. We'll also take a look at the different program task managers and Today screen plug-ins available for the Pocket PC.

Change the Personal Settings

The Personal tab is where you personalize the Pocket PC by changing settings tailored to the way you work. In this section, we'll go over how to use each of the icons on the Personal tab. Table 3-1 contains a summary of what you do with each icon.

Program Hardware Buttons

In Chapter 2, you learned that part of the specification for Pocket PCs are hardware buttons. The hardware buttons may be located in different areas on the device. The purpose of these buttons is to make it easier for you to navigate within the device and start applications; you can program

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CHAPTER 3: Personalize Your Pocket PC

lcon	Name	Description
Buttons	Buttons	Specifies which application a button will start.
input	Input	Configures options for character recognition and the onscreen keyboard. Also configures word completion and voice record formats.
Menus	Menus	Specifies the program shortcuts that appear on the Start menu. Also turns on the New button, and specifies the items that appear on the New Button menu.
Uwner Information	Owner Information	Enter personal information, such as address and phone number, here. Includes a Notes field that can be used to enter additional information not included with the owner information. Both sets of information can be configured to display when you turn on your device.
CR Password	Password	Creates or changes the password on your device and specifies whether you want to enable password protection for the device.
Sounds & actifications	Sounds & Notifications	Changes the volume of your device, as well as the type of sound that is made for particular events.
Today	Today	Changes the appearance of the Today screen with themes and plug-ins.

most of these buttons to start any application that you like. The following are some specifics of hardware buttons:

To open the Button Properties dialog box, as shown in the following image, tap the Buttons icon on the Personal tab.

	Buttons			
	Assign your favorite progra hardware buttons.	ns to the program		
	Button Assignme	nt		
Select the button to	Button 1 Calendar			+
program here.	Q Button 3 QMenu			
	Z Button 4 QStart	*		
	Button assignment;			
	Calendar	- Sele	ct what program a	
Sales - Shering	R	store Defaults butte	on will start.	
	Program Buttons Up/Down			

Facebook's Exhibit No. Ex. 1112 0067 Snap Inc. Ex. 1112 Page 0067

47

- To change the program associated with a button, first select a button in the list. Then click the triangle to the right of the Button Assignment field and select the program you want from the drop-down menu. You will see the assigned program change in the Buttons list. When finished, tap OK. If at any time you want to restore the default settings for your device, tap the Restore Defaults button.
- The Up/Down Control tab is used to configure the Action button. The Action button is a wheel, a rocker, or a cursor pad that is used to move the cursor up or down. It is particularly useful when reading documents because you can scroll through a document while holding the device in one hand.
- Within the Up/Down Control tab, shown on the right, you change how quickly the cursor starts scrolling and how fast it scrolls.
- Within the Delay Before First Repeat section, move the slider left or right to control how soon scrolling starts. To control the scrolling speed, move the slider left or right within the Repeat Rate section.

5ettings	4 € 1:47 @
Buttons	
Customize the way you repeats.	r Up/Down control
Delay before first re	peat:
Short	· · · · · Long
Repeat rate:	
Slow	Fast
Program Buttons Up/De	own Control
	-

Configure the Input Methods

Pocket PC 2002 has four methods of input. The Block and Letter recognizers recognize characters that you write in the Input Panel on the screen. Microsoft Transcriber is a natural handwriting recognizer that translates what you write on the Pocket PC screen to text. Finally,

Input	
input method:	yboard 🗸 🗸
🔵 Large keys	ert
Small keys	dfg
remove them fro	Shift + key
Backspace	Enter
nput Method Word	Completion Options
stylus taps become	inaccurate, align the

you can use the onscreen keyboard to tap characters. Settings for each method are configured in the Input Settings dialog box.

The Input Properties dialog box has three tabs: Input Method, Word Completion, and Options. Use the Input Method tab to configure settings for each method. To make a change to an input method, first select it from the drop-down list, and then tap Options. There are no Block Recognizer options. When you select the Keyboard, the Input Settings dialog box changes to look like that shown at left.

Change the size of the keys on the keyboard by selecting either the Large Keys or Small Keys radio button. When you select Large Keys, you then have the option to use gestures for SPACE, BACKSPACE, SHIFT-key, and ENTER, which are made on the keyboard.

TIP

You will notice that at the bottom of the Input Settings dialog box is a sentence that contains a link, similar to the hyperlinks found on web pages. The Pocket PC settings include links to related settings; in this case, if you tap the Align link in this dialog box, the Align Screen Settings dialog box is displayed.

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When you select the Letter Recognizer input method and tap Options, the screen shown at right is displayed.

When you select the Quick Stroke option, you must write all letters in one stroke. A single stroke enables you to write faster, but requires you to learn new ways to write certain letters. The Right to Left Crossbar option specifies whether you write crossbars for t, f, and the plus symbol (+) from right to left. If you need to write accented characters, be sure to select the Allow Accented Characters option.

> Pocket PC Online Help contains demonstrations of how to write characters. To see the demonstration while the Letter Recognizer Options dialog box is displayed, go to Start | Help and then choose Demo. You can also display this help by tapping the Information button on the soft Input Panel any time that the panel is open.

🕼 Settings	4 € 1:49 🚯
Letter Recognizer: O	ptions
Quick stroke	
Right to left o	rossbar
Allow accente	ed characters
	4
	ECCO .

3

 Settings
 ✓ 1:49

 Input

 Suggested words pop-up in a window above the input panel. Tap to accept.

 ✓

 Suggest words when entering text

 Suggest after entering

 2 ✓

 letter(s)

 Suggest

 1 ✓

 word(s)

 ✓

 Add a space after suggested word

Input Method Word Completion Options If stylus taps become inaccurate, align the touch screen. As you enter characters in the Input Panel, the Pocket PC will suggest words that you may be writing. If you tap the word that is displayed, that word will be placed wherever the cursor is located. By using this word completion feature, you can speed up data entry on your device. Use the Word Completion tab, as shown on the left, to turn word completion on or off, and to specify how many words display. It can display one to four words at a time.

You can specify how many characters you must enter before a word is suggested on this tab, as well as specify whether you want a space automatically inserted after the word or not.

Did you know?

TIP

Input Methods

Pocket PC 2000 has only two default input methods: Character Recognizer and Keyboard. Transcriber is included with the ActiveSync Version 3.1 CD-ROM, and is available to download from http://www.pocketpc.com.

Character Recognizer has two modes, Uppercase and Lowercase. Lowercase is the system default, and it is compatible with the Jot recognizer found on Palm-size PCs. If you have upgraded from the Palm-size PC, then you will find this mode to be consistent with

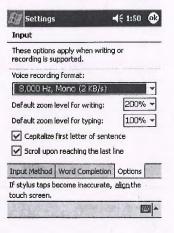
Facebook's Exhibit No. Ex. 1112 0069 Snap Inc. Ex. 1112 Page 0069

what you already know. Uppercase mode works like *Graffiti*, the character recognizer found on Palm Computing devices. If you switch from Palm, then you may find this mode more familiar. On Pocket PC 2002 devices, the Block Recognizer replaces the Character Recognizer Uppercase mode.

Use the Options tab, shown on the right, to configure options wherever writing or recording is supported.

Specify the default Voice Recording Format by selecting a percentage option from the Voice Recording Format drop-down list. Selecting percentages from the drop-down list specifies the default zoom levels for writing and typing. The Pocket PC automatically capitalizes the first letter of sentences if you select that option in this dialog box. Choose Scroll upon reaching the last line, and the Pocket PC will automatically scroll the window when you reach the last line.

> Each of the voice recording options affects the quality and the size of the audio file. Mobile Voice (GSM) is the recommended format because it provides good recording quality and takes far less storage than Pulse Code Modulation (PCM). PCM provides slightly better sound quality, but can take up to 50 times more storage.



Change the Start Menu

One of the first things to do with a new Pocket PC is edit the Start menu so that the programs you use most frequently are in it. By placing shortcuts to these programs in the Start menu, you

BJ Settings	4 € 1:50	œ
Menus		
Checked items appear in the Others appear in Programs.	start menu.	
ActiveSync		-
Calculator		
Calendar		=
Contacts		
File Explorer		H
Games		
Solitaire		
Inbox		
Infrared Receive		4
Internet Explorer		-
Start Menu New Menu		
	E	-

decrease the number of taps necessary to start these programs. Change the contents of the Start menu by tapping the Menus icon in the Personal tab of the Settings dialog box. When you tap the Menus icon, the Menus dialog box is displayed, as shown in the illustration at left.

This list box contains all of the programs installed on the Pocket PC. Items that are selected appear on the Start menu, while the remaining items are available by selecting Start | Programs. To add an item to the Start menu, simply select the check box next to its name; to remove an item from the Start menu, deselect the check box next to the name of the program.

A feature that is unique to the Pocket PC is the New button. This feature adds a pop-up list to the New menu option on the

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TIP

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E Pocket Word	4 € 6:39 😵		
Personal +	Name 👻		
Meeting Notes			
Memo			
Phone Memo			
To Do			
Appointment			
Contact			
E-mail Message			
Excel Workbook			
Note			
Task Word Document			
New Tools			
T		Tap here to expand the n	ew
k		— menu list.	

Command bar. Enable this feature, and a small triangle appears next to the New menu option, as shown in the following image:

Tapping the triangle enables you to create a new item, such as an appointment, wherever you may be currently working on your Pocket PC. For example, suppose you are in Pocket Word

editing a document when you are asked to attend a meeting. If the New button is enabled, all you need to do is tap the triangle and select Appointment. An appointment entry sheet appears for you to enter the appointment, which saves you the extra step of having to first switch to Calendar and then create the appointment.

To turn the New button on or off, tap the New Menu tab to display the dialog box shown in the illustration at right.

Select the Turn On New Button Menu check box to turn the menu on, and clear the check box to turn it off. The list box in the middle of the dialog box displays the items that will appear in the list. By default, everything is selected. Remove items from the list by clearing the check boxes you do not want selected.

Settings ↓€ 1:51 O Menus ✓ Turn on New button menu Checked items appear in the New button menu. ✓ Appointment ✓ Contact ✓ Excel Workbook

Edit Owner Information

With the Owner Information icon, you can enter your name and address and have them display whenever you turn on your Pocket PC. Enter this information by following these steps.

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- 1. Tap the Owner Information icon on the Personal tab. The resulting dialog box, shown in the illustration on the right, has two tabs: Identification and Notes.
- 2. Enter your Name, Company, Address, Telephone number, and E-mail address in the Identification tab. To have this information display every time you turn on your Pocket PC, select the Show Information When Device Is Turned On check box. With this option selected, the information will display every time the device is turned on, and continues to display until you tap the screen.
- **3.** Use the Notes tab to add any information you want that is not on the Identification tab. One way to use this tab is

to provide a message in case your device is lost. When the device is turned on, you can have the message display along with the owner information by selecting the check box next to Show Information When Device Is Turned On.

Turn On Password Protection

You can protect the data in your device by requiring a password every time the device turns on. Tap the Password icon on the Personal tab to open the dialog box shown here.

Pocket PC 2002 supports a 4-digit password or a strong alphanumeric password, but Pocket PC 2000 devices only support 4-digit passwords. Strong alphanumeric passwords combine letters, numbers, and mixed case.

> Sign-On from Communication Intelligence Corporation is a password security utility that uses your signature for authentication. Find more information about this program at http://www.cic.com.

When you tap the Simple 4 Digit Password radio button, a numeric keypad appears for you to enter the password. A similar keypad displays for you to enter the password when you turn on the Pocket PC. Enter the password by tapping the buttons on the screen using either the stylus or your finger.

Strong alphanumeric passwords are harder to break and, therefore, provide greater security. When you tap the Strong Alphanumeric Password radio button, two fields display for you to enter a password. It is recommended to use the onscreen keyboard for entering passwords to ensure there are no translation errors. The password must be at least seven characters long, and contain a combination of upper- and lowercase letters, numbers, or punctuation.

F

Snap Inc. Ex. 1112 Page 0072	2
0072	
Facebook's Exhibit No. Ex. 1112	

Name:	Frank M	cPherso	n	
Company:				
Address:				
Telephone:	(248) 5	55-1212	2	
E-mail:	frank@r	ncphers	on.com	
		informat e is turne	ion when ed on	
Identification	Motor			

The second second	
Password	
No password	
O Simple 4 digit passwo	rd
O Strong alphanumeric	password
Prompt if device unused for	15 minute 👻
Password:	
-	
	1

TIP

Strong alphanumeric passwords are case sensitive.

You can configure how often you enter the device password by selecting a time in the Prompt If Device Unused For drop-down list. Selecting 0 minutes forces you enter the password every time you turn on your Pocket PC. Selecting 30 minutes forces you to enter the password only after the device has not been used for 30 minutes. Thus, if the device is turned off and turned right back on again, you won't have to enter the password.

TIP

NOTE

It is crucial that you remember your password, because without it you will not be able to retrieve your data. If you forget your password, the only way to access your device again is to perform a full reset, which deletes all data. The process for a full reset for each device is slightly different; consult your owner's manual for details. The process usually involves removing your backup and main batteries so that your device has no power, and when you do this, all of your data will be lost.

Change Sounds & Notifications

Using a Pocket PC is both a visual and audible experience. Sound plays a very important role in providing you with feedback. For example, when you tap a button using a stylus, you not only see the button being pressed, but you can also hear a sound. In most cases, this sound lets you know that the Pocket PC has recognized your request.

Sounds and their volumes are controlled using the Sounds & Notifications Settings dialog box. To open this dialog box, as shown in the following image, tap the Sounds & Notifications icon on the Personal tab.

System volume	
Enable sounds for Events (warnings, system events) Programs Notifications (alarms, reminders) Screen taps Soft Loud	—— Adjust volume by moving this slider
Hardware buttons Soft Loud	

Turn sounds on or off by selecting these check boxes.

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Settings for Sounds & Reminders

Pocket PC 2000 devices have a Sounds & Reminders setting that has three tabs: Volume, Sounds, and Reminders. The Notifications tab on the Pocket PC 2002 combines Sounds & Reminders settings. To change Sounds on Pocket PC 2000 devices, follow these steps:

- 1. Tap a name in the Event Name list, shown on the Sounds tab.
- 2. Tap the Sound drop-down menu at the bottom of the dialog box. Select the sound that you want from the list. If do not want a sound associated with the event, then select None from the list.
- **3.** Once you have selected the sound that you want, preview it by tapping the Play button to the right.
- 4. Tap OK to save the changes.

You will notice two tabs in the Sounds & Notifications Settings dialog box. The Volume tab allows you to enable sounds for events or applications. (An event is something generated by the operating system, such as opening or closing a program.) The Notifications tab allows you to specify what you hear when you want to be reminded of appointments and tasks.

The specific sounds that you enable by selecting their check boxes on the Volume tab are the following:

- Events, such as warnings and system events
- Programs and notifications, such as alarms and reminders
- Screen taps, which you can specify as Soft or Loud by selecting the appropriate radio button
- Hardware buttons, which you can specify as Soft or Loud by selecting the appropriate radio button

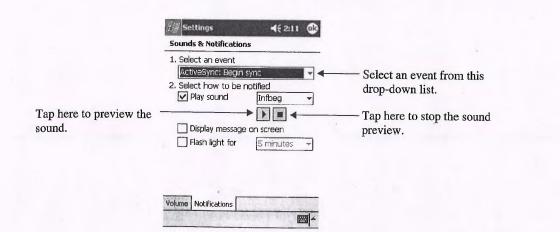
There is a slider on the Volume tab that you can move to adjust the sound volume. Tap and hold the slider while dragging it to adjust the volume.

On the Notifications tab, shown in the following image, you specify what sound plays when an event occurs.

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CHAPTER 3: Personalize Your Pocket PC 55

3



First, select an event from the drop-down list, and then tap the Play Sound check box and select a sound. To preview the sound, tap the Play button.

Events can also display a message and flash the Pocket PC LED light if you select these options on the Notifications tab. When you select the Flash Light For option, you can specify how long the light flashes by selecting a number of minutes from the drop-down list.

Change the Today Screen

The Pocket PC Today screen is similar to the Windows desktop. As you see here, the Today screen can contain owner information, appointments, e-mail messages, and tasks.

肼	Start ◀€ 2:12
0	Tuesday, September 04, 2001
	Owner: Frank McPherson (248) 555-1212
	No upcoming appointments
-	No arroad messages
2	12 Active tasks 1 High priority
New	

Tap the Today icon on the Personal tab to configure the appearance of this screen.

Facebook's Exhibit No. Ex. 1112 0075 Snap Inc. Ex. 1112 Page 0075

You can tap each item of the Today screen to quickly start the associated application. Tap the Date icon to open the Pocket PC clock settings; tap the Owner icon to open the Owner Information settings; tap the Appointments, Unread messages, or Tasks icons to open the Calendar, Inbox, or Tasks.

Themes change the look of the Today screen, Start menu, and Navigation bar, and are new with Pocket PC 2002. Select which theme to use on the Appearance tab of the Today Settings dialog box, shown in the image at right.

To change the current theme, tap the new theme you want to use from the list box and then tap OK.

> Several programs have been developed for Pocket PCs that change the appearance of the Today screen. An overview of several of these programs is provided later in this chapter.

To add a theme to your Pocket PC, copy the theme file, which has a .tsk extension, to either the Windows or My

Documents folder on the Pocket PC. Themes can also be stored

Colors Beneric Street		
Today		
To customize the following	the Today si themes and	treen, tap one of tap OK.
7of9		
<default></default>		(ARI) (23) (12) 53 (1
Croft2		
Iheartbritr		
MoonScap	eBlue	
Msbob RockotXB		
LUCCIOTIL	Bean	Delete
	Dear	
Use this	picture as the	e background
Sarah3		Browse
Jarano		l
Appearance	Items	A STREET

in a My Documents folder on storage cards, but they should not be in subfolders of My Documents. Chapter 7 shows you how to use ActiveSync to copy files to the Pocket PC, or you can use File Explorer to copy themes from a network share. If you want to share a theme with another Pocket PC, tap the theme, tap Beam, and align the infrared ports. To delete a theme, first tap the theme name, and then tap Delete.

If you don't want to change the appearance of the Start menu or Navigation bar, but want to change the Today screen background image, tap the Use This Picture As The Background check box, and then tap Browse to select an image. Background images can be either JPEG or GIF files and must be stored in the My Documents folder or a subfolder of My Documents.

You can combine themes and background images to further customize the Today screen appearance to your personal preferences.

The items that can appear on the Today screen are listed on the Items tab of the Today Settings dialog box, as shown here on the right.

To add or remove items from the screen, tap the check box next to the item name. Owner Info, Calendar, Inbox, and Tasks can be moved up or down in the list by selecting the item and then tapping the Move Up or Move Down button.

Options that control what displays on the Today screen can be set for the Calendar and Tasks items. Select either, and then tap the Options button. The Today screen can display either the

Date Image TodaysTheDay Owner Info	Move Up Move Down Options
✓ Calendar ✓ Inbox ✓ Tasks	een if device is not used
opearance Items	

Facebook's Exhibit No. Ex. 1112 0076 Snap Inc. Ex. 1112 Page 0076

TIP

TIP

NOTE

next appointment or upcoming appointments, as well as all-day events. Task options include the number of high-priority tasks, the number of tasks due today, and the number of overdue tasks. You can also restrict the task information to a specific category.

The best time for the Today screen to be displayed is when you turn the device on for the first time each day. You might also want to have the screen display after a specified period of time has elapsed, which will happen if you tap the Display Today Screen If Device Is Not Used For [] Hours check box in the Today Settings dialog box. You specify the number of hours that must elapse before the screen displays from the drop-down list in the dialog box.

Enter Information on Pocket PCs

Handwriting recognition is one of the most intimate ways of interacting with computers. Writing on a computer screen with your own hand, and seeing the writing translated to text, makes the computer more personal than just a machine. It is no wonder that, from the first time handwriting recognition was introduced, it captured the imagination of computer users.

Your Pocket PC provides several ways of translating what you write to text. The Block and Letter recognizers instantly translate a letter that you write on the Pocket PC Software Input Panel to a character inserted at the cursor location. Another way is to write on the screen as you write on paper and see the results displayed on the screen in digital ink. After you finish writing, either store what was written in the digital ink form or have the Pocket PC translate the digital ink into text. Finally, you can write anywhere on the Pocket PC screen in your own handwriting, and after you finish writing, the Pocket PC translates each written word and inserts them at the cursor location.

How to ... Install Transcriber

Transcriber is not available by default on some Pocket PC 2002 devices or any Pocket PC 2000 devices. To use it, you must install the Transcriber handwriting recognition software from the Companion (or ActiveSync) CD-ROM that comes with Pocket PCs, or download it from http://www.pocketpc.com.

Connect your Pocket PC with a desktop computer running ActiveSync. If you use the Companion CD-ROM, insert it into the CD-ROM drive, and the Getting Started screen automatically loads on the desktop computer. Click Play; click Enhance Your Pocket PC; click Tools; and, finally, click Install in the Microsoft Transcriber section of the Tools page. If you download Transcriber from the Web, browse the location where it is stored on your hard drive and run tranScriberCE_e.exe.

Follow the onscreen prompts, and install the software to the default location. After the installation finishes, a dialog box will display on the Pocket PC telling you to close documents and then reset the device. When the Pocket PC restarts, you will find that the Transcriber option has been added to the Software Input Panel options.

> Facebook's Exhibit No. Ex. 1112 0077 Snap Inc. Ex. 1112 Page 0077

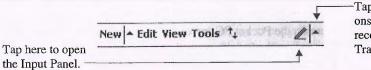
If you prefer not to use any of the handwriting recognition methods, you can use the stylus to tap letters from an onscreen keyboard. Each letter that you tap will appear on the screen at the cursor location. In this section, you'll find instructions for using the onscreen keyboard, the Pocket PC Block and Letter recognizers, and Transcriber handwriting recognition. The process of translating digital ink is called *deferred recognition*; and because it works in many of the Pocket PC programs, instructions for using it are in the chapters covering those programs.

NOTE

The fastest way to enter information into your Pocket PC is by using ActiveSync to synchronize data between the device and Microsoft Outlook. Chapter 6 provides instructions for using ActiveSync.

Use the Software Input Panel

The Software Input Panel is a window on the Pocket PC screen that provides a location for writing characters or displays the onscreen keyboard. To open the window, tap the Software Input Panel button located at the bottom right-hand corner of the screen, as shown in the following image:



-Tap here to select the onscreen keyboard, the recognizers, or the Transcriber.

The button image changes to indicate which of the three modes are in use. A keyboard indicates the onscreen keyboard, a blue pencil indicates the Block or Letter recognizers, and a

	Options
	Block Recognizer Keyboard
	 Letter Recognizer Transcriber
New - Edit View 1	fools 1, Z

hand and pencil indicates the Transcriber.

To change the input method, tap the arrow next to the Software Input Panel

button to open the pop-up menu shown at left. Tap the name of the input method that you

want to use; if you select Keyboard, Block Recognizer, or Letter Recognizer, the menu closes and the panel switches to the mode that you select. When you select Transcriber, the panel closes and the button switches to the hand and pencil.

Included at the top of the pop-up menu is Options, which you can tap to open the Input Settings dialog box, as shown in the illustration on the right.

Input method:	Letter Recognizer 💌 Options
haracter strol	cognizer you can input natural kas as well as strokes you may using Jot® from CIC.
input Method	Word Completion Options
if stylus taps b ouch screen.	ecome inaccurate, align the
	4+
	+

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Another way to open the Input Settings dialog box is to tap Start | Settings | Input.

Enter Information Using the Onscreen Keyboard

The standard onscreen keyboard displays in the Software Input Panel, as shown in the following image:

Tap here to switch to _ the numeric keypad.

123 1	2 3	3 4	5	6	7	8	9	0	-	=	+
Tab q	W	е	r	t	¥	u	i	Ò	р	I	1
CAP a	S	d	f	g	h	j	k	1	;	1.	T
Shift z	X	E	V	b	In	m	1,	1.	1	IT	÷.
Ctl áü		1			-			41	î	+	->
New	Edit	Vie	W	Too	ols	ţ,				2	

Tap here to switch to the special character keyboard.

To use the onscreen keyboard to enter information, do the following:

- **1.** To enter text, tap the letters on the keyboard using the stylus. The keyboard has three different modes: standard, numeric, and special character.
- 2. To switch to the numeric and special character keyboards shown in Figure 3-1, tap the 123 and AU buttons, respectively, on the standard keyboard.
- **3.** Tap SHIFT to switch the keyboard buttons to their uppercase equivalents, and the number row displays the symbols that normally display above the number row on a standard keyboard. After you enter an uppercase letter by tapping SHIFT and then tapping a letter, the keyboard switches back to lowercase, but tapping CAP locks the keyboard in CAPS LOCK.

123	I	1	{	}	7	8	9	#	%	=	4	123 i ¢
^	,		<	>	4	5	6	+	-	181	1	Tab à á
±	0	:	1	1	1	2	3	¥	Ť	+	->	CAP e i
\$	¢	€	£	¥	(0)	Tab	sp	ace	+	Ctl áü 🔞
\$ Nev	¢		-	- 1	(/ To	ols) † _↓	Tab	sp	ace		

Tab	à	á	â	ã	ä	å	æ	ç	ð	è	é	ê
CAP	ë	1	í	î	Ϊ	ñ	ø	Ce	ò	Ó	â	íT
Shift	tŐ	ö	6	þ	Ù	Ϊť	i û	Ü	1)	11	I	Ę,
Ctla	áü,	1	C			-		1	+	1	-	->
New	▲ E	dit	Vie	₩	Too	ols	Ť4		111		555	

FIGURE 3-1

On the left is the numeric keyboard; on the right is the special character keyboard.

Facebook's Exhibit No. Ex. 1112 0079 Snap Inc. Ex. 1112 Page 0079

4. The standard onscreen keyboard displays small keys, but that can be switched to large keys by opening the Input Settings dialog box and selecting the Keyboard Input Method option, as shown in the following image:

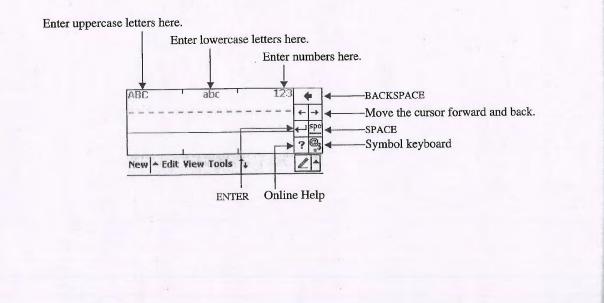
Input		
Input method: Ke	eyboard 💌	
🛞 Large keys	ert	
🔿 Small keys	dfg	
Use gestures for remove them fro	the following keys and m the keyboard	-
• Space	Shift + key	These are the keyboard
Backspace	Enter	shortcut gestures.
Input Method	Completion Options	
Tibac Mechoa Area e		

5. Tap the Large Keys or the Small Keys radio button to switch between the two different keyboard types.

The Large Keys keyboard supports gestures that you can write across the keyboard for the SPACE, BACKSPACE, ENTER, and SHIFT keys. To use the gestures shown on the Input Settings dialog box, tap the check box in the dialog box.

Enter Information Using the Letter Recognizer

To use the Letter Recognizer to enter text, tap Letter Recognizer on the Software Input Panel pop-up menu, which changes the panel, as shown in the following image:



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The Letter Recognizer has four areas for entering uppercase letters, lowercase letters, numbers, and keyboard commands, such as BACKSPACE and ENTER.

TIP

TIP

Drag the stylus across the panel horizontally from left to right to insert a space, and drag from right to left to delete a character or space.

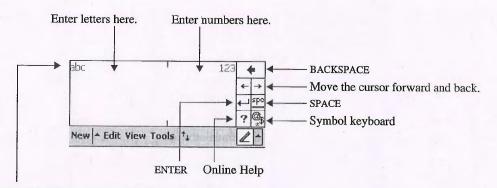
The Letter Recognizer translates letters written in lowercase, but you have the option of using a single stroke to enter certain letters of the alphabet. To enter characters in a single stroke, select the Quick Stroke option on the Letter Recognizer Options screen. To see demos for writing all characters, open the Letter Recognizer Online Help, and tap Demo.

The dotted middle line and the solid bottom line on the panel help the Letter Recognizer translate shorter letters and letters with descenders or ascenders. Write letters such as o and c between the midline (dotted) and baseline (solid). Write letters with descenders, such as p, with the top of the letter between the midline and baseline, and the descender below the baseline. Letters with ascenders, such as b, should be written with the ascender above the midline, and the bottom portion between the midline and baseline.

The Letter Recognizer also translates accented and special characters. Open Online Help to see demonstrations of how to enter these characters on the Input Panel.

Enter Information Using the Block Recognizer

If you switch to a Pocket PC from a Palm OS device, you may prefer using the Block Recognizer because it translates the Palm Graffiti–like character strokes to text. To use the Block Recognizer to enter text, tap Block Recognizer on the Software Input Panel pop-up menu, which changes the panel, as shown in the following image:



Indicates Lowercase, Shift and Caps Lock modes.

The Block Recognizer has three areas for entering letters, numbers, and keyboard commands such as BACKSPACE and ENTER.

Facebook's Exhibit No. Ex. 1112 0081 Snap Inc. Ex. 1112 Page 0081

The first word of each sentence is automatically capitalized; otherwise, all other letters translate in lowercase. To capitalize other words, switch to Shift mode by drawing a straight line from the bottom up for at least half the length of the Input Panel. The *abc* label at the upper-left corner of the Input Panel changes to *Abc*, indicating Shift mode. To activate Caps Lock, draw two lines from the bottom up. You will know that Caps Lock is active by the *ABC* label on the Input Panel.

TIP

TIP

To see a demonstration of how to enter characters using Graffiti, tap Online Help on the Input Panel, and then tap Demo.

You enter punctuation and symbols anywhere on the Input Panel. To enter punctuation, tap once on the panel, and then write the punctuation mark. A circle appears in the upper left-hand corner of the Input Panel, indicating punctuation mode. Enter extended characters by first

drawing a slash in the Input Panel, and then writing the character. A slash appears in the upper left-hand corner of the Input Panel, indicating extended character mode.

Punctuation and symbols can also be entered by tapping the Symbol Keyboard button on the Input Panel, and then tapping an item on the keyboard, as shown in the illustration at right.

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Tab	©	<	>	;	1	r]]	١	-	=
	0	*	20	¢	8	i.	i	€	£	¥	@ ₁

The Block Recognizer also translates accented characters, special characters, and mathematical symbols. See Online Help for demonstrations on how to enter these characters on the Input Panel.

Word Completion

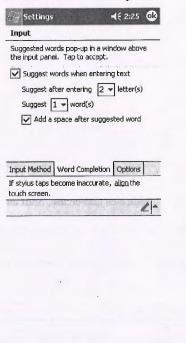
As you enter letters using the onscreen keyboard or recognizers, the Pocket PC suggests words in a pop-up window that appears above the Input Panel. Tap the word to enter it at the insertion point.

In the Input Settings dialog box, tap the Word Completion tab to configure options for word completion, as shown in the illustration at right.

When the Pocket PC suggests more words, a greater amount of space is taken up above the Input Panel, which covers up other information in the dialog box where you enter text.

Enter Information Using Transcriber

Transcriber is a natural-handwriting recognition translator for the Pocket PC. It recognizes words written in cursive, print, or mixed handwriting by using an integrated dictionary. When you select Transcriber from the Software Input Panel pop-up menu, the panel closes and you enter text by writing directly on



Facebook's Exhibit No. Ex. 1112 0082 Snap Inc. Ex. 1112 Page 0082 the screen. The Input Panel button changes to the Hand and Pencil icon, as shown in the following image:

New - Edit View Tools 🗘	-
	Ť

This icon indicates that Transcriber is active.

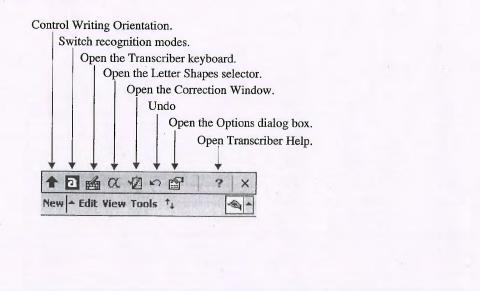
3

An introductory screen and icon bar will display if these items are selected in the Transcriber Options dialog box, as shown in the following image:

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Transcriber: Options	
☑ Sound on ☑ Show intro ☑ Show iconb	
Inking	Width: 🛐 🌩
Sample:	
General Recognizer	

This dialog box opens when you select Options from the Transcriber input method in the Input Settings dialog box.

The icon bar, as shown in the following image, is a set of buttons that appear at the bottom of the screen when Transcriber is active.



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The Control Writing Orientation arrow on the icon bar points upward relative to the selected direction of the writing. For example, if the arrow points NW, then you should write characters with an inclination of 45° from left bottom up to right top. If your writing slants letters slightly to the left, tap the arrow until it points NE.

Transcriber has three recognition modes: Unrestricted, Uppercase, and Numeric. The Unrestricted mode allows all symbols and words, and is indicated by an a on the icon bar. The Uppercase mode converts everything to uppercase and is indicated by an A on the icon bar. The Numeric mode converts numbers and some letters, and is indicated by a 12 on the icon bar.

The Transcriber keyboard provides an easy way to enter punctuation or symbols. It will remain visible until you tap OK; but if you tap the Push-Pin button, then the keyboard will close after you tap a key.

Use the Letter Shapes selector, shown at right, to configure Transcriber for your handwriting.

Tap each shape shown on the screen and then tap the Often, Rarely, or Never radio button to specify whether you write the letter in that shape. It's worth taking some time to go through each letter and symbol to increase translation accuracy.

The Transcriber Correction Window is new with Pocket PC 2002, and it simplifies the process of correcting translation mistakes. To open the window, first highlight a mistake, whether it's a letter, word, or phrase, and then tap the Correction icon on the toolbar. You can also use the quick-correct gesture, which is an up/down motion, over the highlight, and then tap Go To Corrector on the pop-up menu; or you can use the correction gesture, which is a check mark, to open the window, which looks like the following:

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a	α	ax	XX	

Tap on the shapes above for a demo

Often O Rarely O Never

BCDEFGHIJKLMNOPQRSTUV WXYZ12345678901@#\$%^&*

([{-+_=, <?/|£¥©®

I write this 'A'

File

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Delete —— Undo	Full screen	n
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	New A Edit View Tools 🗘 🚳 A	

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CHAPTER 3: Personalize Your Pocket PC 65

There are several gestures that you can use to direct Transcriber to perform certain actions, such as enter a RETURN or BACKSPACE. You will find these gestures in Online Help, which you can open by tapping Help on the toolbar, which looks like a question mark, or by tapping Start | Help.

There are many ways to make a correction. You can write directly over a letter or word to change it, or you can double-tap the letter or word to open the Alternates menu. From the Alternates menu, you can select an alternative letter or word from those provided, add the selection to the Transcriber dictionary, change the case of the selection, or cancel corrections.

Another method is to select the letter or word and then tap the caret underneath the text to open a menu, where you can delete the selection, replace the selection with a space, change the case of the selection, copy the selection, or replace the selection with text from the clipboard. If you double-tap the correction window in any area not over a word or the caret, a menu opens where you can erase everything in the window, cancel the previous action, copy everything in the window to the clipboard, or paste text from the clipboard into the window.

The General tab of the Transcriber Options dialog box is also used to configure the color and the width of the ink that displays when you write onscreen. The Recognizer tab of the Transcriber Options dialog box, shown in the illustration at right, provides settings for controlling handwriting recognition.

If you select the Add Space After check box, then a space is added after each translated word. If you do not connect letters when you write, select the Separate Letters Mode check box to speed up recognition. The Speed of Recognition Vs. Quality slider controls the trade-off between recognition speed and quality, with faster speed resulting in decreased quality. The Recognition Start Time slider controls the length of time after a word is written before Transcriber translates the word to text. When the slider is in the center, Transcriber will wait about a second.

Settings	4 € 2:37 ⓓ
Transcriber: Options	
Microsoft Transo	criber 1.5 std(e)
Add space aff	ers mode
Speed	Quality
Recognition	n start time ———
Shorter	Longer
General Recognizer	

How to ... Use the Transcriber Calculator

Transcriber has a built-in calculator that can complete simple mathematical equations. Write the equation as you would text, such as 2+2=. Transcriber recognizes this equation, performs the calculation, and translates what you wrote to 2+2=4.

Facebook's Exhibit No. Ex. 1112 0085 Snap Inc. Ex. 1112 Page 0085

TIP

Try Alternative Recognizers

Each recognizer that comes with the Pocket PC might require you to slightly change how you write. If you have difficulty getting the recognizers to translate your handwriting, you may want to try one of several alternative recognizers available for the Pocket PC. Many of these recognizers come in trial versions so that you can try the software before purchasing it. Two alternate recognizers are PenReader and Calligrapher.

Transcriber only supports English, French, and German languages. If you write in a language other than these, you may want to consider PenReader from Paragon Software because it supports 28 different languages. It recognizes all national alphabets based on the standard Latin ABC, and there are additional recognition engines adjusted for Cyrillic and Greek alphabets. You will find more information about PenReader at http://www.penreader.com.

Calligrapher is the big brother of Transcriber. It was developed by ParaGraph, from whom Microsoft licenses code used in Transcriber. ParaGraph is also the company that developed the handwriting recognition software for the Apple Newton operating system. PhatWare Corporation recently took over distribution and support responsibilities for Calligrapher. One of the features that sets Calligrapher apart is PenCommander, which launches user-defined commands that you create using a scripting language. It also includes an integrated spell checker that you can use to check the spelling of any document that has text. There are English and International versions of this program, and you will find more information about it at http://www.phatware.com.

- MyScript from Vision Objects adds a new Software Input Panel to Pocket PCs that enables you to write across the entire width of the panel. There are English and French versions available. Find more information about MyScript at http://www.visionobjects.com.
- Fitaly from Textware Solution is an alternative to the onscreen keyboard. The keys are arranged for optimal input using a stylus, with 84 percent of the keystrokes clustered in a central area. People who are proficient with Fitaly have been able to enter text as fast as 50 words per minute. You will find this program at http://www.fitaly.com.
- Resco Keyboard Pro enhances the onscreen keyboard by adding three numeric layouts, including a calculator for typing numbers or numerical expressions. Another keyboard from Resco stores phrases, which you can insert by simply tapping a button. This program can be found at http://www.resco-net.com/resco/en/default.asp.
- AccessPanel from DeveloperOne is an additional Software Input Panel that speeds data entry by storing phrases that you can insert into documents or e-mail. It also automatically inserts information from the Pocket PC Contacts program into documents. More information about this program can be found at http://www.developerone.com.

External keyboards are also available for Pocket PCs so that you can enter information by typing. The Stowaway keyboard is very popular and can be found at www.thinkoutside.com

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TIP

Manage Running Programs

One of the most hotly debated topics between Microsoft and Pocket PC users is about exiting programs. Microsoft believes it is better to have all programs open and to jump between them, because it is much faster to switch between running programs than it is to start a program. Because of this, Microsoft does not provide a way to exit programs. Pocket PC users prefer to start, exit, and switch between programs on their devices just as they do on their personal computers.

Most Pocket PC users prefer to have more control over what programs run on their Pocket PC. Furthermore, Windows CE does not do a good enough job of managing memory, so when too many programs run, the Pocket PC slows down. Consequently, software developers have written programs that provide users with the ability to easily shut down running programs.

While there are several different program task managers for Pocket PCs, they all work in a similar way. Additional buttons are added to the Pocket PC Navigation bar at the top of the screen, and the default OK button is replaced with a button that automatically switches between Exit and OK. Tapping Exit shuts down the program.

HP (Hewlett-Packard) and Compaq include their own program task managers with their Pocket PCs. The HP Task Switcher is accessible from the Today screen, and the Compaq iTask is automatically programmed to a hardware button.

The choice of which program task manager to install is based on whether you want a number of features available from the Navigation bar, or a simple button that just shuts down programs. For example, GigaBar from ThumbsUpSoftware (http://www.gigabar.com) switches tasks, supports gestures for starting programs, browses files, shows memory and battery status, displays background images, and captures screen shots. In contrast, Go from Stellarmetrics (http://stellarm.hostme.com/Software/go.htm) adds one button to the Navigation bar for switching and exiting programs.

Did you know?

TIP

X Marks the Spot

Pocket PC 2002 adds an X button that appears to exit programs but does not. When you tap the X, the window closes and the previously opened program appears on the screen. However, tapping the X really just closes the window and does not exit the program. If you tap Start | Settings | System | Memory, and then tap the Running Programs tab, you will see the program still listed as running. Consequently, it is best to think of the X as a minimize button, and use a program task manager to shut down programs.

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The support of background images, or skins, with GigaBar is popular with its users because it allows them to change the Pocket PC appearance to something they find more appealing. There are links to GigaBar skins at http://www.gigabar.com/htm/skins.html. Another program task manager that supports skins is WIS Bar, which is made by the Japanese firm Walkers Internet Service. WIS Bar displays running programs as icons on the Navigation bar, and adds icons for the Today screen, Battery, and Memory meters to the Navigation bar. You can download WIS Bar from http://www.walkers.ne.jp/ww/wisbare.html.

TaskPro Navigator from DeveloperOne does not support skins, but you can customize its colors. Taskpro Navigator adds Navigation buttons to the top of the screen, and includes memory and battery meters. You will find this program at http://www.developerone.com/pocketpc/taskpronavigator/.

Scott Seligman's PocketNav is a program task manager favored by Pocket PC users who simply want to switch between programs and shut down programs. It adds two buttons to the Navigation bar: one loads the Today screen, and the other loads the task switcher. You'll find more information about this program at http://www.scottandmichelle.net/scott/cestuff.html.

Enhance the Today Screen

The Pocket PC Today screen supports plug-ins, which provide software developers the ability to enhance the Today screen by adding more functions or changing its appearance. You can select from several programs to tailor the Today screen to your personal needs.

How to ...

Change the Overall Appearance of the Pocket PC

The skinning capabilities of Dashboard, WIS Bar, and GigaBar significantly change the appearance of a Pocket PC. However, there are parts of the Pocket PC software that these programs do not change that you can change using other software.

Stardock has brought the features of its popular WindowBlinds program to the Pocket PC. It changes the appearance of the Navigation bar and allows you to add and place as many buttons on the Navigation bar as you want. You will find this program at http://www.stardock.com/products/pocketblinds/.

You can use CETuner from Paragon Software to change the color schemes and system fonts on your Pocket PC. By decreasing the font size, more information will display on the screen, or you can make the fonts bolder so they are easier to see. This program is available from http://www.penreader.com/PocketPC/CETuner.html.

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If you want to simply add something a little fun to your Pocket PC, try Pocket Mascot. This program from JGUI For Pocket PC displays a character, called a mascot, on top of any program. The mascot speaks like a comic strip, and the messages can contain help about using the Pocket PC, or they can be anything that you want displayed. This program is available at http://jguippc.tripod.com/mascot/index.htm.

Perhaps the most widely used Today screen enhancement is Dashboard from SnoopSoft. Dashboard replaces all the default parts of the Today screen with its own agenda, mail, and task viewers, and adds a program launcher. You can combine Dashboard skins with WIS Bar and GigaBar skins to change nearly the entire appearance of the Pocket PC. You will find more information about this program at http://www.snoopsoft.com/pocketpc/dashboard.html.

DeveloperOne provides several Today screen plug-ins. Normally, the Today screen only displays the number of tasks that you have, but TaskView Today lists the tasks on the Today screen. Agenda Today replaces the Calendar portion of the Today screen with all of the day's activities, including tasks. PointStart adds a list of icons that you can tap to run programs, and Phrase Today adds inspirational thoughts, quotes, and trivia to the Today screen. You will find all of these plug-ins at http://www.developerone.com/.

ScaryBear Software is another company that provides a number of Today screen plug-ins. QuickCalendar displays the current week; and if you tap the QuickCalendar window, it expands to display two months. QuickAgenda provides an overview for several days of appointments. QuickQuotes displays quotes on the Today screen, and PowerLevel displays meters for power level and memory. You will find these plug-ins at http://www.scarybearsoftware.com/.

BirthdayBoy plug-in from Gigabyte Solutions Ltd displays birthdays and anniversaries up to 31 days in advance. One version of the plug-in works with the Today screen, and another version is available for Dashboard. You can download this plug-in from http://www.gigabytesol.com/pocket.htm.

If you would like the appearance of the Today screen to change a little bit each day, check out the Today's The Day plug-in from Stellarmetrics. It displays a different image on the Today screen for each day of the week. Stellarmetrics provides

instructions for how to create your own images for the plug-in, along with links to other sites that have images, at http://stellarm.hostme.com/Software/ttd.htm.

Microsoft provides a free Today screen image tool that you can download from http://www.pocketpc.com. The tool is a Today screen plug-in that displays any JPEG, GIF, or BMP image that you select. When you install the tool on your Pocket PC, an Image Entry is added to the Today screen items list. To select an image to display, tap Image and then tap Options, which opens the dialog box shown here.

Tap Browse to select an image file, which needs to be located within the My Documents folder. It's best to use images that are 240 pixels wide, but the plug-in will fit the image to the

💮 Settings
Image path:
\My Documents\test image.jpg
Browse
Run this when tapped:
calc.exe
Fit Image to Window Width
Center Image Horizontally
New Image Item
2

Facebook's Exhibit No. Ex. 1112 0089 Snap Inc. Ex. 1112 Page 0089

width of the screen when you tap the Fit Image To Window Width check box. You can also configure the plug-in to start programs that you enter in the Run This When Tapped field.

The Today Screen Image tool provides an easy way to add corporate logos to the Today screen.

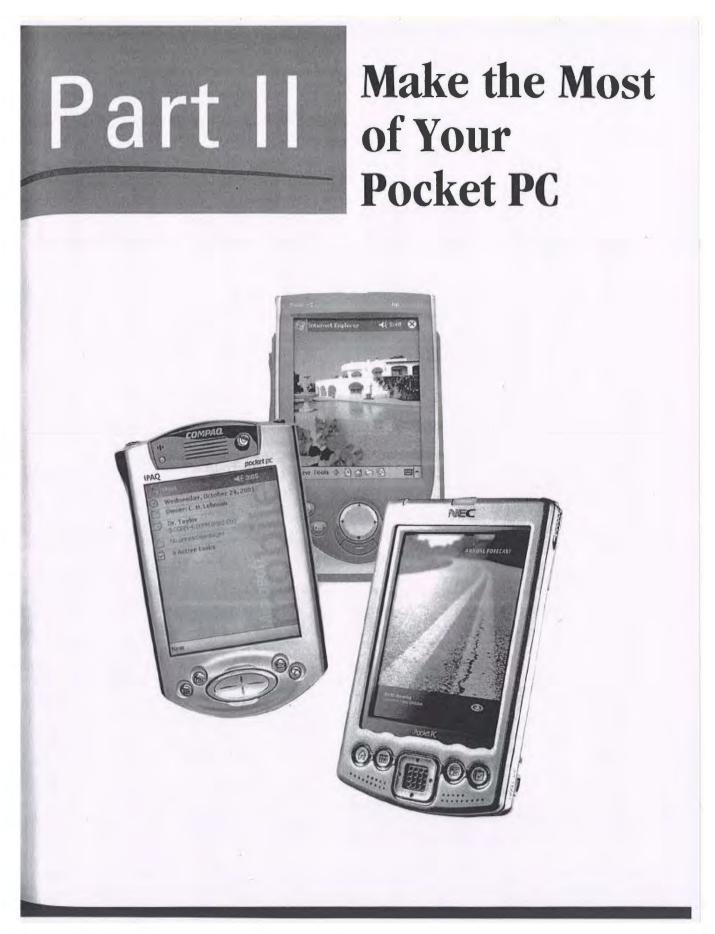
If you select a program that is in the Windows folder, such as the calculator, you simply need to enter the executable filename. To run programs from other folders, enter the entire path along with the executable filename. When you tap New Image Item, a second Image Entry is added to the Today screen items list, allowing you to add more than one image to the Today screen. Be careful with this feature because you cannot remove the Image Entries from the items list.

Wrapping Up

TIP

As you have seen, there are several ways for you to emphasize the personal part of the Pocket PC. Each setting and program discussed in this chapter has the purpose of tailoring the Pocket PC to your tastes and preferences. You now know how the second P stands for personal; in the next chapter, you'll learn how the second C in Pocket PC stands for computer. There are a number of system settings that control how the Pocket PC operates, and we'll take a closer look at these settings next.

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How To...

- Schedule appointments
- Store addresses
- Track tasks
- Search for appointments, addresses, and tasks
- Use the New Button menu on the Pocket PC to create appointments, contacts, and tasks

Today's fast pace and hectic schedules have made time management an important skill. The fundamental tools for managing time include a calendar for appointments, an address book for contact information, and a task list to keep track of what needs to be done. Despite all of the capabilities that Pocket PCs provide, you probably bought your device to help manage these three things.

In this chapter, you'll learn how to use the Calendar, Contacts, and Task programs on the Pocket PC. You will use each of these programs frequently throughout the day to enter and look up information. The programs provide a search capability that helps you quickly find information based on a word or phrase. With the Calendar recurrence scheduling capability, creating an appointment that occurs on the same day and time every month is as easy as completing one screen, which eliminates the need to write the appointment on multiple entries in a day planner.

Calendar and Contacts are integrated with Inbox, the e-mail program on your device that is covered in Chapter 20. From Calendar, you can schedule a meeting with people by retrieving their e-mail addresses from Contacts and e-mailing a meeting request. From Contacts, you can send an e-mail by simply selecting an entry in the contacts list and tapping a button.

Appointments, addresses, and tasks can be sent to other Pocket PCs by using the infrared port, making it easy to share information with other people. Perhaps even more important, as you read in Chapter 6, the information in these three programs can be synchronized with your desktop computer, enabling you to work with the same information whether you are sitting at your desk or in a taxi cab.

Use Pocket Outlook on Your Pocket PC

Calendar, Contacts, and Tasks may be the most frequently used programs on your Pocket PC. Each program contains information that you use constantly throughout the day. Need to schedule an appointment? Start Calendar. Need to look up an address? Start Contacts. Been given another assignment? Start Tasks.

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You will want to quickly retrieve the information stored in these three programs; the Pocket PC is designed to help you achieve this goal. By default, shortcuts for Calendar, Contacts, and Tasks are placed in the Start menu. If the shortcuts are not in the Start menu, you will find them in Programs, which you open by tapping Start | Programs.

Each program is also assigned to a hardware button. An exception is the Casio Pocket PC, which only assigns Calendar and Contacts to hardware buttons, assigning the third button to the Casio menu. You can use the button settings program on Casio Pocket PCs to change the assignments of all the hardware buttons, including the third button, which you can assign to Tasks.

TIP

If you assign Calendar, Contacts, and Tasks to hardware buttons, consider moving their shortcuts from the Start menu to the Programs menu. By doing so, you will make space for other programs that you can place in the Start menu for quicker access. To make this change, tap Start | Settings | Menu and clear the check box next to the menu item.

The instructions for starting Calendar, Contacts, and Tasks in this section use the Start menu. However, keep in mind the hardware buttons that you can use to quickly start each of these programs.

How to ... Quickly Create Appointments, Contacts, or Tasks Using the New Button Menu

The Today Screen has a New button, which you can tap to open a pop-up list with options for creating appointments, contacts, tasks, e-mail messages, and more. Using this menu from the Today Screen saves the step of first opening the program and then tapping New, but Calendar, Contacts, and Tasks do not have this feature.

The New Button menu fixes this problem by adding a pop-up list everywhere that the New button appears, but it is not turned on by default. To enable this feature, tap Start | Settings | Menus, and then tap the New Menu tab to open the Menus dialog box, as shown in the following image.

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Tap the first check box to turn on the New Button menu, select the items that you want to appear on the menu and tap OK. After you turn on the menu, you will see a triangle to the right of New. When you tap the triangle, the New Button menu pop-ups up with Appointment, Contact, and Task options, which you can tap to create the desired item.

enus	
Turn on New button menu	
ecked items appear in the Nev nu.	v button
Appointment	
]Contact	
]E-mail Message	
Excel Workbook	
Note	
] Task	
Word Document	
rt Menu New Menu	

Schedule Appointments Using Calendar

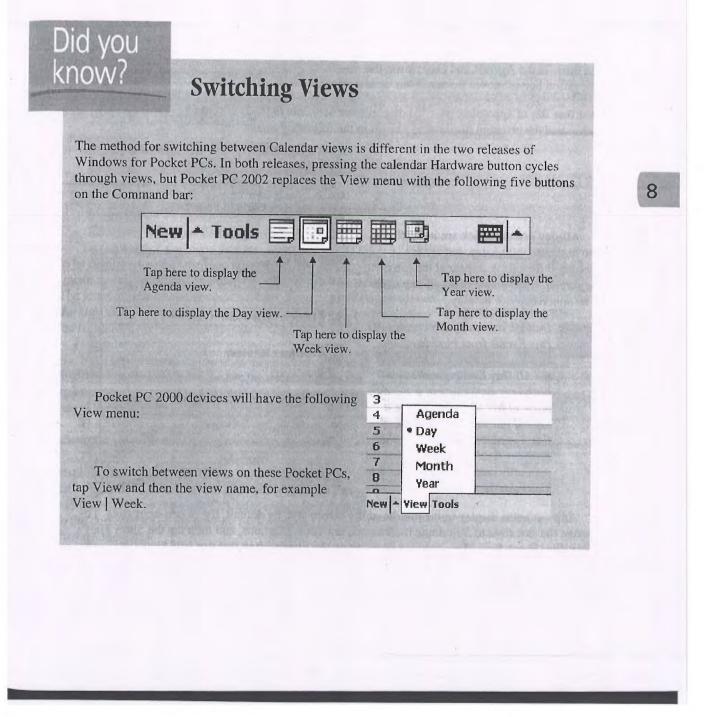
The Calendar program is the Pocket PC companion to the Calendar folder in Microsoft Outlook. ActiveSync synchronizes appointments that you enter in Calendar on the Pocket PC with the Calendar folder in Outlook, as explained in Chapter 6. To enter an appointment, first start Calendar by tapping Start | Calendar, which opens the program window shown in Figure 8-1.

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URE 8-1 The Calen	dar menu and toolbars are	at the bottom of the scre	en
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View Your Schedule in Calendar

You can view your schedule by day, week, month, and year. Calendar also provides an Agenda view that summarizes your appointments for each day. Unlike the Handheld and Palm-size PCs, the Agenda view on Pocket PCs does not list active tasks.

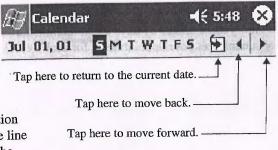


Facebook's Exhibit No. Ex. 1112 0096 Snap Inc. Ex. 1112 Page 0096

Each view has buttons, as shown in this image, for moving forward and backward, and for returning to the current date:

You can use the hardware navigation button to move forward and backward through the calendar in the Week view. In the Month and Year views, the navigation button scrolls the screen up and down one line at a time; in the Agenda and Day views, the

navigation button moves the scroll bar up and down.



View One Day of Appointments To display your schedule in the Day view, tap the Day View button and the program displays, as shown in the following image:

All-day events, which are items that you associate with a day, but are not scheduled for a time, appear at the top of the screen. An example of an all-day event is an anniversary or holiday.

TIP

Outlook automatically creates All Day Events from birthdays you enter in Contacts. You may find the All Day Events for those birthdays duplicated in Calendar, particularly when you create a second partnership. Because of this, I recommend not using the birthday field in Contacts; instead, manually create All Day Events in Calendar for birthdays.

All-day events are	🔊 Calendar 🛛 📢 5:52	3
displayed here.	Jul 02,01 SMTWTF5 🔂 📢	•
	Chris in Phoenix	
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e items that t are not	8	
at the top of	9 SAP Hours	
all-day event	10	
	11	100
11 atog A 11	12 Lunch with John (Cafeteria)	
ally creates All rthdays you	1	
You may find	2 Project Review	=
for those	3	
d in Calendar,	4	
you create a	5	F
. Because of	6	
not using the	7	+
ontacts; instead, I Day Events in	New - Tools	-

Appointments display in the middle of the screen and, by default, list in one-hour slots. To change the slot sizes to 30-minute increments, tap Tools | Options, and then tap the Show Half Hour Slots check box. More space is taken up on the screen when you use half-hour slots.

The left edge of the appointment screen has a bar indicating its status. Any slot shown as free time (indicated with a white bar) means that another appointment could be scheduled in that time

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CHAPTER 8: Manage Appointments, Tasks, and Contacts

Calendar ◀€ 5:53 Q	slot. Appointments can be free, tentative (light blue), busy (dark blue), or out-of-office (purple), each shown as a different color.
1st day of week: Sunday • Week view: 5-day week •	Icons are used to provide information about an appointment, such as whether a reminder is set, or the whether the appointment recurs. By default, the icons are turned off, yet they can be turned on by
 Show week numbers Use large font. Set reminders for new items 15 minute(s) minute(s) 	tapping Tools Options to display the Options dialog box, as shown in the image on the left:
Show icons:	These icons will not be displayed on appointments. These icons will be displayed on appointments.
L	- 8

10 Project Meeting

Edit Tools

11

Tap on each of the icons that you want to be displayed so that the icon turns dark (meaning it is selected), and then tap OK. The icons appear on the appointment in the Day view, as shown in the image on the right:

Each appointment can have more information than i displayed in the Day view. To see the details, tap on the appointment to open it in a Summary view, as shown in image on the right:

The Summary view provides all of the information about the appointment on one easy-to-read screen.

Tap the date at the top of the calendar screen to display a date picker, which you can use to select a different date to be displayed. Remember that you can use the buttons on the main Calendar screen for returning to the current date or for moving backward and forward through the dates.

This icon indicates a recurring appointment.		This icon in appointmen		
than is	🖅 Calendar	-	€ 5:56 ok	•
on the	Project Meetl	ng	56	
own in	10:00a-12:00p	Tue, 7/3/2001		
nation	Rm161			
ι.		Tap OI	K to close t	he _
to		Summa	ary view.	
a				

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2-

View a Week of Appointments The Week view displays appointments for the workweek, with each day in a column, as shown in the image to the right:

To switch to this view, tap Week view. Appointments appear as blocks with different colors, indicating statuses of free, busy, tentative, and out-of-office. All-day events are indicated by a bar running down the column. To display the appointment information, tap a block to show the information at the top of the screen.

To change the number of days that display in the Week view, tap Tools | Options and then select 5-day week, 6-day week, or 7-day week in the Week View drop-down list. Tap OK to save the change and close the Options dialog box.

To move to a different week in the year, tap the month at the top of the screen to display a date picker, which you use to select a different date to be displayed. To switch years, tap the year at the top of the screen and

> I: a

select a year from the drop-down list that displays. Tap

Project Review 2:00p-4:00p Mon, Jul 02, 2001 4 5 6 7 8 9 10 11 12 1 2 3 4 New ~ Tools : D : D : D : D : C ~

Calendar

€ 6:00

the column head of a day in the Week view to switch to the Day view for that day.

View a Month of Appointments To display the calendar one month at a time, tap the Month View button to switch to the Month view, as shown in the following image:

1	$\frac{M}{2}$	13 T	W	/ T	F	S	
			4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	Indicates an afternoon
ates a morning	23	24	25	26	27	28	appointmentIndicates morning and
intment 29	30	31	1	2	3	4	afternoon appointments
5	6	7	8	9	10	11	4

Facebook's Exhibit No. Ex. 1112 0099 Snap Inc. Ex. 1112 Page 0099

CHAPTER 8: Manage Appointments, Tasks, and Contacts

Appointments display as filled blocks, with a solid block indicating morning and afternoon appointments. If a day has only a morning appointment, the upper-left corner of the filled block displays. A filled-in lower-right corner of a block indicates afternoon appointments. An all-day event is indicated by an empty block with a blue border.

A black box over a day indicates the current date. Tap the month at the top of the screen to display a drop-down list that you can use to select a different month to be displayed. To change the year, tap the year at the top of the screen and select a different year from the drop-down list. To switch the display to the Day view for a specific date in a month, tap the date on the calendar.

View a Year of Appointments The Year view displays every month of a year. To switch to the Year view, tap the Year View button to display the screen on the right:

The current date is indicated by a black square. Each month in the Year view is limited to five lines, so a sixth line of dates is indicated by a slash (/).

To display a different year, tap the year at the top of the screen and select another year in the drop-down list. To switch the display to the Month view, tap the name of the month you want displayed. To switch to the Day view, tap a date in the Year view.

Indicates multiple dates. -

How to ... Display Week Numbers In Month View

Pocket PC 2000 devices only display week numbers in the Week view, but Pocket PC 2002 adds the ability to display week numbers in the Month view. To turn week numbers on, tap Tools | Options, tap Show Week Numbers, and tap OK. In Week view, the number displays at the upper right of the screen; in Month view, the week numbers display along the left edge of the screen. Week numbers on Pocket PC 2000 devices do not correspond to European or actual week numbers. For example, the week that begins on Sunday, December 30, 2001 is called Week 53. This problem is fixed on Pocket PC 2002 devices.

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View a Daily Agenda The Agenda view, as shown in the image to the right, summarizes appointments and all-day events on one screen:

All-day events display at the top of the screen, and appointments list in rows by time. Current appointments display in a darker font on the screen, and past appointments are grayed out.

Tap the date at the top of the agenda to display the date picker, which you use to go to a specific date. Tap the date on the calendar to go to that date in the Agenda view. You can also use the buttons along the top of the screen to move through the days of the week or to return to the current date.

Tap an event or appointment in the Agenda view to open the appointment in the Summary view.

Create an Appointment in Calendar

To create an appointment in Calendar, tap New to open the dialog box shown in Figure 8-2.

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Jul 02, 01	SM	гwт	FS	1	4	•
La Maria	Chris in	Phoe	nix	11111	his	A.A.A
SAP Hours 9:00a-10:00a						
Lunch with 1 12:00p-1:00p		ria)	any second second second second			
Tentative: P 2:00p-4:00p	roject F	Review	Y			

Subject:	Contraction of the second		*	
Location:			*	
Starts:	7/2/01	12:00 PM	T	
	7/2/01	1:00 PM	*	
	Normal			
Occurs:				
Reminder:	Remind I	ne		
	15 minu	ute(s)	white set	
Categories:	No cateq	ories		
Appointment	Notes	ALC PAR	· · · · · · · · · · · · · · · · · · ·	
ABC	abc	123	+	
			~ →	
			spo	
-			? @	
Edit		Collection of the local of	1+4	

New - Tools

-

FIGURE 8-2

The New Appointment dialog box.

Facebook's Exhibit No. Ex. 1112 0101 Snap Inc. Ex. 1112 Page 0101 When this dialog box opens, the Subject field is selected, and the Software Input panel at the bottom of the screen is open and ready for you to enter a description for the appointment. Enter a description of the appointment in the Subject field and enter a location for the appointment in the Location field. The Location field is a drop-down list containing locations from previous appointments. If the new appointment is at a location that you already entered, you can select it from this list.

TIP

The Subject field is also a drop-down list that contains words commonly used in appointments. Unfortunately, this list doesn't change, and there is no way to add words to the drop-down list.

Enter dates in the Starts and Ends fields by tapping the date that is displayed to open the date picker, as shown in the image on the right:

Tap a date on the calendar to select it for either field. You can use the arrows at the top of the calendar to move backward and forward a month at a time or tap the month to jump to another month that appears in a pop-menu. The date that you select for the Starts field automatically appears in the Ends field.

Starting and ending times are displayed in drop-down lists, which contain times in half-hour increments. Tap the values in the drop-down lists to set the starting and ending times for the appointment. If you opened the dialog box from within the Day view, the Starts and Ends fields will contain the date and time selected in the Day view.

🖅 Calendai					€ 6	:06	ok
Subject:	No	sub	ject				*
Location:							-
Starts:	71	2 /2	200_	12;	00 F	M	-
Ends:	4		Jul	y 20	101		1
Туре:	S	M	T	w	Т	F	S
Occurs:	24	25	26	27	28	29	30
Reminder:	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
Categories;	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
Appointment	29	30	31	1	2	Э	4
123 1 2 3	Too	tay:	7/1	L/01	L		
Tab q w e	T	T	YIL	ПТ	0	PT	
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Edit				1			国ト

TIP

A quick way to enter starting and ending times from the Day view is to select a group of slots and then tap New. The dialog box opens with the Starts and Ends fields populated with the starting and ending time that you selected in the Day view.

By default, Calendar creates appointments that have starting and ending times, which is indicated by the Type field with the value of Normal. To create an all-day event, tap the Type field and select All Day from the drop-down list that appears. When All Day is selected, the times in the Starts and Ends fields are removed.

Appointments can be scheduled multiple times by selecting a *recurrence pattern*. The default setting for each appointment is to occur once, as indicated by the value of the Occurs field.

Facebook's Exhibit No. Ex. 1112 0102 Snap Inc. Ex. 1112 Page 0102

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To schedule the appointment for multiple dates, tap the Occurs field to display the items shown in the image on the right:

The items will be different, depending on the day of the week, day of the month, and date that you select.

The appointment shown in Figure 8-2 is being scheduled on Monday, July 2, 2001. Select Every Monday from the Occurs drop-down list to schedule the appointment at the same time on every Monday. Select Day 2 Of Every Month to schedule the appointment for the second day of each month. If you want to schedule the appointment for that specific date—in this case, July 2—every year, select Every July 2.

🖅 Calendar		mu:	- € 6:08	s 🚯
Subject:	Projec	t Re	view	*
Location:				*
Starts:	7/2/0	1	2:00 PM	*
Ends:	7/2/0	1	4:00 PM	*
Туре:	Norm	al		
Occurs:	Once			-
Reminder: Categories: Attendees:	Every	of e July	very month	
Status:	Tenta	tive		
Sensitivity:	Norm	al		
Appointment	Notes	(105 - 445	and a provident	
Edit	3.878	LIBA	at the bea	

85 Calendar		-4 € 6:09
What time de and end?	oes the appoir	ntment start
Time: 2:00	PM - 4:00 PM	
Duration: 2	hour(s)	-
Remove	Recurrence	

	Cancel	Back	Ne	xt	
ABC	abc	1	123	•	Þ
				-	->
				+	spi
				?	@. *
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If none of the items in the drop-down list meet your requirements, tap <Edit pattern...> to start the Recurrence wizard. The Recurrence wizard has three dialog boxes with questions that help you create a customized recurrence pattern. The dialog box is shown in the image on the left:

In the first dialog box, you set the starting and ending times for the appointment. Typically, the times that you originally set are the ones you want to use. If the starting time is correct, you can change the ending time by expanding the Duration dropdown list and tapping a value in the list. Tap Remove Recurrence to close the Edit Pattern dialog box and delete the recurrence.

> Facebook's Exhibit No. Ex. 1112 0103 Snap Inc. Ex. 1112 Page 0103

You can also change the times in the dialog box by tapping them to open the following dialog box (shown to the right):

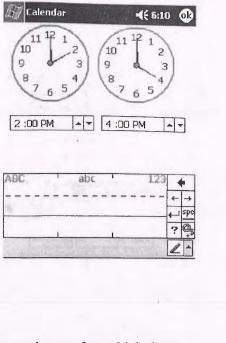
The clock and time field on the left side of the dialog box show the starting time, and on the right is the ending time. Change the times by either tapping the clock faces to move the hands of the clock or tapping the up and down arrows on the digital display. Tap OK to save the times that you select.

Tap Next to open the second dialog box of the Recurrence wizard, and tap the buttons along the top of the dialog box to define a recurrence time. When you tap Daily, two radio buttons appear, as shown in the image below:

🐨 Cale	endar	4€	6:11
Daily	Weekly	Monthly	Yearly
	ry 1 -	day(s)	-
O Eve	ry weekday		

	Cancel	Back	Ne	xt
ABC	abc		123	4
				< →
		- La chuir -	-	← spo
		- 23 -		?@
Edit		and the state	2 from	1-

Tap the days in the week that you want to schedule the appointment; more than one day can be selected. Select a value from the Every [] Week(s) drop-down list to schedule the appointment for several weeks on the days that you select.



To schedule the appointment for multiple days, select a number from the Every [] Day(s) drop-down list. Tap Every Weekday to schedule the appointment on every weekday.

Tap the Weekly tab to change the dialog box, as shown in the image below:

endar	.	6:12
Weekly	Monthly	Yearly
1 - 1	veek(s)	
TWT	FS	
	1 v	

	Cancel	Back	Next
ABC	abo	1	123
			+ →
			spc
	1		? 4
Edit			2-

Facebook's Exhibit No. Ex. 1112 0104 Snap Inc. Ex. 1112 Page 0104

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Tap Monthly to define a monthly recurrence pattern, as shown in the image on the right:

The pattern can be defined for a specific date in a month (such as the second), for a select number of months, or for a day in a week (such as the third Monday) for a select number of months. Tap the radio button of the option you want, and select the values from the drop-down lists.

Tap Yearly to define a yearly recurrence pattern, as shown in the image below:

🖅 Cale	enda r	∢ €	6:15
Daily	Weekly	Monthly	Yearly
🔘 Eve	ry July	+ 2	*
() The	first	- Monday	-
of	July	Ŧ	

[Cancel	Back	Next
ABC	abo		123 🔶
			+ ->
			d≤ 1≤b
	1	1	? 🤹
Edit			2-

Day 2 of every

1
month(s)

The first
Monday

of every
1

month(s)

Cancel

Back

Next

ABC

abc

123

+ PPe

- - - - + PPe

€ 6:13

Yearly

Monthly

The yearly pattern is similar to the monthly pattern. Your options are to schedule the appointment for the same date and month each year, or for the day in a week of the month that you select. Tap the radio button of the option that you want, and select the values from the drop-down lists.

87 Calendar

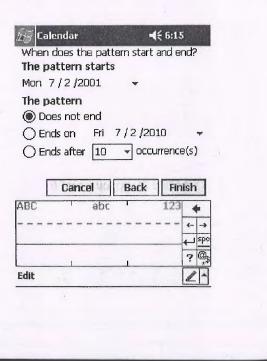
Weekly

Daily

Tap Next to define the starting and ending dates of the recurrence pattern, as shown in the image below:

Select the start date by using The Pattern Starts drop-down list. Select the end date by choosing one of the three options available for defining the end date: the recurrence pattern does not end, it ends on a date that you select, or it ends after a select number of occurrences. Tap the radio button of the option that you want and select the appropriate values from the drop-down lists.

After you select the starting and ending dates of the recurring appointment, tap Finish to return to the Appointment dialog box. The Occurs field will contain <Edit pattern...> to indicate that a customized recurrence pattern has been created for the appointment.



Facebook's Exhibit No. Ex. 1112 0105 Snap Inc. Ex. 1112 Page 0105

The Reminder field on Figure 8-2 sets the time when you will be notified about the upcoming appointment. Turn the reminder notification on or off by tapping the field and selecting either None or Remind Me from the drop-down list. The second line of the Reminder field defines the amount of time prior to the appointment that notification occurs. For example, a reminder can be set for one day before the appointment. Tap the number in the field to set the amount of time, and tap the minutes portion to select either minutes, hours, days, or weeks.

Appointments assigned to categories can be filtered in any of the Calendar views by tapping View | Categories. In order to filter appointments, you must first assign them to a category, which you do by setting a value for the Categories field. Tap the field to display a list of categories, and then tap the check box next to the categories listed to assign them to the appointment.

The Attendees field is used to create a meeting, and is explained in the "Schedule a Meeting Using Calendar" section. The Status field is a drop-down list containing Free, Tentative, Busy, or Out-Of-Office. The item that you select from the list changes the color of the bar on the left side of the appointment in the Day view and is used to indicate how the time should be treated when scheduling other appointments.

Tap the Sensitivity field to display a drop-down list that contains Normal and Private. If you select Private, the appointment will be private in Outlook and Exchange after it is synchronized with a desktop computer. Other Outlook and Exchange users may view Normal appointments.

Did you know?

Time Zones Affect Appointments

If you change the time on your Pocket PC by tapping Start | Settings | System | Clock and the time zone of the time you choose is different, then you will also change the times for your appointments. This is because every appointment time includes the current time zone. For example, if you are in the Eastern time zone and create an appointment for 10:00 A.M., changing the clock to the Central time zone will cause the appointment time to change to 9:00 A.M.

Unfortunately, the way your Pocket PC treats time zones means that you have to keep in mind where you will be on the day of the appointment. If you are going to be in Chicago tomorrow, which is in the Central time zone, for a 10:00 A.M. appointment, you can either not change the Pocket PC clock when you are in Chicago, or you can create the appointment for 11:00 A.M. EST (Eastern Standard Time).

As you can tell, appointment times can become very difficult for those who travel. Information Appliance Associates provides CorrectTime, which will reset appointments to their original times after you change the Pocket PC clock. CorrectTime can be downloaded from http://www.doctorce.com/correcttime.htm.

> Facebook's Exhibit No. Ex. 1112 0106 Snap Inc. Ex. 1112 Page 0106

Enter Notes for Appointments

Appointment notes can contain text, drawings, recordings, or writing in digital ink. To enter a note, tap the Notes tab to display the portion of the Appointment dialog box that functions in a manner similar to the Notes program explained in Chapter 13.

To make a recording, press-and-hold the hardware record button. Your device will beep and begin recording. Stop the recording by releasing the button. Once the recording is finished, an icon is inserted into the note, which you tap to play back the recording.

Schedule a Meeting Using Calendar

In Calendar, meetings are appointments with attendees. When you create a meeting in Calendar, an e-mail containing the meeting request is sent to the people that you select in the Appointment dialog box. To send the e-mail, Inbox must be configured with an e-mail service, as outlined in Chapter 20.

The process of creating a meeting is the same as creating an appointment, but with one additional step-you select participants in the Attendees field. Create a new appointment and complete the fields in the dialog box as needed. Tap the Attendees field to display the dialog box shown on the right, which lists names and e-mail addresses:

The names listed in the dialog box are entries in Contacts that each contain an e-mail address. A name may appear in the list more than once if it has more than one e-mail address (for example, a home and a work e-mail address). Tap the check box next to a person's name to select that person as a meeting participant.

Complete the fields on the Appointment dialog box and tap OK to create the meeting. The meeting will display in the Calendar Day view just like an appointment, but it contains a graphic to indicate that it is a meeting, as shown in the following image:

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11 Mt with Linda

🖅 Calendar	-{ € 6:18 (ok
Adams, Don	Don.Adams	
🗌 Adrian, Brad	badrian@ear	110
Amrich, Denise	denise@com	
Anderson, Dyche	dyche@medi	
Anderson, Matt	0904342@pa	
Anderson, Matt	matt.anders	
Anderson, Ray	norwayam@	
Anderson, Ray	 randerson51 	
Ballard, Nigel	nigel@datam	
Beckerson, Darla	dbeckerson	
Belinc, Rhonda	rbelinc@mon	
Belinc, Rhonda	blinky@provi	
Bell, Kevin	kbell@exsc0	
Bell-Hanson, Jeff	jbhanson@m	1
Benavente, Ken	kib@hnc.com	

This icon indicates a meeting.

Facebook's Exhibit No. Ex. 1112 0107 Snap Inc. Ex. 1112 Page 0107 CHAPTER 8: Manage Appointments, Tasks, and Contacts 159

An e-mail message of the meeting request is placed in the Outbox of the e-mail service that you select in Calendar. To select the e-mail service in Calendar, tap Tools | Options and select the service in the Send Meeting Requests Via field, as shown in this image:

The e-mail message will be sent the next time you use Inbox to send and receive e-mail, unless you select ActiveSync for the e-mail service. If ActiveSync is used, the request will move to Outlook during the next synchronization.

This shows which e-mail service is used for meeting requests.

Calendar € 6:24 lok. Options 1st day of week: Sunday Week view: 5-day week Show half hour slots Show week numbers Use large font Set reminders for new items 15 minute(s) \mathbf{T} Show icons: 近つ国 ធា Send meeting ActiveSync requests via: -----

8

Edit the Appointment Category List

Did you

know

Appointments can be filtered on categories so that only appointments belonging to a certain category display. You assign categories in the Appointment dialog box while creating the appointment. The category list contains several default items and is shared by Calendar, Contacts, and Tasks.

Meeting Attendees Are Visible With Pocket PC 2002

You cannot see the attendees for meetings in Calendar that have been sent to you in Outlook on Pocket PC 2000 devices. On Pocket PC 2002 devices, you will see the first six lines of meeting attendees.

> Facebook's Exhibit No. Ex. 1112 0108 Snap Inc. Ex. 1112 Page 0108

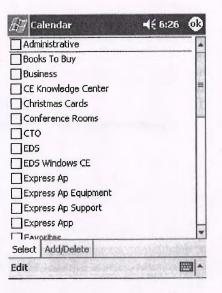
You add items to the category list when you create an appointment or edit an existing appointment. Tap the Categories field on the Appointment dialog box to open the image on the right:

Tap the Add/Delete tab, enter the new item in the box, and tap Add. You also use this dialog box to delete items from the category list. To delete an item, select it in the list and then tap Delete.

Filter Appointments by Categories

Filters help you focus on specific groups of appointments by only displaying entries belonging to a category that you select. In order for filters to be useful, you must assign appointments to categories.

> Categories do not appear in the Tools menu if there are no appointments assigned to a category.



To filter appointments on a category, tap Tools | Categories, tap the check box next to the categories that you want to display, and then tap OK. To clear the filter and display all appointments, tap Tools | Categories, tap the check boxes of the categories selected and tap OK.

NOTE To filter appointments on Pocket PC 2000 devices, tap View | Categories.

Edit and Delete Appointments

Tap appointments listed in the Day and Agenda views to display the Appointment Summary screen. You can also open the Appointment Summary screen from the Week view by tapping the appointment block and then tapping the summary that appears at the top of the screen.

To edit the appointment, tap the Edit command at the bottom of the screen. The Appointment dialog box opens for you to make any changes by either tapping the fields or tapping the Notes tab. Tap OK to save the changes.

Facebook's Exhibit No. Ex. 1112 0109 Snap Inc. Ex. 1112 Page 0109

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NOTE

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8

Did you know?

The Edit Command Is New

The Edit command has been added to the Summary view of all the Pocket Outlook programs in Pocket PC 2002. In the prior version, you simply tapped the top part of the summary screen to edit the appointment, task, or contact information, or tapped the bottom part of the screen to edit notes. Microsoft added the Edit command for two reasons: The first reason is that many users found it too easy to accidentally edit an item. The second reason is to support hyperlinks, which are now available in Contacts and can be tapped to open a web page in Internet Explorer.

Appointments listed in Day, Week, or Agenda view can be copied, moved, or deleted by tapping-and-holding the stylus on the appointment that you want to edit and then tapping either Cut, Copy, or Delete from the pop-up list that appears. When you tap Delete, a confirmation dialog box displays, asking whether or not you want to delete the appointment.

To paste an appointment that you either cut or copied, tap-and-hold the stylus on an open time slot in either Day, Week, or Agenda view, and then tap Paste in the pop-up list that appears.

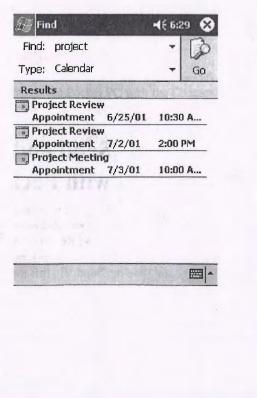
Find Appointments in Calendar

To search for appointments in Calendar, tap Start | Find to open the dialog box on the right:

Enter the word or phrase that you want to search for in the Find field, expand the Type field drop-down list, tap Calendar, and then tap Go.

Find will search through all appointments and list the entries containing the word or phrase in the Results portion of the dialog box. Tap an entry in the list to open the Summary view of the appointment; when you tap OK on the Summary View dialog box, you return to the Find dialog box.

You can search for entries in other Pocket Outlook programs by tapping their entry in the Type drop-down list, or by tapping the Pocket Outlook entry to search across all of the programs. The procedure for searching and viewing each type is the same.



Facebook's Exhibit No. Ex. 1112 0110 Snap Inc. Ex. 1112 Page 0110

Send and Receive Appointments via Infrared

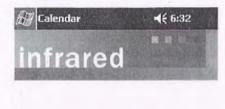
Any appointment in Calendar can be sent to another Pocket PC using the infrared port on the device. To send and receive appointments with infrared, follow these steps:

- 1. On the receiving Pocket PC, tap Start | Programs | Infrared Receive.
- 2. Start Calendar on the Pocket PC sending the appointment, tap-and-hold on the appointment that you want to send, and then tap Beam Appointment.
- **3.** Line up the infrared ports of the two devices.

Once the connection is established, the appointment will be transferred and the sending Pocket PC will display the dialog box shown on the right:

The receiving Pocket PC will display a similar dialog box indicating that the appointment was received.

Did you know?



1 appointment(s) sent.

Close

Send and Receive Via Infrared with Pocket PC 2000

The process for receiving appointments, tasks and contacts via infrared is different with Pocket PC 2000. To receive these items on Pocket PC 2000 devices, start Calendar, Tasks, or Contacts and tap Tools | Receive Via Infrared. When you send appointments, tasks, and contacts from Pocket PC 2000 devices, the menu option is different. To send, tap-and-hold the item, and then tap Send Via Infrared.

Facebook's Exhibit No. Ex. 1112 0111 Snap Inc. Ex. 1112 Page 0111

Configure Calendar Options

Several Calendar options can be set by tapping Tools | Options to open the Options dialog box on the right:

By default, the first day of the week is Sunday, but you can change it by selecting a day from the 1st Day Of Week drop-down list. To set the default number of weeks in the Week view, expand the drop-down list and tap 5-day week. 6-day week, or 7-day week.

To have Calendar show half-hour slots, week numbers, or use large fonts, tap the check boxes for each in the dialog box. To have Calendar automatically set reminders for appointments, tap the Set Reminders For New Items check box. Select the default time for the reminder notification by tapping the appropriate drop-down lists.

Tap the information icons that you want to be displayed on appointments in the Day view. The dark icons will be displayed on the appointment. Meeting announcements are sent using the Inbox e-mail service that you select in the Send Meeting Requests Via drop-down list.

Options		
1st day of week	Sunday	•
Week view:	5-day week	•
Show half ho	ur slots	
Show week I	numbers	
Use large for	t	
Set reminder	s for new items	
15 🗸	minute(s)	•
Show icons:	道口国众见。	2 8
Send meeting requests via:	ActiveSync	-

Store and Retrieve Addresses Using Contacts

The Contacts program is the Pocket PC companion to the Contacts folder in Microsoft Outlook. ActiveSync synchronizes addresses that you enter in Contacts on the Pocket PC with the Contacts folder in Outlook, as explained in Chapter 6. To enter an address, first start Contacts by tapping Start | Contacts, which opens the program window shown in Figure 8-3.

As you can see in Figure 8-3, the Contacts program on the Pocket PC does not have a toolbar along the top of the screen. The Command bar at the bottom of the screen replaces the menu and toolbars.

View Addresses in Contacts

Your contacts are listed in alphabetical order by last name in the program window. At the top of the program window, as shown in Figure 8-3, are the alphabetical tabs, which you tap to move through the list. Tapping a tab multiple times moves through contacts by jumping to entries that start with each letter on that tab.

Press-and-hold the hardware navigation button or rocker, and after a brief pause the alphabet will scroll in large letters. Release the button to scroll to the first contact matching the letter displayed on the screen.

> Facebook's Exhibit No. Ex. 1112 0112 **Snap Inc. Ex. 1112 Page 0112**

a	Contacts	-{ € 6:4	E Million and	Onish Eindham
Categories	All Contacts 👻			Quick Find box
drop-down list	#ab cde fgh ijk	Imn opg rst uv	W XYZ	
	Anderson, Ray	(906) 555-1212	h	Alphabetical
	Brown, Derek	(425) 555-1212	₩	index tabs
	Bush, Steve	(425) 555-1212	w	
	Dunn, Jason	(425) 555-1212	₩	
	Hersey, Chris	(425) 555-1212	₩	
	Kumpula, Jim	(425) 555-1212	h	
	Moraska, Sue	susie@nomail.com		
	Palmer, Steve	(906) 487-1234	h	
	New - View Tool	S S S S S S S S S S S S S S S S S S S		

The Quick Find box is above the alphabetical tabs and is used to find names in the list. Tap the box and start entering a name. As the letters are entered, the display will scroll and eventually show the name that is being entered.

Each contact in the list is displayed with the last name first and the first name last, unless it is a business, in which case the business name is displayed. Also included with each contact is a phone number or e-mail address, indicated by a blue letter to the right of the contact (w is work telephone number; h is home telephone number; m is for mobile number, p is pager number, f is fax number, e is e-mail).

If a contact has multiple telephone numbers and e-mail addresses, the work telephone number will be displayed by default. To change what is included with the contact in the list, tap the blue letter and select the desired item from the pop-up list that displays.

> Facebook's Exhibit No. Ex. 1112 0113 Snap Inc. Ex. 1112 Page 0113

To view the address information for a contact, tap its entry in the Contacts list to display the Contact Summary view, as shown in the image on the right:

Tap OK to close the Contacts Summary view and return to the Contacts list. The Contacts Summary view is a new feature available only on the Pocket PC, and it only displays information that has been entered for a contact.

😥 Contacts	-€ 6:47 OB
Steve Bush	
Owner	
Brighthand	
(425) 555-1212	Work tel
123 Any	Work addr
Seattle, WA 98765	
http://www.brighthand	Web page

Summary	Notes	
Edit Tool	5	E

Did you know?

Contact Summary View Changes

The order of the fields that display in the Contacts Summary view is different between the two releases of Windows for Pocket PCs. Pocket PC 2000 lists all of the contact's phone numbers and e-mail addresses before displaying street addresses. Pocket 2002 groups the work and home fields together so that work phone numbers, street address, and e-mail addresses display first, then home numbers and addresses. The Pocket PC 2002 Contacts Summary view provides hyperlinks for e-mail addresses and web pages, which launch Inbox and Internet Explorer. Pocket PC 2002 devices that have integrated mobile phones provide hyperlinks to phone numbers. To dial a number all you need to do is tap the hyperlink.

> Facebook's Exhibit No. Ex. 1112 0114 Snap Inc. Ex. 1112 Page 0114

Change the Contact List View

To view your contacts by company, tap View | By Company to change the List view, as shown in the image to the right:

Each company name is listed alphabetically with a number to the right indicating the number of contacts in that company. Tap the company name to display the contacts indented beneath the company name. Tap the company name a second time to collapse the view and only display the company name.

Contacts	
All Contacts 🚽	
#ab cde fgh i	ik Imn opq rst uvw xyz
Brighthand (1)	
Kensai (1)	
Microsoft (2)	
Brown, Derek	(425) 555-1212 w
Goza, Beth	(425) 555-1212 w
<none>(5)</none>	

NOTE

View By Company is not available with Pocket PC 2000.

Tapping View | By Name switches the List view back to the default listing. The Outlook File As setting defines the default listing. Unfortunately, to change the default view you have to edit each of your contacts in Outlook. If you wish to make this change in Outlook, follow these steps:

- 1. Start Outlook.
- 2. Open the contact that you want to change.
- 3. Click the File As drop-down field, as shown in the following image:

John Doe - Contact		
File Edit View Insert Format Iools Actions Help	or a feature of the second	
🖬 Save and Close 📑 🎒 🖉 🔻 🔗 🗟 🌫	· • · • · •	
General Details Activities Certificates	All Fields	and the second
Full Name John Doe	Business	
Job title:	Home	
Compan <u>y</u> :	Business Fax	
File as: Doe, John	Mobile	
Address Doe, John	E-mail	
Home Anytown, MI 49870		Send using plain text
	Web page address:	
This is the mailing address		the second shirts

4. Select the option that you want and click OK.

The next time you synchronize your Pocket PC, the contact will be listed using the option you select.

Facebook's Exhibit No. Ex. 1112 0115 Snap Inc. Ex. 1112 Page 0115

How to ... Have More Power Over Contacts

One of the most frustrating aspects of the Pocket PC 2000 software is that the Contacts program does not allow you to change how contacts display in the List view. Microsoft partially addresses this issue with Pocket PC 2002 by adding the View By Company command.

While some will find this addition to Contacts useful, others will find it still does not provide the power they want over how contacts are listed. Fortunately, Web Information Solutions has written a program that addresses this shortcoming.

Pocket Informant by Web Information Solutions is a very popular alternative to all the Pocket Outlook programs. It can display contacts by first name, last name, and company name. This program also provides an Agenda view that lists appointments and tasks for each day, as well as more informative Week and Month views. You can also link appointments, contacts, and tasks to each other and to files on your Pocket PC. For more information and a trial version of the program, go to http://www.pocketinformant.com.

Create New Contacts

Tap New to open the Contacts dialog box:

🚰 Contacts	∢ € 6:53 🐽	
Name:	* 4.	Tap here to see each part of the name.
Job title:		
Department:		
Company:		
Work tel:		
Work fax:		
Work addr:	T	Tap here to see each part of the address.
E-mail:		
Mobile tel:	-	
Details Notes	ningel installer	
ABC abc	123 🔶	
		As you can see, the dialog box has two tabs:
	4_1 spo	Details and Notes. The Details tab contains all
	20	of the fields available for a contact. Tap each
Edit		field that you want to complete and then enter 7the desired information.
LUIL		/ the desired mitormation.

Facebook's Exhibit No. Ex. 1112 0116 Snap Inc. Ex. 1112 Page 0116

The Name and Work Address fields include detail indicators (downward pointing triangles) that you can tap to display the different parts of the field. You can enter the information directly in the field or tap the details indicator and enter the different parts of the field separately, as shown in the image to the right:

Telephone numbers on the dialog box automatically include the area code that you define in the Contact Options. To change the area code, tap Tools | Options, enter the number in the Area Code field and tap OK.

Tap the Categories field on the Contacts screen to display the category list. Assign the contact to one or more categories by tapping the check box next to the items in the list. If the category that you want to use is not available in the list, tap the Add/Delete tab, enter a category in the empty box, and tap Add. When you tap the Select tab, you will notice that the check box next to the category you entered is automatically assigned to

Æ Contacts	@ 3
Mobile tel:	-
Web page:	
OF Street: 123 Any St	_
н	=
Hom	- -
City: Any City	
State: MI	
Cate Zip: 49870	
Oth Country: United States	T T
Details Notes	
123 1 2 3 4 5 6 7 8 9 0 -	- +
Tab q w e r t y u i o p	[]]
CAP a s d f g h j k l ; ;	<u>.</u>
Shift z × c v b n m / . /	+
Cti áü `\ ↓↑•	
Edit	₩

to the category you entered is automatically assigned to the contact.

Contact notes can contain text, drawings, recordings, or writing in digital ink. To enter a note, tap the Notes tab to display the portion of the Contacts dialog box that functions in a manner similar to the Notes program explained in Chapter 13.

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• • • 0		4
		4
		1
Tap here to play the recording.	١	
		+
Details Notes Edit Tools	Datasta Baha	12

To make a recording, press-and-hold the hardware record button. Your device will beep and begin recording. To stop the recording, release the button. Once the recording is finished, an icon is inserted into the note, as shown in the image on the left.

When you have finished entering all the information for the contact, tap OK, and the contact will be added to the Contacts list.

Edit and Delete Contacts

To edit a contact, first tap its entry in the Contacts list to open the Contacts Summary view; then tap Edit. Tap the Notes tab to edit the contact notes.

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NOTE

On Pocket PC 2000 devices, tap any item displayed in the Contacts Summary view to open the contact's Detail view, where you can edit any of the fields for the contact.

To copy or delete entries in the Contacts list, tap-and-hold the stylus on the contact that you want to edit; then tap Create Copy or Delete Contact from the pop-up list that appears. When you tap Delete Contact, a confirmation dialog box displays, asking whether or not you want to delete the contact.

When you tap Create Copy, a copy of the contact that you selected inserts into the Contacts list. You can then edit the entry that was added to the Contacts list.

How to ... Create a Contact Template

You might find yourself creating many contacts with the same information, such as for people who work for the same company. One trick you can use to help speed up entering these types of contacts is to create a template that contains all of the duplicate information. By using the template, you save yourself the time spent entering the same information repeatedly. Follow these steps to create a template:

- 1. Tap New to create a new contact.
- 2. Enter the company name as the first name of the contact, and enter _Template for the last name. By using an underscore for the first character of the last name, you ensure that the template appears at the top of the Contacts list.
- **3.** Complete the remaining details, such as the work address and category, that are shared by all the contacts.
- 4. Tap OK to add the template to the Contacts list.

The template contact will appear at the top of the list. To create a new contact using the template, tap-and-hold the template and then tap Create Copy. Tap the copy of the template that was added to the list and edit the fields as needed for the new contact you are creating.

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Edit the Contact Category List

Contacts can be filtered on categories so that only contacts belonging to a category display. You assign categories in the Contacts dialog box while creating the contact. The Category list contains several default items and is shared with Calendar and Tasks.

To add an item to the Category list, expand the Categories drop-down list, as shown in the image on the right, and tap More:

The title of the drop-down list changes to Show when the list is expanded.

Tap the Add/Delete tab, enter the new item in the box, and tap Add. You also use this tab to delete items in the Category list. To delete an item, select it on the Add/Delete tab and then tap Delete.

The Category list can also be edited from the Contacts dialog box. Tap the Categories field on the Contacts dialog box to open the Contacts List and then tap the Add/Delete tab.

Filter Contacts by Categories

Filters help you focus on specific groups of contacts by only displaying entries belonging to a category that you select. In order for filters to be useful, you must assign contacts to categories.

[2]] Contacts	4 € 6:58	×
Show -	24	
Recent	mn opg rst uvw	xyz
✓ All Contacts	906) 555-1212	h
No Categories	125) 555-1212	₩
Business	425) 555-1212	W
Personal	125) 555-1212	₩2
More	125) 555-1212	W
Hersey, Chris	(425) 555-1212	₩
Kumpula, Jim	(425) 555-1212	h
Moraska, Sue	susie@nomail.com	e
Palmer, Steve	(906) 487-1234	h

New - View	Tools	

Use the Categories drop-down list to quickly filter items by the category that you select.

The title of the Categories drop-down list changes to show the currently displayed category. To filter tasks on a category, tap the Categories drop-down list and tap the category that you want to display. If the category is not in the drop-down list, tap More, tap the check box next to the categories that you want to display, and then tap OK.

Clear the filter and display all contacts by expanding the Categories drop-down list and tapping All Categories.

TIP

Use the Recent entry in the Categories drop-down list to display the contacts you have recently added, edited, or viewed.

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How to ... Display Contacts Not Assigned to a Category

A problem on Pocket PC 2000 devices is that you cannot display contacts not assigned to a category, which means if you use categories you might not find a contact, since it won't display. A No Categories option has been added to the Categories drop-down list in Pocket PC 2002. When you select this option, only the contacts that have not been assigned to a category will display.

Find Contacts

To search for entries in Contacts, tap Start | Find to open the Find dialog box. Enter the word or phrase that you are searching for in the Find field, expand the Type field drop-down list, tap Contacts, and then tap Go.

Find will search through all contacts and list the entries containing the word or phrase in the Results portion of the dialog box. Tap an entry in the list to open the contact, and tap OK in the Contacts dialog box to return to the Find dialog box.

You can search for an entry in other Pocket Outlook programs by tapping it in the Type drop-down list; the procedure for searching and viewing each type is the same.

Send E-Mail to a Contact

To send e-mail to a person from Contacts, tap-and-hold on the person's entry in the Contacts list, and then tap Send E-mail To Contact on the Context menu. Inbox will start and create a new e-mail message using the contact's e-mail address. If the contact does not have an e-mail address, Inbox will still create a new message, but the e-mail Address field will be blank.

Complete the message, tap Send, and you will return to Inbox. Return to Contacts by pressing Hardware or tapping Start | Contacts.

TIP

On Pocket PC 2002 devices, you can also send e-mail from a contact's Summary view by tapping the e-mail address. You can also open the contact's web page by tapping the URL entered in the web page field on the Summary view.

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Send and Receive Contacts via Infrared

Any entry in Contacts can be sent to another Pocket PC using the infrared port on the device. To send and receive contacts with infrared, follow these steps:

- 1. On the receiving Pocket PC, tap Start | Programs | Infrared Receive.
- 2. Start Contacts on the Pocket PC sending the contact, tap-and-hold on the contact that you want to send, and then tap Beam Contact.
- 3. Line up the infrared ports of the two devices.

Once the connection is established, the contact will transfer and the sending Pocket PC will indicate that the contact has been received.

Configure Contact Options

Set several options in the Options dialog box, as shown in the image on the right, by tapping Tools | Options:

Tap the check boxes next to Show ABC Tabs, Show Contact Names Only, or Use Large Fonts to change how the contact list displays. Enter the Area Code and select the Country/Region to be used for new contacts. Tap OK to save the changes and close the dialog box.

Manage Your Tasks

The Tasks program is the Pocket PC companion to the Tasks folder in Microsoft Outlook. ActiveSync synchronizes tasks that you enter in Tasks on the Pocket PC with the Tasks folder in Outlook, as explained in Chapter 6. To enter a task, tap Start | Tasks, which opens the program window shown in Figure 8-4.

Options			_	
List view s	settings			
Show	ABC tabs			
	contact names on	lly		
Use lar	ge font			
Country/I	legion settings	+		
Area code	: 248			
Country/	United States		-	
Region:	<u>L</u>			
			-	
Edit		And E	3	
Edit		enen 🔎		
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Edit			3 -	
Edit		-4 ₁₀₁ 🗩	3 ~	
Edit		-1 (s) 📕	3 -	
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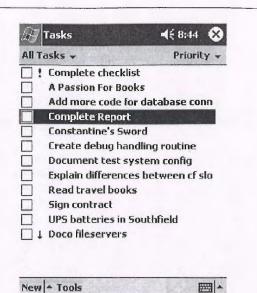


FIGURE 8-4 Tasks on a Pocket PC

As you can see in the figure, the Tasks program on the Pocket PC does not have a toolbar along the top of the screen. The Command bar at the bottom of the screen replaces the menu and toolbars, and overall the screen looks less busy.

View Your Tasks

Tasks display in the main program window in one complete list. To the left of each task is a check box that you tap to mark a task as complete. Immediately to the right of the check box is the Priority column, which displays exclamation marks for high-priority tasks, an arrow pointing down for low-priority tasks, and nothing for normal tasks. The description of the task takes up the remaining space for each item.

Above and to the left of the Tasks list is the Categories drop-down list. The "Filter Tasks by Categories" section explains how to use the Categories drop-down list to change what displays in the Tasks list.

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To the right of the Categories drop-down list (and above the Tasks list) is the Sort drop-down list. The title of the Sort drop-down list displays the name of the item used to sort the list. In Figure 8-4, the Tasks list is sorted by Priority. Tap the title to expand the drop-down list, as shown in the image to the right:

You can sort the tasks list by Status, Priority, Subject, Start Date, and Due Date. A task has either an active or a complete status, and when the list is sorted by status, active tasks appear before complete tasks. To change the sort order of the Tasks list, expand the Sort drop-down list and then tap an item in the list.

B	Tasks d€ 7:19 €	3
All Ta	asks 🗸 Priority	-
8	Complete checklist 7/2/01 - 7/6/01	-
	A Passion For Books	
	Add more code for database conn	8
	Constantine's Sword	
	Create debug handling routine Due: 7/4/01	_
	Document test system config	
	Explain differences between cf slo	
<u> </u>	D	-
New	- Tools 🔤	-

7:18 😣
Sort By
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 Tools New

Task start and due dates do not appear in the Tasks list unless you enable them. To display start and due dates, tap Tools | Options and then tap the Show Start And Due Date check box. When the dates are enabled, each task will occupy two lines in the Tasks list, as shown in the image on the left:

> Facebook's Exhibit No. Ex. 1112 0123 **Snap Inc. Ex. 1112 Page 0123**

Past due tasks are displayed in red in the Tasks list. To increase the font size, tap Tools | Options, and then tap the Use Large Font check box.

Each task can have more information than is displayed in the Tasks list. To see the details, tap on the task to open it in a Summary view, as shown in the image on the right:

The Summary view is a new feature found only on Pocket PCs. It provides all of the information about the appointment on one easy-to-read screen. The top part of the screen displays the task details and can be expanded by tapping the down arrows of the task's start and due dates and category assignments. The bottom part of the screen display

The bottom part of the screen displays notes.

Create New Tasks

Tap New to open the Tasks dialog box and create a new task. The dialog box has two tabs: Task and Notes. On the Task tab you enter the all of the details about the task. The Subject field is a drop-down list, which you can use to select words commonly used in task subjects. By using the drop-down list you can speed up data entry, but unfortunately the list does not change, and you cannot add words.

Dates are entered in the Starts and Due fields by tapping the field to open the date picker shown on the right:

Tap a date on the calendar to select it for either field. You can use the arrows at the top of the calendar to move backward and forward one month at a time, or tap the month to jump to another month that appears in a pop-up list. The date that you select will automatically appear in the field.

ET Ta	asks				14	467	:21	•
5	subject:	Co	mple	ete c	:hecl	klist		-
1	Priority:	Hig	h					
	Status:	No	t Co	mple	eted			
	Starts:	71	2/2	2001				
	Due:	4	1	Jul	y 20	101	4	•
	Occurs:	S	M	T	W	T	F	S
Re	minder:	24	25	26	27	28	29	30
		1	2	3	4	5	6	7
Cate	Categories:		9	10		12	13	14
Sen	sitivity:	15		17	_		20	21
		22 29	23	31	25 1	20	3	28
			lay:		./01		2	-1
Task	Notes				The			1
Edit			wyYr.		(Inter-	1	E	- I

Facebook's Exhibit No. Ex. 1112 0124 Snap Inc. Ex. 1112 Page 0124

Tap here to close the Tasks -€ 7:20 OB Summary view. **Complete checklist** 十六 -Tap here 24 Review project tasks to expand the details portion of the Summary view. 8 **Edit Tools**

NOTE

A task cannot be assigned a start date without a due date. However, a due date can be assigned without a start date.

Tasks can be created multiple times by selecting a recurrence pattern. The default setting for each task is to occur once. To make the task appear multiple times, tap the Occurs field to display the items shown in the image on the right:

The items will vary depending on the day of the week, day of the month, and date on which the task is created.

The task shown in the image is being created on Friday, July 6, 2001. Select Every Friday to add the task to the task list on every Friday. Select Day 6 Of Every Month to add the task on the sixth day of each month. If you want to add the task on the specific date every year—in this case, July 6—then select Every July 6.

If none of the items in the drop-down list meet your requirements, tap <Edit pattern...> to start the Recurrence wizard. The Recurrence wizard has three dialog boxes, the first of which is shown below:

ks	Star In	€ 7:24
		lates for
None		*
Fri 7/6/2	2001	-
on: None	Ŧ	
nove Recurre	ence	
Cancel	Back	Next
abc	-1	123 🔶
		? 🤹
		1-
	are the start a st task in this s None Fri 7 / 6 /2 on: None move Recurre Cancel	are the start and due of t task in this series? None Fri 7 / 6 /2001 on: None None Cancel Back

In the first dialog box you set the Start and Due dates for the task. Typically, these will have been already entered prior to creating the recurrence pattern. If the start date is correct, you can change the due date by expanding the Duration drop-down list and tapping a value in the list. Tap Remove Recurrence to delete the recurrence and close the dialog box.

> Facebook's Exhibit No. Ex. 1112 0125 Snap Inc. Ex. 1112 Page 0125

£₽ T	asks	∢ € 7:23	٩
	Subject:	Complete Report	*
	Priority:	Normal	
	Status:	Not Completed	
	Starts:	None	
	Due:	7/6/2001	
	Occurs:	Once	-
R	eminder:	Once Every Friday Day 6 of every month	
Cal	tegories:	Every July 6	
Task	Notes	< Edit pattern >	
ABC		abc 123	+
		+	_ spc
	1		?
Edit		and the second second	

Tap Next to open the second dialog box of the Recurrence wizard. Tap the buttons along the top of the dialog box to define a recurrence time. When you tap Daily, two radio buttons appear, as shown in the image at right:

To create the task on multiple days, tap the first radio button and select a number from the Every [] Day(s) drop-down list. Tap the Every Weekday radio button to create the task on every weekday.

Tap Weekly to define a weekly recurrence pattern, as shown in the image below:

Tap the days in the week for which you want to create the task; you can select more than one day. Select a value from the Every [] Week(s) dropdown list to create the task for several weeks on the days that you select.

街 Tas	ks	4€	7:28
Daily	Weekly	Monthly	Yearly
Every	1 -	veek(s)	
SM	тwт	FS	
L,		Celline I	
	Damaal	Back	Next
E	Cancel	، السبب ا	Next
Edit	The Assessed	中華國的現代中國	-

Daily	Weekly		7:25
Daily	WEEKIY	Monthly	Yearl
• Eve	LÀ T	day(s)	
		-] uay(s)	
	ry ueekday	, and and a state of the state	
		, l nah(z)	
		-] gai(2)	
		-] gah(z)	

		C	anc	el	TRU.	I	Bac	k.		Ne	xt	
123 1	12	3	4	5	6	7	8	9	0	-	=	4
Tab	q	W	e	r	t	Y	u	i	0	р	[]
CAP	a	s	d	f	g	h	ĵ	k	1	;	1	T
Shift	Z	X	C	Y	b	n	m	.,	1.	1	1	+
Ctlá	ü	•	1					1	+	1	+	->
Edit		130		142	in the second	52	NF T					1-

Tap Monthly to define a monthly recurrence pattern, as shown in the image below:

🗑 Tas	ks	.	7:29
Daily	Weekly	Monthly	Yearly
Day	6 • 0	f every	3
L		nonth(s)	
) The	first	- Friday	-
	every 1	▼ month(s	5)
٥	Cancel	Back	Next
dit			

The pattern can be defined for a specific date in a month (such as the sixth), for a select number of months, or for a day in a week (such as the first Friday) for a select number of months. Tap the radio button of the option you want, and select the values from the drop-down lists.

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Tap Yearly to define a yearly recurrence pattern, as shown to the right:

The yearly pattern is similar to the monthly pattern. Your options are to create the task on the same date and month each year, or for the day in a week of the month that you select. Tap the radio button of the option you want, and select the values from the drop-down lists.

Tap Next to define the starting and ending dates of the recurrence pattern, as shown in the image below:

☐ Tasks< ◄€ 7:30
When does the pattern start and end?
The pattern starts
Fri 7 / 6 /2001 👻
The pattern
Does not end
🔿 Ends on 🛛 Tue 7 / 6 /2010 🛛 👻
◯ Ends after 10 → occurrence(s)
·
Cancel Back Finish
Edit 🔤 🔺

Daily	Weekly	Monthly	Yearly
D Eve	ry July	• 6	*
) The	first	✓ Friday	Ŧ
of	July	-	
	Cancel	Back	Next

711

Edit

Select the starting date by using The Pattern Starts drop-down list. Three options are available for defining the end date: the recurrence pattern does not end, it ends on a date that you select, or it ends after a select number of occurrences. Tap the radio button of the option that you want and select the appropriate values from the drop-down lists.

After you select the start and end dates of the recurring task, tap Finish to return to the Tasks dialog box. The Occurs field will contain <Edit pattern...> to indicate that a customized recurrence pattern has been created for the task.

TIP

You may have problems synchronizing recurring tasks between your Pocket PC and Outlook. If you create a recurring task, only edit it on the Pocket PC; otherwise, the task may not be re-created for each occurrence.

The Reminder field on the dialog box sets the date when you will be notified about the upcoming task. Turn the reminder notification on or off by tapping the field and selecting either None or Remind Me from the drop-down list. The second line of the Reminder field defines the date for the notification. Tap the date on the second line to display the date picker, and tap a date on the calendar for when you want the reminder notification to occur.

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Tasks assigned to categories can be filtered in the Tasks list by using the Categories dropdown list. In order to filter tasks, you must first assign them to a category, which you do by setting a value for the Categories field. Tap the field to display a list of categories, and then tap the check box next to the categories listed to assign them to the task.

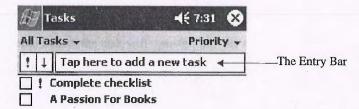
Enter Notes for Tasks

Task notes can contain text, drawings, recordings, or writing in digital ink. To enter a note, tap the Notes tab to display the portion of the Tasks dialog box that functions in a manner similar to the Notes program explained in Chapter 6.

To make a recording, press-and-hold Hardware Record. Your device will beep and begin recording. Stop the recording by releasing the button. Once the recording is finished, an icon is inserted into the note, which you tap to play back the record.

Use the Task Entry Bar

The Task Entry Bar provides a quick way to enter tasks, but it is disabled by default. To display the Task Entry Bar, tap Tools | Entry Bar. When the Task Entry Bar is enabled, an extra row is added beneath the Categories and Sort drop-down lists, as shown here:



The Task Entry Bar includes two priority buttons and the task subject. Set the task priority to either high or low by tapping the exclamation mark or arrow. To create the subject, tap Tap Here To Add A New Task on the bar and enter the task subject.

When you have finished entering values on the Task Entry Bar, tap ENTER on the Software Input panel to add the new task to the Tasks list.

Edit and Delete Tasks

Tap an item in the Tasks list to display the Task Summary screen; then tap Edit to open the task information. To edit the task notes, tap the Notes tab, make any necessary changes to the fields in the dialog box, and then tap OK to save the changes.

NOTE

On Pocket PC 2000 devices, tap the top part of the Task Summary screen to edit the task information and tap the bottom part of the screen to edit notes.

To copy or delete a task, tap-and-hold the stylus on the task that you want to edit and then tap either Create Copy or Delete Task on the Context menu that appears. When you tap Delete, a confirmation dialog box displays, asking whether or not you want to delete the appointment.

> Facebook's Exhibit No. Ex. 1112 0128 Snap Inc. Ex. 1112 Page 0128

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Edit the Task Category List

Tasks can be filtered on categories so that only tasks belonging to a given category display. You assign categories in the Tasks dialog box while creating the task. The Category list contains several default items and is shared with Calendar and Contacts.

To add an item to the Category list, expand the Categories drop-down list and tap More. Tap the Add/Delete tab, enter the new item in the box, and tap Add. You also use this dialog box to delete items in the Category list. To delete an item, select it in the list and then tap Delete.

The Category list can also be edited from the Contacts dialog box. Tap the Categories field to open the dialog box and then tap the Add/Delete tab.

Filter Tasks by Categories

Filters help you focus on specific groups of tasks by only displaying entries belonging to a category that you select. In order for filters to be useful, you must assign tasks to categories. Use the Categories drop-down list to quickly filter items by the category that you select.

The title of the Categories drop-down list changes to indicate the category currently being displayed. To filter tasks on a category, tap the Categories drop-down list and tap the category that you want to display. If the category is not in the drop-down list, tap More, tap the check box next to the categories that you want to display, and then tap OK.

To clear the filter and display all contacts, expand the Categories drop-down list and tap All Categories.

TIP

Use the Recent entry in the Categories drop-down list to display the tasks that you have recently added, edited, or viewed.

The Categories drop-down list has two items useful for looking at tasks. Select Active Tasks to list all tasks with a start date before and on the current date. Tasks not assigned a start date are always active. Select Completed Tasks to list all tasks marked complete.

TIP

You can select a category and Active Tasks or Completed Tasks to display the active or completed tasks for a category.

Hew to ... Display Tasks Not Assigned to a Category

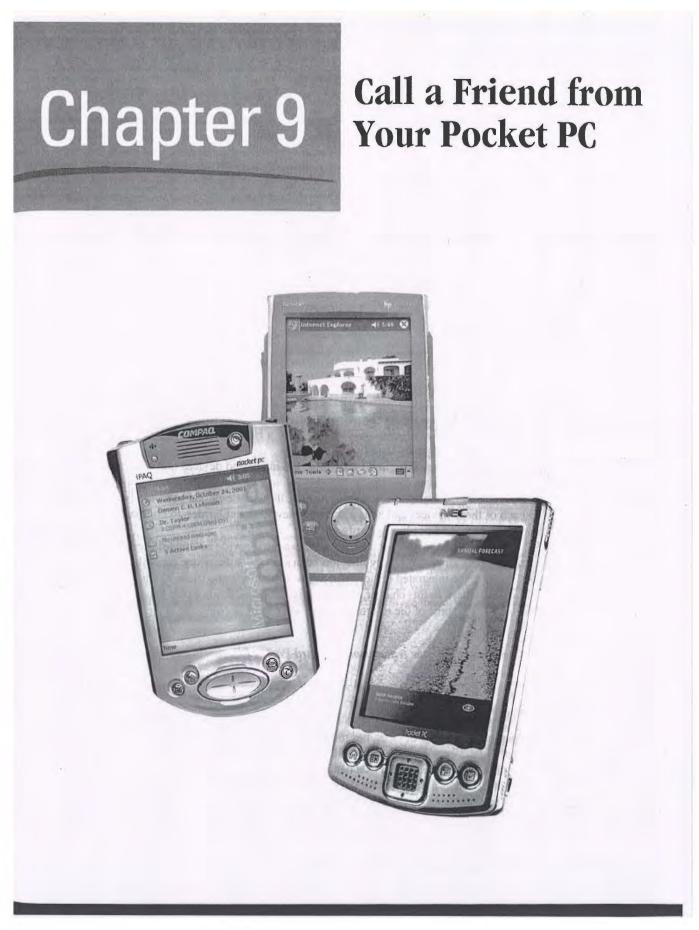
A problem on Pocket PC 2000 devices is that you cannot display tasks not assigned to a category, which means if you use categories, you might miss a task, since it won't display. A No Categories option has been added to the Categories drop-down list in Pocket PC 2002. When you select this option, only the tasks that have not been assigned to a category will display.

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Wrapping Up

Pocket Outlook provides the tools that help you manage your time. Recurring appointments are easy to schedule in Calendar because you only have to enter the appointment information once, and your Pocket PC automatically enters that appointment on all the other days you select. The Tasks program provides the same functionality, reminding you of tasks that you must complete at regular intervals. All of your addresses are stored in Contacts, which make it easy to retrieve a phone number or an e-mail address. In Chapter 9, you'll see how Pocket PC 2002 provides more power to Contacts by integrating all of the phone numbers with a dialer program. The combination of Contacts, the dialer program, and integrated mobile phone hardware enables you to make , phone calls using your Pocket PC.

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Facebook's Exhibit No. Ex. 1112 0131 Snap Inc. Ex. 1112 Page 0131

How To...

- Purchase an Pocket PC with mobile phone capabilities
- Make and receive phone calls using Pocket PCs
- Manage phone call information
- Change phone, service, and network settings

Chances are you own a mobile phone, and have had one long before you even considered buying a Pocket PC. Today, mobile phones are one of a growing number of gadgets we consider essential and must be carried with us at all times. Pocket PCs are in that list of essential gadgets, but for many lugging a phone and a Pocket PC around all day is one gadget too many. The answer, according to analysts and hardware manufacturers, are devices that integrate mobile phone and personal digital assistant (PDA) features.

Over the last several years there has been considerable talk about integrated devices, which are often called *smart phones*. In fact, Microsoft competitors have taken a lead in developing such devices. Palm Computing works with several mobile-phone manufactures, such as Kyocera, in developing integrated devices, and the Kyocera Smartphone has been on the market for many months. The VisorPhone is a Springboard module that turns a Handspring Visor handheld, which runs the Palm OS, into a mobile phone.

Mitsubishi, Sagem, Siemens, Zess, and Cesscomm sell integrated devices that run Pocket PC 2000 in Europe. These devices run the standard Pocket PC software, with the mobile-phone functions added by the hardware company. Consequently, the mobile-phone software functions differently on each of these devices and adds a software development burden to companies that usually focus on designing and producing hardware.

Pocket PC 2002 directly supports mobile-phone hardware to provide a standard user interface for phone functions across all devices. Very little has been said about the phone capabilities of the Pocket PC 2002 because the integrated devices will not be available in the United States until the spring of 2002, at the earliest. In this chapter, you'll receive an introduction to the phone features in Pocket PC 2002, though some of the information may change by the time the devices become available.

NOTE

You will not see the phone features on standard Pocket PCs discussed in this chapter.

Buy a Pocket PC Phone

Several companies sell integrated devices, but the total numbers sold have not been nearly as high as the number of mobile phones or even handheld computers sold. The challenge is designing a device that is large enough to be useful as a handheld computer, while being small enough to be carried around and used as a phone. With the trend of mobile phones becoming smaller, integrated devices feel and look like bricks in comparison.

Facebook's Exhibit No. Ex. 1112 0132 Snap Inc. Ex. 1112 Page 0132 The Microsoft solution to this dilemma recognizes that no one hardware design will be right for everyone. One part of the Microsoft solution is Pocket PC 2002 and its mobile-phone capabilities, which is designed to be the best handheld computer capable of making phone calls. The second part of the Microsoft solution is a smart-phone platform code named Stinger. Stinger is designed to be the best mobile phone that also has some handheld computing capabilities.

The two Microsoft solutions are targeted at two different types of users. People who frequently use cell phones, or want to carry one small device, will prefer Stinger phones because they are small and optimized for use in one hand. Those who do not frequently use cell phones, yet use handheld computers, will prefer a Pocket PC integrated with a phone so that they don't have to carry multiple devices.

Trying to decide which Microsoft solution is right for you? First determine how frequently you make phone calls, and then determine whether you can live with the trade-offs of one solution over another. A Stinger phone will be smaller than a Pocket PC, but it will not have all of the features available on handheld computers. An integrated Pocket PC is larger than most mobile phones, and can be awkward when holding it up to your ear. You will most likely want to use a hands-free microphone with any integrated Pocket PC.

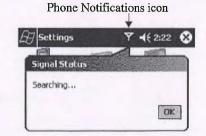
We do not have enough information about the Microsoft smart phones to provide adequate coverage of them in this book. In this chapter, the focus is on the mobile-phone extensions of Pocket PC 2002, with the intention of providing enough information to provide you with an idea of how these integrated devices may work.

The Pocket PC 2002 launch event provided some information about what these integrated devices might be like. At the event, mmO2 announced the O2 xda, which will be the first integrated device running Pocket PC 2002. The O2 xda only supports the communication protocols used by European phone systems, and will start selling there in early 2002. It uses the same 206Mhz StrongARM processor, 32MB of ROM, 32MB of RAM, and built-in secure digital slot as other Pocket PCs. It is expected to have 3.5 hours of talk time and 150 hours of standby time.

While the O2 xda will only be available in Europe, similar integrated devices will also be available in the United States. Compaq plans to start selling the Wireless Expansion Pack for the GSM/GPRS networks by the end of 2001. The expansion pack will add mobile phone features to the iPAQ Pocket PCs. As more announcements of new products are made, you will find information about them at http://www.pocketpc.com.

Make and Receive Phone Calls

The mobile-phone features in Pocket PC 2002 are only available with integrated devices and add-on products. You will not be able obtain the Phone application unless you buy one of these products. When you turn on a Pocket PC that is integrated with a mobile phone, you will see a Phone Notifications icon as shown in the image to the right: The phone searches for a connection, and when one is found it shows signal strength in the form of bars to the right of the icon.



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Facebook's Exhibit No. Ex. 1112 0133 Snap Inc. Ex. 1112 Page 0133

Turn the phone on or off by tapping the Phone Notifications icon. By default the phone is always on, even when you have the Pocket PC turned off.

Make Phone Calls

NOTE

Did you know?

There are several ways for you to make a phone call, depending on the number that you want to dial. One way to make a call is to simply dial a number using the Phone application, which you start by tapping Start | Programs | Phone. Tap the numbers on the keypad and then tap Talk. The image to the right shows a call in progress:

Tap End to complete the call and hang up.

Some Pocket PCs with integrated mobile phones will have dedicated hardware buttons for Talk and End, which are similar to the buttons on mobile phones.

The Phone application supports speed dialing, which uses phone numbers that you program into storage locations. To speed dial a number, tap-and-hold on the speed dial location on the keypad and Phone application will dial the associated number. If the speed dial location is a two-digit number, tap the first digit and then tap-and-hold the second digit. You can also tap Speed Dial on the keypad and then tap a number in the following list:

A Phone	🍸 📢 2:04 🐼
Dialing	
(425) 55	5-1212
	G
1 2ab	c 3def Call Log
4ghi 5jk	6mno Speed Dial
7pqrs 8tu	y gwxyz
* 0+	# & End
Edit Tools 💭	TAL MONPOLEMENT
@ Phone	▼ 4€ 2:18 🚭
1 Voice Ma	ail
McPhers	on, Frank
(425) 55	5-1212 h

Pocket PC Phones Use GSM

There are several different mobile-phone technologies, but Global System for Mobile Communications (GSM) is the preferred technology for Pocket PC phones because it is available around the world. GSM is widely used throughout Europe, but there is much less use of it in the United States. VoiceStream Wireless provides the majority of GSM service in the United States, but AT&T Wireless is in the process of converting their network to GSM, and Cingular Wireless also provides some GSM service.

Most of the GSM service providers are upgrading their networks to support General Packet Radio Service (GPRS), which adds data communications to their networks. Most Pocket PC phones will be designed to use GSM for voice communications and GPRS for data communications.

Facebook's Exhibit No. Ex. 1112 0134 Snap Inc. Ex. 1112 Page 0134 GSM phones use Subscriber Identification Module (SIM) cards, which are smart cards that store mobile-phone service settings and user preferences. In some cases SIM cards contain contact information, which you can access as speed dial numbers on Pocket PC phones. You can also import contacts from SIM cards to the Pocket PC.

If you already subscribe to a GSM service, you should be able to use a Pocket PC phone with that service by simply transferring the SIM card from your phone to your Pocket PC.

While speed dialing can be handy when making calls from the Phone application, you will most likely store all phone numbers in Contacts. The Contacts program on integrated Pocket PCs is enhanced to support dialing phone numbers. To dial a number from the Contacts list view, tap-and-hold the contact. On the pop-up menu, tap Call and the type of phone number displayed. For example, if the contact's work number is displayed in the list view, Call Work Tel will display in the pop-up menu, as shown in the image to the right:

Create	e Copy
Delete	e Contact
Send E-mail to Contact	
Beam	Contact
Call W	ork Tel
add S	need Dial Work Tel

To change the number for a contact that displays in the list view, tap the letter to the right of the number in the Contacts list view and then select a number from the pop-up menu.

Another enhancement to Contacts is that phone numbers display as hyperlinks in the Contacts summary view, as shown in the image to the right:

To make a call, simply tap any one of the phone numbers in the summary view.

NOTE

TIP

When you make a call from Contacts, the Phone application does not display. Instead, a notification displays showing that a call is connected. Tap the Phone Notification icon at the top of the screen to end the call.

All the calls that you make or receive are tracked in the Call Log. You can review the Call Log and make calls from

87 Contacts	▼ -(€ 2:08 🚯
Frank McPherson	
Freelance Writer	
(425) 555-1212	Work tel
(425) 555-1212	Work fax
frank@fmcpherson.com	E-mail
(425) 555-1212	Home tel



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that log by tapping Call Log on the keypad and then tapping a number in the list, as shown in the image on the right:

You can filter the Call Log to show missed calls, outgoing calls, incoming calls, or calls sorted by caller name. In the following image, tap the Show drop-down list at the upper left of the Call Log screen and select an option from the list:

Show	•			
• All Ca Misse		son, Frank 55-1212 w	2:20	a
Outg Incor	-		2:19	а
By Ca	aller		2:18	a
G		son, Frank 55-1212 w	2:13	a
G	McPherson, Frank (425) 555-1212 w		2:09	a
C		son, Frank 55-1212 w	2:08	а
(3)		son, Frank	2:08	a



How to ... Take Notes During Calls

If you want to take notes during a call, tap the icon shown in the following image:

Edit	Tools		

Tap here to create a note.

The Pocket PC Notes application starts for you to write notes. Notes taken during a call are associated with the phone number so that you can open the note from within the Call Log. In order to take notes during a call, you will need to use a hands-free microphone or the speakerphone functionality that may be available with integrated Pocket PCs.

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Receive Phone Calls

When the Pocket PC receives a call, a notification bubble appears on the screen with options for Answer and Ignore. Tap Ignore to silence the phone and transfer the call to voice mail if it is included by the mobile-phone service, or tap Answer to receive the call. If the Phone application is running, you can also tap Talk to answer a call. Finally, if you use an integrated device that includes a Talk hardware button, press the button to receive the call just as you do with mobile phones.

Manage Calls

Every call that is made, received, or missed is entered in the Call Log. To view the contents of the log, tap Call Log on the keypad to open the following screen:

	🔠 Phone	7	4 € 2:39 0	3
	Show -			1
	All Calls son, Frank Missed 55-1212 w	2:20 a	*	
Tap here to filter items — in the Call Log.	Outgoing Incoming		2:19 a	金を
U.	By Caller		2:18 a	II
		erson, Frank 555-1212 w	2:13 a	
		erson, Frank 555-1212 w	2:09 a	
		erson, Frank 555-1212 w	2:08 a	
		erson, Frank 555-1212 w	2:08 a	+
	Tools	A Star Long L	E	-

How to ... Use the Wireless Radio for Data Communications

Integrated Pocket PC phones may be sold by mobile-phone service providers who will provide voice and data service for the phones. The Pocket PC 2002 Communication Manager is designed to use the wireless radio built into the device or added to the device. To use the phone to connect to the Internet, you will need to create a new connection in the Connection Manager Internet settings and select the wireless radio as the modem. Chapter 19 provides instructions for configuring Connection Manager.

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You can filter the items in the Call Log by selecting one of the following items from the drop-down list.

- All Calls Shows all the calls made, received, or missed in chronological order
- Missed Shows only those calls that were not answered
- Outgoing Shows only those calls made from the phone
- Incoming Shows only those calls made to the phone
- **By Caller** Shows only those calls associated with a single caller

If a note was created for a call, an icon will appear next to the call entry in the log; tap the icon to open the note. Tapping within the white space of an entry in the log displays a tooltip showing the date, time, and duration of the call.

To delete all the items in the Call Log, tap Tools | Delete All Calls. You can also delete a select number of entries from the log by tapping Tools | Options to display the Call Log Options screen:

Select an item from the Delete Call Log Items Older Than drop-down list and tap OK.

The Call Log Options screen displays call statistics. You can view the total time spent on all calls, the total number of calls, and the total time since the last time the Call Log was reset. Tap Reset to reset the call statistics to zero.

87 Phone	▼ ┥€ 2:42 🐠
Options	
All Calls: O min, O sec O calls	
Recent Calls; O min, O sec	
0 calls	Reset
Delete call log items	older than:
1 week 🔹	

Program Speed Dial

There are two ways to add a speed-dial number. To create a speed dial from a contact, tap-and-hold the item in the Contacts list view and then tap Add Speed Dial and the type of phone number displayed. For example, if the work phone number is displayed, tap Add Speed Dial Work Tel, as shown in the image to the right:



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CHAPTER 9: Call a Friend from Your Pocket PC. 191

The other way to create a speed dial is to tap Speed Dial on the keypad of the Phone application and then tap New, which opens the screen shown in the image to the right:

Select the name of the contact for the speed dial, the phone number for the speed dial, and the speed-dial location. There are 99 speed-dial locations for you to use. Tap OK to save the speed dial.

Configure the Pocket PC Phone

To change the phone settings, tap Tools | Options in the Phone application. Alternatively, you can choose Start Settings | Phone. The settings screen has three tabs: Phone, Services, and Network.

Change the Phone Settings

The Phone tab, as shown in the image to the right, displays the phone number, which is read from the SIM card:

The Ring Type and Ring Tone settings configure how the Pocket PC reacts to an incoming call. Ring Type specifies the type of notification you receive for an incoming call. If you select a Ring Type option, you can sample and select a Ring Tone. You cannot select a Ring Tone if you select the Vibrate Only ring type.

The Keypad field specifies what you hear when using the dialer. You can set the keypad to Beep or Off to not be disruptive in public places. Other Settings opens the Pocket PC Sounds and Notifications settings, where you can set phone, volume, and system sounds.

87 Phone ₹ 4€ 2:17 Speed Dial Contact: McPherson, Frank Name: McPherson, Frank Number: (425) 555-1212 h

ि Settings ♥ ◀€ 3:15 @ Phone	9
Phone Number: 1 (425) 727-2772	5
Sounds: Ring type: Fing	
Ring type: Ring	
lap here	
Other Settings a King I Security:	one.
Require PIN when phone is in use	
Change PIN	
Phone Services Network	

-

Select the Require PIN When Phone Is In Use check box to prevent unauthorized use of the Pocket PC phone by requiring that a PIN be entered to use the phone. Tap Change PIN to change the PIN. Emergency 911 calls can be made at any time without first entering a PIN.

> Facebook's Exhibit No. Ex. 1112 0139 **Snap Inc. Ex. 1112 Page 0139**

Location: 2:<Available>

NOTE

Instructions for changing the Pocket PC Sounds and Notification Settings are provided in Chapter 4.

Change the Services Settings

You use the Services tab, as shown in the following image, to access and configure services provided by your mobilephone service provider:

To configure a setting, select the service and then tap Get Settings.

The Caller ID setting controls whether or not your phone number displays to the person you call. You can prevent your number from being displayed by tapping Disable Caller ID.

Call Forwarding configures the service to forward calls made to the phone depending on the status of the phone. You can configure the following forwarding options:

- Unavailable Forwards calls if the phone is turned off or unreachable
- **Busy** Forwards calls when the line is busy
- No answer Forwards calls if you do not answer the phone

ि Settings र द{ 3:22 ∰ Phone

To access settings for a service, select it from the following list and tap "Get Settings".

Caller ID
Call forwarding Call waiting
Call waiting
Voice mail and SMS

		Get Settings
Phone	Services	Network
3		ALL DE LE CALLER

Call Waiting allows you to receive a second call during a call. To turn call waiting off, tap Do Not Notify Me.

Voice Mail and SMS configures the voice mail and Short Message Service (SMS) access numbers.

NOTE

Short Message Service provides text messaging between mobile phones.

TIP

Speed dial location 1 is automatically configured for accessing voice mail.

Change the Network Settings

The network settings allow you to select which mobile-phone network the Pocket PC phone will use. The selection remains active until you change it, lose the network signal, or change the SIM card. The currently registered network displays on the Network tab, as shown in the image to the right:

🖅 Settings 🛛 🕈 ┥€ 3:24 🐽	
Phone	1
Current network: Network unavailable Find Network	
Network selection: (ii) Automatic (iii) Manual	
Set Preferred Networks	
Phone Services Network	

Facebook's Exhibit No. Ex. 1112 0140 Snap Inc. Ex. 1112 Page 0140 In this image, the phone was not able to find a network. To change this, tap Find Network to start the network selection process.

The phone will search for a network using the criteria specified in the Network Selection portion of the screen. If you select Automatic, the phone will select a network from those you specify as preferred networks. If you select Manual, the phone will search for all available networks and list them. You can then select the network that you want to use from the list.

Tap Set Preferred Networks to specify the networks the phone should use and the order in which they should be accessed.

Wrapping Up

Pocket PC 2002 is designed to be a great handheld computer that is also capable of making phone calls. Whether or not you want to use your Pocket PC as a phone will depend on your mobile phone needs. In this chapter, you have seen how the phone software might work on Pocket PCs. Keep in mind that phone software is still being developed, so information in this chapter may change by the time integrated Pocket PC phones are sold.

In the future you might be able to call a friend using your Pocket PC, but right now you can use your Pocket PC to write a letter to that friend. In the next chapter, you'll learn how to use Pocket Word to create and edit documents.

> Facebook's Exhibit No. Ex. 1112 0141 Snap Inc. Ex. 1112 Page 0141

Chapter 19

Connect to the Internet with or without Wires



Facebook's Exhibit No. Ex. 1112 0142 Snap Inc. Ex. 1112 Page 0142

How To...

- Use the Connection Wizard to configure modem connections
- Use the Connection Manager to configure network connections
- Select a wireless modem
- Use ActiveSync Desktop Pass Through to connect to networks using serial cables
- Connect to local area networks

By all accounts, the number of people who use the Internet has grown at a phenomenal rate. The majority of Internet connections are made using personal computers; but a variety of other devices, such as smart phones, TV/set-top boxes, and handheld computers, are starting to be used to connect to the Internet.

When Microsoft originally designed Pocket PCs, Microsoft recognized the importance of connecting to the Internet; so every Pocket PC has the ability to connect in a variety of different ways. One way is the traditional dial-up method using a modem and telephone line, which is normally called *remote networking* or *dial-up networking*. All Pocket PCs come with the software needed to make this connection, and a number of companies make CompactFlash modems that work with Pocket PCs.

The modem and telephone line combination is the most widely used means of connecting to the Internet, but two alternative methods are emerging. One is *wireless networking*, which provides a connection to the Internet using analog or digital cellular phones, special wireless modems, or wireless Ethernet cards. The second emerging method for Internet access is *broadband*. In the simplest terms, broadband is fast Internet access for consumers. Two implementations of broadband are popular: cable-modem service, using the same cable wire connected to your television set; and Digital Subscriber Line (DSL), which provides high-speed access using regular telephone lines.

For the majority of Pocket PC users, remote networking will be the method used to connect to the Internet; and this chapter provides instructions for making the connection. Wireless networking with cellular phones and wireless moderns works the same way as remote networking, which is also covered in this chapter.

You'll find instructions for connecting to the Internet using the device's USB cable and ActiveSync Desktop Pass Through. Finally, instructions are also provided for connecting to local area networks (LANs) using wired and wireless Ethernet cards.

Gather Internet Service Provider Information

Internet Service Providers (ISPs) are companies that provide connections to the Internet. Thousands of ISPs provide telephone numbers that you use to either connect directly to the Internet or, as is the case with America Online (AOL), connect to a private network and then connect to the Internet. Pocket PCs work with the majority of ISPs that connect directly to the Internet, but you cannot connect using AOL.

Facebook's Exhibit No. Ex. 1112 0143 Snap Inc. Ex. 1112 Page 0143 Before you connect to the Internet, you need to gather some information in order to configure Internet connections. If your ISP provides instructions for connecting to the Internet, then what you need will be provided in those instructions. If your ISP does not provide instructions, you can find the information by opening the Properties of the connection in Windows. You will need the following information to create Internet connections on your Pocket PC:

- Do you provide a username and password in the Dial-Up Connection dialog box, or does a terminal window open after the number has been dialed (in which case you enter a username and password)? If a terminal window is used, you must configure the Pocket PC connection to open one, as explained in the "Modify Internet Connections" section later in this chapter.
- Obtain the maximum baud rate for the connection and the settings for data bits, parity, stop bits, and flow control.
- Find out whether the connection uses Point-to-Point Protocol (PPP) or Serial Line Interface Protocol (SLIP). The most common of these is PPP.
- Does the network access server, or Windows NT remote access server, provide an IP address or is one manually assigned? The most common configuration is server assigned; but if it is manually assigned, you will need the address provided by the ISP.
- Does the connection use software compression and IP header compression? The most common configuration is to use both.
- Does the server assign addresses for name servers or are they manually assigned? If they are manually assigned, you will need the address for Primary DNS, Secondary DNS, Primary WINS, and Secondary WINS.
- Obtain the phone number

Did you know?

Connection Manager Automates Network Connections

In this chapter, you'll learn how to use ISP information to create modem connections and connect to the Internet or corporate networks. Pocket PC 2002 has a new Connection Manager that provides a way to designate modem connections for the Internet and corporate networks, which Connection Manager calls Work. Depending on the type of information you are trying to access, Connection Manager automatically determines which type of connection it needs to make and dials the call.

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Facebook's Exhibit No. Ex. 1112 0144 Snap Inc. Ex. 1112 Page 0144

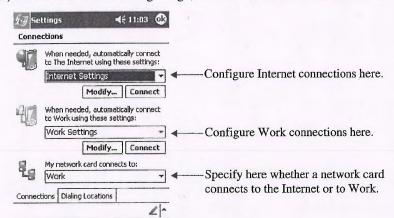
Use Connection Manager

Your Pocket PC has multiple ways to connect to networks. It can use modems to connect with ISPs or with corporate remote access servers. The USB cable or infrared port that you use to connect a device with a PC creates a small network between the two devices, and can also be used by the Pocket PC to connect with the Internet.

LANs are common in offices today, and are also beginning to be installed in homes to share resources and Internet connections. All Pocket PCs include the necessary software to connect to LANs by using either PC Card or CompactFlash Ethernet network interface cards (NICs).

Connection Manager, as shown in the following image, controls all network connections for

Pocket PC 2002. You can manually establish network connections directly from Connection Manager by tapping the Connect buttons, but the Pocket PC is designed to automatically make network connections. Once you configure Connection Manager, it makes connections based on the type of



information that you attempt to retrieve and the peripheral attached to the Pocket PC. Table 19-1

	Internet	Work
Internet Explorer	Enter a URL in a fully qualified domain name form, such as www.pocketpchow2.com.	Enter a one-word URL, such as fmcpherson.
Inbox	All Inbox services connect to the Internet by default.	Configure Inbox services to connect to Work.
MSN Messenger	MSN Messenger is only configured to use a Passport account.	MSN Messenger is configured to use an Exchange account.
ActiveSync	Never connects to the Internet.	Always connects to Work.
Terminal Server Client	Does not directly make a network connection.	Does not directly make a network connection. If you use a modem, you must use Connection Manager.

TABLE 19-1

Scenarios for Which the Pocket PC Will Connect to the Internet or Work Using a Modem

Facebook's Exhibit No. Ex. 1112 0145 Snap Inc. Ex. 1112 Page 0145

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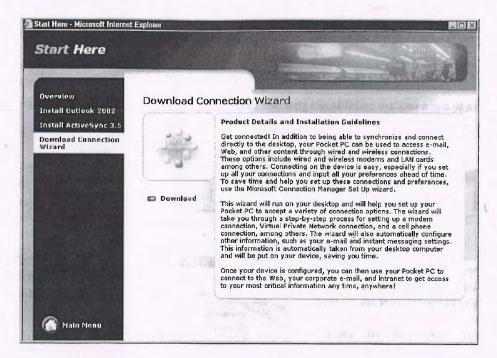
lists the Pocket PC applications that use network connections, along with the connection scenarios when using a modem. If a network card is available instead of a modem, the applications will make a connection based on the network card setting in Connection Manager.



If you want to synchronize using a network card, you must configure the card to connect to Work.

Use the Connection Wizard

Among the first things that you will configure on a new Pocket PC is how it will make network connections. Microsoft makes it easier for you to set up this configuration by providing the Connection Wizard, which you download by clicking the Download link on the following screen of the companion CD-ROM:



This screen appears when you load the companion CD-ROM into your desktop computer. The companion CD-ROM ships with all Pocket PCs.

The Connection Wizard guides you through the process of configuring connections on your Pocket PC. While it does copy your MSN Messenger User ID from the desktop to the Pocket PC, it does not copy any remote networking or Outlook Mail Services. You will have to enter the ISP and Work network information on the Pocket PC. Before you can begin using the Connection Wizard, you must connect your Pocket PC with a desktop computer.

> Facebook's Exhibit No. Ex. 1112 0146 Snap Inc. Ex. 1112 Page 0146

The following image shows the Connection Wizard reading the settings on the Pocket PC:

zard
settings are checked.
m that đah: :Pj
work
the Internet while connected to your work network.
voik (VPN) to access your work network while you're
programs that need to connect to the Internet or your Messenger, will determine the best method to u
MANNAN .
Back Next Cancel

If you plan to use a modem and it is not attached to the Pocket PC, the following dialog box will display:

ecking For Modems				
Are you using an external mod	em? If so, insert the mo	dem now and click \	es to continue. Ot	herwise, click No

Insert the modem, click Yes, and the Connection Wizard will read the settings again.

On the screen on the right, the Connection Wizard asks you how you will connect to the Internet and to Work networks.

The radio buttons that you select for modem connections will determine which screens you will see in the Connection Wizard. For example, if you select An Internet Service Provider, then you will not see the screens for connecting to Work networks.

w do you want to connect? Select the methods you want to use to ac and/or your work network.	cess the Internet		đ	
7 I have a modem				
My modern connects to:				
C An Internet Service Provider [ISP])			
C My work network	4			
Both an ISP and my work network	K			
7 I have a network card				-
My network card connects directly to:				
C The Internet only				1
C My work network only				-
Both the Internet and my work net	lwork			
				-
	< Back	Next>	Cancel	
				_

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On the next screen, shown on the right, you configure dialing locations.

The Pocket PC uses the dialing locations to determine how to dial a number, and which number to use when multiple connections are available in either the Internet or Work settings. A check mark next to a dialing location indicates that it is the one that the Pocket PC will use when making a call.

Two locations, Home and Work, are available by default on all Pocket PCs, with the locations configured to the 425 area code. You will want to change these area codes to match your home and work phone numbers. You can also create new locations or delete existing locations from this screen.

here do you want to Add the location(s) from		connect.		ଭି
Your Pocket PC will aut location's country code with your Pocket PC Y Dialing Locations tab in Dialing locations	and area code. B	elow enter the ocations later of	locations you expect to	travel to
Location	Prefix	Country	Atea Code	
✓ Home Work	9,	. 1	248 248	
Make	Default	New	Edit De	lete

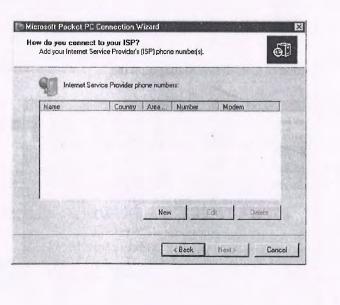
NOTE

You can manually specify dialing patterns for local, long distance, and international calls for dialing locations on the Pocket PC. The Connection Wizard does not provide a way for changing dialing patterns.

On the screen shown at right, you enter the phone numbers for your ISP. The numbers you enter on this screen are entered in the Internet Settings portion of the Pocket PC Connection Manager.

NOTE

If you did not tell the Connection Wizard that you will use a modem to connect to an ISP, you will not see this screen.



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To add a number, click New, which opens the dialog box shown on the right.

Enter a name for the connection along with the phone number information, and select a modem. Click OK to save the ISP phone number, or click Cancel to close the dialog box.

Name:	MSN Southfi	eld		-
Country code:	1	Area code:	248	-
Phone number:	204-1312	- Hulling of the	lons to	
Modern:	PRETEC-Co	mpactModem_3.	W_56K	5

al

NOTE

An external modem will only appear in the modem drop-down list if the modem is inserted in the Pocket PC and detected by the Connection Wizard.

Nan

Microsoft Pocket PC Connection Wizard

Add the phone numbers you use to dial into w

Country Area ...

Numbe

New

< Back

Modem PRETEC-Comp

Work phone numbers:

How do you connect to work?

You can enter more than one ISP phone number. When multiple ISP numbers are available, Connection Manager will dial the number that has an area code matching the dialing location area code. The one exception is 800 numbers, which will always be used even if there are local ISP phone numbers.

The Work phone numbers, shown on the right, only appear if you tell the Connection Wizard that the modem will connect to a Work network.

The numbers you enter on this screen will be entered in the Work connection portion of Connection Manager on the

Do ye	u use a VPN server to connect to work?
lf	you do use a Virtual Private Network server, enter its name or address.
r	No, I do not use a VPN server
6	Yes, I use a VPN server
	For example, your VPN server may be a host name like vpn yourcompany.com,
	or example, your verv server may be a nost name like vpruyourcompany.com, or an IP address that looks similar to 157.54.0.1,
	(Back Next) Canc

Pocket PC. Multiple phone numbers can also be entered on this screen, and Connection Manager uses them in the same way as multiple ISP phone numbers.

Edit

Next)

Delete

Cancel

Work connections have two additional settings not available for Internet connections: the VPN (Virtual Private Networking) server and the proxy server. After you enter work phone numbers and click Next, you'll see the screen shown at left for entering VPN information.

If you will use a VPN server to connect to a Work network, select Yes, I Use A VPN Server, enter the host

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Did you know?

Virtual Private Networking Provides Secure Connections

VPN is a method for providing a secure connection to Work networks using the public Internet. All information is encrypted and sent to the VPN server, which then decrypts the information and passes it along to the corporate network. There are different methods for implementing VPN, but Pocket PCs only support Microsoft's Point-to-Point Tunneling Protocol (PPTP) by default. Other VPN implementations are supported by third-party software available for Pocket PCs.

name or IP address of the server in the field provided, and then click Next. If you do not use a VPN server, select No, I Do Not Use A VPN Server, and then click Next.

The second setting unique to Work connections is the proxy server. Many companies use proxy servers to provide access to the Internet from the corporate network. If your work network uses a proxy server, select Yes, My Company Requires A Proxy Server To Access The Internet; enter the host name or IP address of the server in the field provided; and then click Next, as shown on the screen at right.

If your company has a pro	xy server, enter its :	name or address		œ
C No, my company does	not use a proxy se	rver to access th	ne Internet	La te
Yes, my company required	mes a proxy server	to access the In	ternet	1
l.			In the second	
	eleponistica			
		and and a start		Non 2
	Dall Meent			



The proxy server setting is the final piece of information that you provide to the Connection Wizard, as indicated in the image on the left.

When you click Next, the Connection Wizard will update your Pocket PC with the connection information.

Connect Using Modems

The Connection Wizard does not provide a way to configure all the possible settings for modem connections. For example, the

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How to ... Buy a Modem for Your Pocket PC

CompactFlash modems are the most common modems for Pocket PCs. All brands of CompactFlash modems work with Pocket PCs, but you do want to make sure that if your Pocket PC only has a Type I CompactFlash slot, you buy a Type I CompactFlash modem. Examples of Type I modems are CompactModem from Pretec; 56K Modem CF Card from Socket Communications, Inc.; and Pocket Modem from Targus. The CompactCard Modem 56 Global Access card from Xircom is a Type II CompactFlash modem.

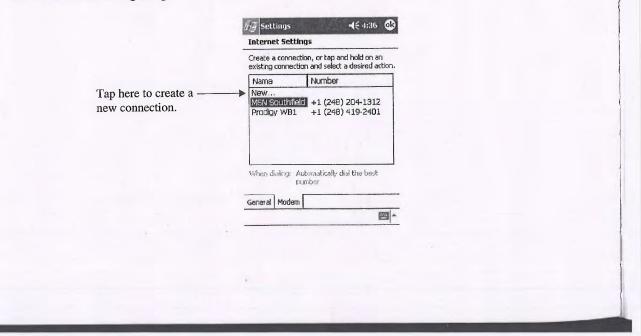
To connect modems such as the 56K Travel Modem from Psion with the Pocket PC infrared port, select the Generic IrDA modem from the Select A Modem drop-down list when creating modem connections. You can also connect Pocket PCs to standard external PC modems by using a serial ActiveSync cable, a null modem adapter, and an RS-232 cable. When using an external PC modem, select the Hayes Compatible on COM1: modem when creating a modem connection.

Connection Wizard does not provide a way for entering IP addresses for Domain Name Servers (DNSs). To add these additional settings to modem connections, you must use the Connection Manager on your Pocket PC.

To create, edit, or delete modem connections for either Internet or Work settings, tap Modify in either the Internet or Work section of Connection Manager.

Modify Internet Connections

The Internet Settings section of Connection Manager has two tabs, General and Modem, as shown in the following image:



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The Modem tab displays by default and lists all of the connections that Connection Manager will use to connect to the Internet. The General tab provides a way for you to change the names of the settings or to delete the settings.

To edit a connection, tap its entry in the Connections list. To delete a connection, tap-and-hold the item, and then tap Delete on the pop-up list. The pop-up list also includes Always Dial and Connect options. If you tap Always Dial, that connection will always be used no matter whether it is a long distance or a local call. An indicator at the bottom of the screen shows which connection is always dialed if one is specified. Tap Connect on the pop-up list to call the ISP and connect to the Internet.

5 Settings	◀€ 11:05
Make New Connectio	n
Enter a name for the co	nnection;
My Connection	
Select a modem:	
Hayes Compatible or	COM1:
Baud rate:	
19200 🗸	Advanced.
	L

1-

19

To create a new connection, tap New in the Connections list. The same screens display when you edit existing connections or create

5ettings	46 11:	15 ok
Advanced		
Connection prefe	rences	
Data Bits:	8	*
Parity:	None	-
Stop Bits:	1	-
Flow Control:	Hardware	*
Terminal	in the second	
Use terminal be		
Port Settings TCP/I	IP Name Servers	
I - DESTRUCTION	41.51	1-

new connections, with the first screen looking like the following image shown on the right.

Enter a name for the connection, select the modem and baud rate from

the drop-down lists, and then tap Next, unless you want a terminal window to display after dialing or you need to manually assign IP addresses.

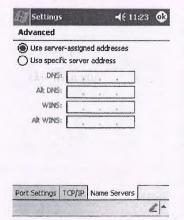
To display a terminal window or manually assign addresses, tap Advanced to open the dialog box shown at left.

Select the Use Terminal After Connecting check box to have a terminal window display after the

connection completes.

To manually assign the IP address, tap the TCP/IP tab, select the button, and enter an IP address in the

Use Specific IP Address radio button, and enter an IP address in the field provided, as shown in the following image on the right.



Clear the Use Software Compression and the Use IP Header Compression check box if the ISP does not support these settings.

Tap the Name Servers tab to assign the name server addresses, as shown in the dialog box at left.

Select the Use Specific Server Address check box and enter the addresses in the appropriate fields. Tap OK to save the changes and return to the Make New Connection dialog box.

		23 o b
Advanced		
Use server-assign	ed IP address	
Use specific IP ad	dress	
Use Stip		
✓ Use software com	preccion	
Use IP header cor	npression	
Port Settions TCP/IP	I Name Servers I	
Port Settings TCP/IP	Name Servers	

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Connection2	
120 second Wait for dial to ait for credit card	ne before dialing I tone 0 seconds
tra dial-string mo	odem commands:
Cancel	Back Finis
Concer	Dack I I wins
	4

In the next dialog box (not shown), enter the area code and telephone number for the dial-up server and then tap Next. Finally, customize the modem settings and tap Finish, as shown in the dialog box on the left.

Modify Work Connections

The Work Settings section of Connection Manager has four tabs, as shown in the image on the right.

General and Modem have the same purpose and work the same way for work connections as they do for Internet connections. VPN and Proxy Settings tabs apply to all modem

reate a conne xisting conne	action, or ta ction and se	ap and hold on elect a desired	ar
Name	Num	ber	
Vhan dialing:	Automakica	aily dial the be	st

connections. To add a VPN server to the Work settings, tap the VPN tab and then tap New. Enter a name for the VPN server and the host name or IP address of the server in the fields on the screen shown next.

15 Set	tings		-46 8:0:	2013/
Make N	ew Connect	ion		
Enter a	name for th	e connec	tion:	3
My Cor	nection			
Host na	me or 1P ad	dress of a	destination:	
			,	
			Advance	ed
ABC	1 8	be 1	123	1 4
				+ + + - ? (2)

Companies use VPN to provide access to their private networks via the Internet. It saves them the cost of having to manage hundreds of modems, and it enables people to access the private network by making local calls to ISPs around the world. The modem connection you use to connect to the Internet will have IP address information for the ISP, and a second set of IP addresses are assigned for the private network by the VPN server. If you need to specify IP address information for the private network, tap Advanced on the VPN Connection screen.

To edit the VPN server information, tap its entry in the VPN list. To delete an entry in the VPN list, tap-and-hold the item and then tap Delete.

NOTE

You can also use VPN with network cards, which allows you to access private networks using broadband connections. To use VPN with a network card, specify that the network connects to Work in Connection Manager.

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CHAPTER 19: Connect to the Internet with or without Wires

Proxy servers provide access to the Internet from private networks. The proxy settings that you specify on the screen shown at right will be used for modem connections, and will also be used by network cards when they are set to Work in Connection Manager.

Select the check boxes on this screen to specify that the private network connects to the Internet, and that it uses a proxy server. Enter the host name or IP address of the proxy server in the Proxy Server field.

If you need to configure port or Socks settings for the proxy server, tap Advanced on the Proxy Settings tab to open the screen shown next.

	Server		Port
TP		đ	80
AP			
icks [1080
1	Гуре: 🔘	Socks 4 O	Socks 5
1	Jser ID		
f	assword		
17	1.15		

The HTTP field and Port setting specify the proxy server

and port to be used by Internet Explorer when browsing the Web. The default port for HTTP is 80, and usually shouldn't be changed unless specified by a network administrator.

Wireless Access Protocol (WAP) settings are used to specify a proxy or gateway server and port that enable browsers using WAP to browse the Web. These settings are not commonly used, and they will be blank in most cases.

A Socks proxy server is used by applications that need to access application servers using TCP/IP. If you need to use Socks, enter the proxy server and port number. The default port number for Socks is 1080, and it usually shouldn't be changed unless you are instructed to do so by a network administrator.

There are two versions of the Socks proxy server protocol, Socks 4 and Socks 5. Socks 5 supports authentication; so if you tap the Socks 5 radio button, you must enter a User ID and Password.

Use Dialing Locations

Dialing locations enable you to specify how the modem dials phone numbers. To create a dialing location, tap the Dialing Locations tab of Connection Manager to display the screen shown on the right. In this screen, you configure information about the location you dial from, including the local area code, the local country code, whether you use tone or pulse dialing, and whether or not you need to disable call waiting. You can also control dialing patterns, such as whether the number nine must be dialed to reach an outside line.

ocal Set	New	Remov	e	
		🔿 Tone diali	ng	
Counts	y code: 1	Pulse dial	ng	
Disable	call waiting;	dlal	*	
	L	ling Pattern		
onnection	s Dialing Locatio	ns	1	1
onnection	s Dialing Locatio	ns	2-	(
onnection	s Dialing Locatio	ns	2-	(
onnection	s Dialing Locatio	ns	2-	

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York Settings	
This network connect	ts to the Internet
This network use: connect to the In	s a proxy server to ternet
Proxy server:	
1	
	Advanced
	Proxy Settings

TIP

Some cities are divided into several area codes, and some require dialing ten digits while others require dialing seven digits. Use dialing locations to specify which area codes require seven- or ten-digit dialing.

By default, there are two dialing locations: home and work. (These locations are set with an area code of 425, which might be OK if you live in Redmond, Washington, but it will cost you a long-distance phone call if you don't modify them to your own area code.)

Dialing patterns are used to control how the modem will dial a phone number from the location you have selected. When you tap Dialing Patterns, you'll see the screen shown at right.

From this screen, you control how local, long-distance, and international calls are dialed. Placeholders—letters and punctuation marks—are used as a type of shorthand so that parts of the phone number that must be dialed each time can be merged into the dialing pattern. For example, suppose that the location you are dialing from uses a nine to place a long-distance phone

2 Settings	4 € 11:04	٩
Dialing Patterns		
For local calls, dial:		
3		
For long distance calls, dial	1	
1FG		
For international calls, dial:		
EFG		
(E,e = country code; F,f = number)	area code; G,ç	=

Edit	1-

call. In the field labeled For Long Distance Calls, Dial you should enter 9,1FG. If the number you are dialing is 248-555-1212, the modem will dial 9,12485551212 because your device will interpret the 9,1FG as dial 9, wait two seconds, and then dial 1, the area code (F), and the number (G). The characters you can use and their corollary interpretations are shown in Table 19-2.

To	Enter
Dial country code	E,e
Dial area code	F,f
Dial local number	G,g
Insert a pause (typically 2 seconds)	, (comma)
Wait for credit card tone	\$ (dollar sign)
Wait for a second tone	W,w
Tone-dial the following numbers	T,t
Pulse-dial the following numbers	P,p
Transfer to another extension (0.5 seconds on hook, 0.5 seconds off hook, sometimes called <i>hook flash</i>)	1
Wait for <i>quiet answer</i> (typically indicated by 6.5 seconds of silence, followed by a ringing tone)	@
Use special controls on some systems (tone only)	ABCD or * or #

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You must select a dialing location prior to initiating a call from Pocket PC 2002 devices.

Use Modem Connections

To manually initiate a modem connection, tap Start | Settings | Connections tab | Connections, and then tap Connect for either the Internet or Work connections. The Network Log On dialog box shown at right appears.

Complete the User Name and Password fields, complete the Domain field if you are connecting to a Windows NT domain, and then tap OK.

When you tap Connect, the default Internet or Work modem connection dials. To dial a specific modem connection, tap Modify for either the Internet or Work settings, tap-and-hold the modem connection, and tap Connect on the pop-up list.

🕼 Lagon to Network Servi 📢 8:58
Network Log On
Resource: Home
User name:
Password:
Domain:
Save password
OK Cancel
$\begin{array}{c} 123 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 0 \ - \ = \ \left(\begin{array}{c} \\ \\ \\ \end{array} \right) \\ \hline Tab \ q \ w \ e \ r \ t \ y \ u \ i \ o \ p \ [\] \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \begin{array}{c} CAP \ a \ s \ d \ f \ 9 \ h \ j \ k \ l \ ; \ ' \ \end{array} \\ \hline \begin{array}{c} \\ \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \\ \hline \end{array} \\ \hline \end{array}$
Shift z x c y b n m , . / ↔ Ctl áŭ ` \ ↓ ↑ ← →
Tools

379

After you tap OK, the modem dials the telephone number of the ISP and establishes a connection. If you configured the connection to display a terminal window after a connection is established, the window will display, prompting you to enter a username and password. When the connection completes, you can then use programs such as Inbox or Internet Explorer to connect to the Internet.

Connect Using Wireless Modems

With a wireless modem, you can connect a Pocket PC to the Internet anywhere that the radio of the wireless modem can receive a signal. Wireless modems provide the convenience of not having to locate phone jacks and string phone cable to connect to the Internet; but, currently, they provide slower connections to the Internet than wired modems.

There are two types of wireless modems that work with Pocket PCs. Some mobile phones have built-in modems, and these phones are usually classified as *data capable*. To use the modems in these mobile phones with a Pocket PC, you connect the Pocket PC to the phone by using the infrared port, a serial cable, a CompactFlash card, or Bluetooth. You'll find a list of mobile phones that work with Pocket PCs at http://www.cewindows.net/peripherals/cellular.htm.



Some Pocket PCs have an integrated wireless modem that you can use for voice and data communications. To connect these types of Pocket PCs to the Internet, create modem connections, as described in the preceding section, and select the built-in modem.

The second type of wireless modem is PC Cards that connect to Pocket PCs with PC Card expansion sleeves (such as the Compaq PC Card Expansion Pack) or a PC Card slot. Pocket Spider from Enfora is the only Type I CompactFlash wireless modem. PC Card modems that work with Pocket PCs include the Sierra Wireless Aircard 300 and Aircard 510, and the Novatel Wireless Merlin, Merlin Platinum, Merlin Platinum Special Edition, and Merlin G100.

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TIP

NOTE

Connect to the Internet with Mobile Phones

Before you can use a mobile-phone modem to connect to the Internet, you need to find out whether or not your mobile-phone service provider supports data communications. Normally, you'll need to sign up for an additional service for data communications that may or may not use the minutes that are part of your regular plan. Contact your mobile-phone service provider and ask whether you can connect to the Internet using their service.

Mobile-phone networks in the United States use a variety of technologies. The maximum data rate for services that use the Global System for Mobile Communications (GSM), such as VoiceStream Wireless, is 9,600 bits per second (bps). Services, such as Verizon Wireless and Sprint PCS, that use Code Division Multiple Access (CDMA) have a maximum data rate of 14,400 bps. CDMA is the most common technology in the United States, and GSM is the standard for mobile communication in Europe.

The data speeds of GSM and CDMA are not optimal for browsing the Web. Fortunately, mobile-phone service providers are upgrading their networks to provide faster data communication. These upgrades are frequently referred to as second-generation (2.5G) and third-generation (3G) upgrades. The current GSM and CDMA technologies are referred to as 2G because they are upgrades of the original analog cellular technology.

The most common 2.5G implementation in the United States is General Packet Radio Service (GPRS), which is being used by Voice Stream Wireless, AT&T Wireless, and Cingular Wireless. These companies began offering GPRS service in limited cities during 2001, and plan to complete implementations in all U.S. cities by the end of 2002. In Europe, there are implementations of GPRS and High-Speed Circuit Switched Data (HSCSD). GPRS and HSCSD will provide data speeds of 19.2 kilobits per second (Kbps) to 115 Kbps.

VoiceStream Wireless markets their GPRS service as iStream and they provide a variety of rate plans for Smartphones, PDAs, and laptops. The PDA plan is targeted specifically at the Compaq iPAQ Pocket PC.

Third-generation upgrades are not planned until some time after 2002. Currently, 3G upgrades are expected to provide data speeds of 38.4 Kbps to 2 Megabits per second (Mbps). The higher speeds promised by 3G are needed to support video transmission.

The method that you use to connect your phone to a Pocket PC will depend on the capabilities of the phone. If the phone has an infrared port, you create a modem connection that uses the Generic IrDA modem and align the infrared ports. Infrared is nice because it is available with all Pocket PCs; but because infrared ports must be lined up, it can be difficult to use.

Alternatives to infrared connections are serial cables; Digital Phone card from Socket Communications, Inc.; and Bluetooth. Most mobile phones have unique ports that require special serial cables, which you can usually purchase from the phone manufacturer. To connect the cable to a Pocket PC, you'll need a null modem adapter and a serial ActiveSync cable for the Pocket PC. Supplynet (http://www.thesupplynet.com) sells cables that connect some mobile phones directly with the Compaq iPAQ Pocket PC, eliminating the need for a null modem adapter or a serial ActiveSync cable.

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TIP

The Digital Phone card is a Type I CompactFlash card with a cable that connects directly to many popular mobile phones. The card includes a driver that you install on the Pocket PC, which you select when creating a modem connection. You'll find more information about these cards at http://www.digitalphonecard.com.

Bluetooth is a specification for short-range radio links between mobile PCs, mobile telephones, and other portable devices. Its purpose is to eliminate the need to carry and use cables to connect devices, which can multiply like rabbits when you use a lot of different peripherals. Bluetooth provides a function similar to the infrared ports on Pocket PCs, but is better because it does not require a line of sight between devices, and it promises to be supported by a wider range of devices.

To use Bluetooth to connect to the Internet, you need a mobile phone that has a Bluetooth radio and the phone must be able to make connections to the Internet. Examples of phones that support Bluetooth are the Ericsson T68, T39, and R520 phones. The Compaq iPAQ 3870 is the first Pocket PC to have a built-in Bluetooth radio. Socket Communications, Inc., and Anycom sell Type I CompactFlash cards that provide Bluetooth capability to all other Pocket PCs. The cards come with drivers that provide a Bluetooth modem option when creating modem connections.

You can also use Bluetooth to connect Pocket PCs to printers and personal computers. However, ActiveSync 3.5 does not support Bluetooth, so Microsoft will have to upgrade ActiveSync before you can synchronize using Bluetooth.

Connect to the Internet with Wireless PC Card Modems

TIP

While mobile-phone modems work with existing mobile-phone service plans, most wireless PC card modems can only be used with wireless Internet service providers (WISPs). Therefore, to use these cards to connect to the Internet, you'll have to pay additional fees for the wireless Internet service.

The one exception is the Sierra Wireless AirCard 510, which is a CDMA PC Card modem that only works with the Sprint PCS network. The AirCard 510 provides data rates up to 14.4 Kbps. You can find more information about this card at http://www.sprintpcs.com.

There has been a considerable amount of change in the WISP market of the Unites States during 2001. Two providers, Metricom, Inc., (with Ricochet Wireless) and OmniSky, have gone out of business and had their assets bought by other companies. The remaining nationwide service providers are GoAmerica (http://www.goamerica.net) and Verizon. Compaq resells the GoAmerica service as iPAQnet.

Data services from GoAmerica and Verizon use Cellular Digital Packet Data (CDPD), which has a maximum speed of 19.2 Kbps. Sierra Wireless and Novatel Wireless sell PC Card CDPD modems that work with service from GoAmerica and Verizon. Pocket Spider CompactFlash CDPD modem also works with GoAmerica and Verizon. The cards come with drivers that make them work like ordinary modems on Pocket PCs

After you install the drivers for CDPD PC Card modems on a Pocket PC, you must configure the driver so that the card works with the network of the service provider. The configuration usually involves entering IP addresses that are provided when you buy the card. You also need to create a modem connection in Connection Manager that uses the CDPD PC Card modem, but you don't enter a complete phone number. Instead, the modem connection turns on the radio of the card, which automatically connects to the network using the addresses you enter in the driver's configuration.

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Connect Using ActiveSync Desktop Pass Through

Desktop Pass Through is new with ActiveSync 3.5 and it provides network connection sharing between desktop computers and Pocket PC 2002 devices. By using Desktop Pass Through, you can access the Internet or LANs from Pocket PCs while they are connected to desktops using serial, infrared, or USB connections.

NOTE

Desktop Pass Through is not available for Pocket PC 2000.

Desktop Pass Through is available by default for all Pocket PC 2002 devices. Once you connect the Pocket PC to the desktop, you can simply use Internet Explorer or Inbox to browse web sites or retrieve e-mail. Desktop Pass Through is always available, but you can control what network the Pocket PC connects to from within ActiveSync. Tap Tools | Options, and then tap the Rules tab to display the following screen:

Options	x
Sync Options Sync Mode Rules	Surger Service and Street
Conflict Resolution	A CONTRACTOR OF THE OWNER
If there is a conflict (an item the mobile device and desk	has been changed on both top computer or server);
Desktop: Leave the item	a untesolved
	Den seconde indusedan
File Conversion	
	ed when they are copied, moved, is computer and your mobile
	Conversion Settings
Pass Through	The second secon
To use pass through, this co	omputer must be connected.
Connection: The Internet	3
🔽 Open ActiveSync when	my mobile device connects.
	OK Cancel

Internet connectivity is provided when the Pass Through drop-down field (at the bottom of the screen) shows The Internet. Change the drop-down field to Work to enable the Pocket PC to use Pass Through to connect to LANs.

NOTE

Terminal Server Client, File Explorer network access, and VPN do not work with ActiveSync Desktop Pass Through.

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How to ... Access the Internet Using Desktop Connections with Pocket PC 2000

To access the Internet from a Pocket PC 2000 device using a serial connection, you must install proxy server software on the PC and configure the programs on the device to use the server. You can install one of several proxy server programs, such as WinGate from Deerfield. Foliage Software Systems provides Version 2.1d of WinGate, which includes a free one-user license that you can download from http://www.foliage.com/ce/ibrowser/indexnew.html. A newer version of WinGate is available for purchase from http://wingate.deerfield.com.

Connect to Local Area Networks

Personal-computer industry analysts have been keeping track of the number of homes that have personal computers, and now that analysis is shifting from a count of homes to a count of how many per home. While the kids use one PC upstairs, Dad may use another in the living room, at the same time Mom uses hers in the basement office. In many cases, these multiple home computers are being networked together to share resources such as printers and Internet connections.

In fact, sharing a single high-speed Internet connection may become the number-one reason for installing a local area network (LAN) in a home. The setup works something like this: You subscribe to a broadband service provider, which installs the cable or DSL data service in the home. To use the service with one PC, you install an Ethernet NIC in the PC, and plug a cable into the card and either a cable or a DSL modem.

You can also purchase DSL cards for PCs that eliminate the need for installing an Ethernet NIC.

Sharing a high-speed connection with other PCs on a LAN requires a cable modem or DSL router, which is sometimes called a *residential gateway*. Several different manufacturers sell these devices, and I personally use the Linksys EtherFast Cable/DSL router. You'll find information about the Linksys router at http://www.linksys.com. Practically Networked provides a very complete guide to many of the routers that are available, at http://www.practicallynetworked.com/ pg/router_guide_index.asp.

To share a high-speed connection using a router, you connect the Ethernet cable from the cable or DSL modem to the router. Most routers have several ports for connecting PCs, and each connected PC can use the high-speed Internet connection at the same time. You can expand the number of ports available to connect PCs by running an Ethernet cable from the router to a hub.

Personal computers can also share high-speed connections by adding a second Ethernet NIC to the PC and installing software on the PC designated for sharing Internet connections. A cable runs from the second Ethernet NIC to an Ethernet hub to connect the PC to the LAN; the other PCs on the LAN are configured to use the Internet connection—sharing software on the host PC for their Internet access, rather than using a modem.

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TIP

Any device that connects to the LAN can access the Internet using the shared high-speed connection, including your Pocket PC. The following section explains how to use network adapters with your Pocket PC to connect to LANs and to the Internet.

Select a Network Adapter

Several vendors manufacture Ethernet network interface adapters. You can buy wired Ethernet adapters, which usually come in speeds of 10 Mbps or 100 Mbps, or wireless Ethernet adapters. Wireless Ethernet adapters support one of two wireless communication standards: 802.11b or HomeRF. There are several factors to take into consideration when deciding which type of card to buy.

The first decision that you need to make is whether or not you want to buy a wired or wireless Ethernet adapter. To buy a wired Ethernet adapter, you'll need to know the network speed and the type of network cabling that is being used. You can buy adapters that only support 10 Mbps or 100 Mbps, and you can buy adapters that support both speeds. However, if the network speed is only 10 Mbps, you may want to buy a 10 Mbps adapter because they are cheaper. The most common network cable is Category 5 (CAT5) Unshielded Twisted-Pair (UTP), which has a RJ-45 connector. Most Ethernet adapters work with CAT5 UTP.

How to ... Use Wireless Ethernet to Connect to Home Networks

Wireless networking is becoming a popular way to connect computers to home networks where it is difficult to install network cable. There are two ways that you can use wireless Ethernet adapters to connect a Pocket PC to a home network. One way is to use access points in what is usually referred to as *infrastructure mode*. The second way is to create a point-to-point connection between two wireless Ethernet adapters in what is called *ad hoc mode*.

Access points support multiple wireless Ethernet adapters and can be easier to set up than point-to-point connections. You connect an access point to an existing LAN by running a network cable from the access point to an Ethernet hub. This connection allows computers connected to the network with cables to communicate with computers connected to the network with wireless Ethernet adapters. If a cable or DSL modem is connected to the hub, you can access the Internet using the wireless Ethernet adapter.

Wireless Ethernet adapters cost less than access points; so if you only want to connect a Pocket PC to one computer, a point-to-point connection may be desirable. If the computer is connected to a wired network and supports network-connection sharing, the Pocket PC can access the wired network. The downside of point-to-point connections is that when a wireless Ethernet adapter is configured for ad hoc mode, it cannot communicate with access points or other adapters.

Facebook's Exhibit No. Ex. 1112 0161 Snap Inc. Ex. 1112 Page 0161 Wireless Ethernet adapters have radios that communicate with access points or other wireless adapters. The type of adapter that you need to buy is dictated by the standard used by the access point or wireless adapter that you want to communicate with. If the access point or adapter uses 802.11b, then you must buy an 802.11b card, or likewise for HomeRF. 802.11b is the most popular wireless Ethernet standard because it provides faster speeds.

After you determine whether you need a wired or wireless Ethernet adapter, the next decision is which type of card. You can buy both types of adapters as PC Cards or CompactFlash cards, so you can choose a card based on the type of slot in your Pocket PC. Because CompactFlash cards are smaller and use less battery power, they tend to be the most popular adapters for Pocket PCs.

TIP

You can also use CompactFlash Ethernet adapters in laptop computers that only have PC Card slots by inserting the CompactFlash card into a PC Card adapter.

Finally, when buying an Ethernet adapter to use in a Pocket PC, you need to consider whether or not there is a Pocket PC driver that works with the adapter. The card will not work without a driver. Wireless Ethernet adapters require specific Pocket PC drivers, but some wired Ethernet adapters will work with the built-in NE2000 Compatible Ethernet driver that is available on all Pocket PCs. Table 19-3 provides addresses to web sites that list Pocket PC-compatible Ethernet adapters.

Configure Network Interface Adapters

If you purchase a network adapter that has a Pocket PC driver, you must install the driver on your device by following the manufacturer instructions. To see the network drivers installed on a Pocket PC, tap Start | Settings, tap the Connections tab, and then tap Network Adapters. The installed network adapter drivers are listed on the screen shown at right.

There can be any number of adapter drivers installed on a Pocket PC. Most Pocket PCs include at least the NE2000 Compatible Ethernet Driver, which is a generic driver that can work with any NE2000-compatible card. Beyond that, each Pocket PC vendor may include any number of additional drivers on their device to support a variety of different types of network



Type of Ethernet Adapter	Websites
Wired PC Card	http://www.cewindows.net/peripherals/pccardethernet.htm
Wired CompactFlash Card	http://www.cewindows.net/peripherals/cfethernet.htm
Wireless PC Card	http://www.cewindows.net/peripherals/pccardwirelesslan.htm
Wireless CompactFlash Card	http://www.cewindows.net/peripherals/cfwirelesslan.htm

ABLE 19-3 Websites That List Pocket PC Ethernet Adapters

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cards. The configuration screens and process is the same for every driver type, so the following instructions are the same for every brand of network adapter.

To use a network adapter, you need to configure the properties of the driver so that they work in your network environment. To open the Driver Settings dialog box, select the driver and tap Properties. The image at right shows the Settings dialog box for the NE2000 Compatible Ethernet Driver.

The settings that you configure in the TCP/IP and Name Servers tabs are specific to your network. Many residential gateways and cable or DSL routers automatically assign IP addresses; if that is the case for your network, you can select Use Server-Assigned IP Address and tap OK. You will get a message saying that the new settings will take effect the next time you insert the adapter into the Pocket PC.

ned IF ddres:		ress
ddres	s	
-	1	-
	121	<u>.</u>
ers		100
	ers	ers

DNS:	is ena	bled o	on this ad	apter.
		'	1	
Alt DNS:	+		1	
WINS:	1		4	
Alt WINS:		14		
P Address Nam		-		

If you need to use a specific IP address with the adapter,

select Use Specific IP address, and complete the IP Address, Subnet Mask, and Default Gateway fields. You may also need to tap the Name Servers tab and complete the DNS and WINS fields, as shown in the image on the left.

Configure Wireless Ethernet Adapters

The network adapter settings are the same for wired and wireless Ethernet adapters, but wireless adapters have additional settings for the wireless portion of the network. The process for configuring these settings will be different for each brand of wireless Ethernet adapter because they use different drivers. Consult the user manual of the adapter for specific instructions on how to configure its driver. The items that you must configure

for all wireless Ethernet adapters are described in Table 19-4.

Some brands of wireless Ethernet adapters will have additional settings only found on that adapter. An example of such a setting is a *power-saving mode*, which specifies how power is supplied to the adapter to save battery strength. Read the user manual of your adapter to determine how to change any settings that are unique to the adapter.

Use Network Adapters

After you configure the adapter driver for your network settings, you can insert the card into the Pocket PC CompactFlash slot. You'll need to connect an Ethernet cable to the card and the high-speed router, or an Ethernet hub. Many cards have indicator lights that show whether a connection is available, and most routers and hubs have similar indicators to show connections.

If the network adapter driver is configured correctly for the network, you'll be able to use Internet Explorer, Inbox, MSN Messenger, Terminal Server Client, and File Explorer to access

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CHAPTER 19: Connect to the Internet with or without Wires

Item	Description
Extended Service Set Identifier (ESSID)	The ESSID has up to 32 characters and provides a unique identifier for the wireless network. The ESSID assigned to the adapter must be the same as assigned to all access points or other wireless adapters on the network.
Operating Mode	If the wireless adapter communicates with an access point, then it must be set to an infrastructure operating mode. If the wireless adapter communicates with another wireless adapter, then the operating mode must be set to ad hoc. If you use an ad hoc operating mode, then you'll need to specify a channel number, which must be the same for both wireless adapters.
Wireless Equivalency Privacy (WEP) or Encryption	WEP is a special form of encryption designed for wireless Ethernet adapters. There are different versions of WEP depending on the size of the key that the encryption uses. Most adapters today support 40-bit and 128-bit encryption. Some adapter drivers will use ASCII characters for keys, while others will only use hex characters. The WEP key that you
	enter for the adapter must match the key used by the access point or wireless adapter that the card communicates with.

resources on the Internet or the LAN. You can also use ActiveSync to synchronize with desktop computers. You may try to use one of these applications and see the

dialog box shown on the right.

This message appears when the Connection Manager is not configured to use the network card in the manner in which you are

		eded, automatic ernet using the		
[Internet	Settings	1.5	٠
		Modify	Connec	t
		eded, automatic using these settl		ct
[Work Se	attings		-
		Modify	Connec	t
1	My netwo	rk card connect	sto;	
1	Work	~~~~		-

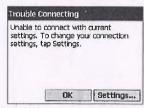
trying to use it. Tap Settings to open the Connection Manager and change the network card setting,

as shown in the image on the left.

To synchronize with desktop computers or access network shares using File Explorer, you must specify that the network card connects to Work in Connection Manager. To browse web pages or retrieve e-mail on the Internet, you must specify that the network card connects to the Internet.

* Specify here whether the network card connects to the Internet or Work.

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How to ... Troubleshoot Network Connections

One of the most important network troubleshooting tools for your Pocket PC is a free program called vxUtil from Cambridge Computer Corporation. You can download this program from http://www.cam.com/vxutil.html. If you have problems connecting to a network, use the Info utility in vxUtil to review the IP address settings of the Pocket PC and make sure they are correct. Use the Ping utility to test network communication between the Pocket PC and a destination computer.

Wrapping Up

Pocket PCs are capable of connecting to the Internet and LANs in a variety of ways. You use Connection Manager to configure all modem connections, and it will automatically connect to the appropriate network based on the type of information you enter. Connection Manager also specifies whether network cards connect to the Internet or Work networks.

Wireless modems and network adapters are becoming the hottest accessories for Pocket PCs. With these accessories, you can use your Pocket PC to connect to the Internet from any location at any time.

Once you get connected to the Internet, you can send and receive e-mail using Inbox on the Pocket PC. In the next chapter, you will learn how to use Inbox to send and receive e-mail using Internet e-mail servers.

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Send and Receive Instant Messages



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How To...

- Send and receive instant messages using MSN Messenger
- Send and receive instant messages using Yahoo Messenger
- Send and receive instant messages using AOL Instant Messenger
- Send and receive instant messages using ICQ

Instant messaging is the CB radio of the Internet. If you are too young to remember, CB (citizens band) radios provide two-way voice communication, and they were very popular in the mid '70s. The pop song "Convoy" by C.W. McCall shows how CB radios were popular among truck drivers at the time.

CB radios were popular because you could use them to communicate with other people who had the same radios whether you were at home, in a truck, or walking around. The radios use airwave frequencies that are unlicensed; so, unlike phone calls, you did not have to pay for the conversations. Today, CB radios have been replaced by mobile phones; however, the spirit of free, two-way conversation lives on in the form of instant messaging on the Internet.

In 1996, a small Israeli company called Mirabilis Ltd. created ICQ, which stands for "I Seek You". It was the first of what is now called *instant messaging software*. With an instant messaging program you can see whether your friends are connected to the Internet; and if so, you can send them text messages. Instant messaging is faster than e-mail, because you know the recipient is online to receive your message.

All of the popular instant messaging programs are available for free; so, like CB radios, you can use them to communicate with people across great distances for free. As CB radios provided mobile communication, so do Pocket PCs, which run all the popular instant messaging programs; and they can connect to the Internet nearly anywhere. In this chapter, you'll learn how to use instant messaging programs on Pocket PCs.

Send and Receive Instant Messages Using MSN Messenger

The Microsoft Network (MSN) Instant Messenger only runs on Pocket PC 2002. It is installed in ROM on most Pocket PC 2002 devices, or it can be installed in RAM on Pocket PCs upgraded to Pocket PC 2002 when it becomes available for download at http://www.pocketpc.com. As of this writing, Microsoft plans to provide a version for download during 2002.

TIP

If you have a Pocket PC 2000 device, you can send instant messages using the MSN Messenger Service by using MSN Messenger Force by Ruksun. You will find this program at http://www.ruksun.com/mobile_computing/windowsce/index.html.

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CHAPTER 21: Send and Receive Instant Messages

Before you can use MSN Messenger, you'll need to create a Hotmail or Passport account. Hotmail is a free web-based e-mail system; you can create a new account at http://www.hotmail.com. If you don't want to use the Hotmail e-mail service, you can create a Passport account at http://www.passport.com.

After you create either a Hotmail or Passport account, configure MSN Messenger to use the account by tapping Tools | Options and then tapping the Accounts tab, as shown in the image on the right.

Select the Enable Passport Account check box, even if you are using a Hotmail account. In the Sign In Name field, enter the full e-mail address, such as **johndoe@hotmail.com**, and enter the password in the Password field. Tap OK to close the dialog box and save the account information.

Accoun	ts				
🗸 Enal	ole Pass	port account			
Sign in n	ame;	frank_mcphe	erson@hoi	trn	
Passwor	d: [*****			
Sign in n		ange account			
Passwor	d:				
Sign in (using th	nis account fi	irst		
Pass	port acc	ount			
() Exch	nange ac	count			
General	Privacy	Accounts	All halks	122	

Microsoft Exchange Server provides an Exchange Instant Messaging service that supports instant messages using the MSN Messenger client. Some corporations use this service to provide instant messaging within their private network. Pocket PCs can also work with Exchange Instant Messaging if you select the Enable Exchange Account check box and provide the required login information.

Send and Receive Messages

To use MSN Messenger, you must connect your Pocket PC to the Internet. MSN Messenger automatically uses the default Internet modem connection that you set up in Connection Manager, or a network card if one is available. Chapter 19 provides the instructions for creating modem connections in Connection Manager.

TIP

NOTE

MSN Messenger also works with ActiveSync Desktop Pass Through, which is described in Chapter 19.

When you start MSN Messenger, you'll see the screen shown on the right. Tap the middle of the screen to sign in to the MSN Messenger server. Another way

.9	0
Tap here to sign in	
Tools Chats	2-
	Messenger

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to sign in is to tap Tools | Sign In. When you do, you'll see the sign-in screen shown at right.

If you configured MSN Messenger with a Hotmail or Passport account, that information will already be on the screen, or you can enter it on the screen and tap Save Password to save the account and password. Tap Sign In to connect to the server.

TIP

To sign out from MSN Messenger, tap Tools | Sign Out.

All of your MSN Messenger contacts are stored on the Messenger server, and you will see all of your contacts that are Online or Not Online in the main program window, as shown in the following:



4€ 8:30 37 MSN Messenger Frank McPherson (Online) Online A Derek Brown 🔧 Jason Dunn This contact is away Jeff Kirvin (Away) These contacts from his desk. Judie are online. Neil Faulkner Steven Perry Not Online Andrew Farkas Andrew Farkas Andy Sjostrom These contacts Arne Hess (DSL) are not online. Bill Boonn 8 Carrie 四 ~ Tools Chats

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To send a message to a contact that is online, tap the contact name to open the screen on the right. Enter a message and tap Send. The message that you enter moves to the top of the screen, which is where you will also see any replies from the person you are chatting with.

TIP

You can also tap-and-hold on the contact name and then tap Send An Instant Message on the pop-up list. To send an e-mail message, tap-and-hold on the contact name and tap Send Mail on the pop-up list. You can send e-mail to online and offline contacts.

You can chat with more than one person by using the Chat menu to switch between people. However, each chat is in a separate window and you cannot participate in conference chats. If you receive a message from a person with whom you are not chatting with, or for whom you don' have the chat window open, their message will appear in a Notification bubble, such as shown in the image on the right.

The Notification bubble displays for about 30 seconds, and if it closes before being acknowledged, the indicator shown here appears at the top of the Pocket PC screen:

MSN Messenger 🛛 🚊 📢 1:41 🗉	Ø\$
a few screen shots of this conversation. Andy Sjostrom says:	-
No problem. Want to start over? Frank McPherson says: Don't need to, I've got some shots and the notification. Thanks,	-
Andy Sjastrom says: ak. cool! Good luck with your book! :-)	-

Chat notification indicator

🕼 MSN Messenger 🛛 🙎 📢	1:41 🚳
a few screen shots of this conversati Andy Sjostrom says:	ion.
Frank McPherson says:	
notification. Thanks. Andy Sjostrom says:	nd the
ok. cool! Good luck with your book! :-	-) 🔻
	Send
Last message: 12/1/01 at 1:39 P	M.
ABC abc	123 🔶
	↓ spc
	?@
Tools Chats My Text	2-
🖅 MSN Messenger 🛛 🙎 ┥	÷ 1:34 00
You are chathloo with	
MSN Messenger: New messa	ige 💦
Andy Sjostrom says: hi frank!	
Chat	Ignore
	a few screen shots of this conversati Andy Sjostrom says: No problem. Want to start over? Frank McPherson says: Don't need to. Tve got some shots at notification. Thanks. Andy Sjostrom says: ok. cool! Good luck with your book! : Last message: 12/1/01 at 1:39 P ABC aDC ABC aDC Tools Chats My Text A MSN Messenger MSN Messenger: New messe Andy Sjostrom says: hi frank!

Verified) says: I am at my home in Michigan.

The Notification bubble and indicator will also appear if you have another program open on your Pocket PC while MSN Messenger is running. When you tap Chat on the Notification bubble while another program is running, the Pocket PC switches programs so that you can enter a response.

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TIP

If you do not want to chat, tap Ignore on the Notification bubble. To change your status to indicate that you do not want to chat, tap Tools | My Status.

Writing long messages with the stylus can be tedious, so MSN Messenger provides a way to send predefined messages; these are 4listed in the My Text menu, as shown in the image to the right.

Tap the text that you want inserted in the message, and then either add more text or tap Send.

There is room for ten entries in the My Text menu, and you can change what appears in the menu by tapping Tools | Edit My Text Messages, to open the screen shown next.

MSN Messenger -({ 7:45	4
My Text Messages	
Tap a message, then edit below.	
Yes.	-
No.	П
I can't talk right now.	=
I'll be right there.	
I'm running late. Where are you?	П
Hi	-
Yes.	Ch
123 1 2 3 4 5 6 7 8 9 0 - =	tex
Tabqwertyuiop[1
CAP a s d f g h j k l ;	<u>.</u>
Shift z x c v b n m , . / Ctláŭ ` \	1
	<u>a</u>

hange the

Yes.	
No.	
I can't talk right n	ow.
I'll be right there.	
I'm running late.	
Where are you?	
Hi.	
Goodbye.	
Call me later.	
I love my Pocket P	C!
1y Text	

To change text, first tap the item you want to change in the scroll list at the top of the screen; then highlight the text in the field under the scroll list and enter the new text. When you tap a different text item or tap OK, the text you enter is saved.

NOTE

MSN Messenger and Inbox both have My Text menus that contain the same items. When you change an item in one program, it also changes for the other program.

Manage Contacts

MSN Messenger Contacts are not the same as Pocket Outlook Contacts; MSN Messenger Contacts are stored on the MSN Messenger server. Because the contacts are on the server, the same contacts appear in versions of MSN Messenger running on desktop PCs or Pocket PCs. Before you can add a contact, you must be online with the MSN Messenger server.

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CHAPTER 21: Send and Receive Instant Messages

To add a contact using a Pocket PC, tap Tools | Add A Contact, and enter the contact's MSN Messenger sign-in name in the Sign-in Name field on the screen on the right.

Tap Next, and if the sign-in name is found on the server, you'll see a message indicating that the contact has been added to your list. If the sign-in name is not found, you'll see a message saying that the operation has failed, and you'll return to the Add a Contact screen.

To delete a contact, tap-and-hold on its entry on the MSN Messenger screen, and tap Delete Contact on the pop-up list. A message box appears to confirm whether or not you do want to delete the contact. Tap Yes to delete or No to cancel.

If you want to prevent a contact from ever sending a message to you, tap-and-hold its entry on the MSN Messenger screen and tap Block on the pop-up list. When you block a contact, you'll always appear offline to that person. Blocked contacts have a cross-out indicator on the MSN Messenger screen, as shown below.



	2:19 🛞
Frank McPherson (Online)	1
Online	
💰 Andy Sjostrom (Away)	
💰 Arne Hess (DSL) (Away)	
🙈 Bill Boonn (Away)	
者 Dale Coffing (Away)	
🐼 htdeppc@yahoo.com (E-mail	Address N
🔏 Judie	-
🔏 Julie	
🚮 Neil Faulkner (Away)	
Not Online	
😤 Andrew Farkas	
Andrew Farkas	1
Carrie	
C II	
ools Chats	d .

Tap the contact that you want to block from the My Allow List, and then tap the arrow in the* middle of the screen pointing toward the My Block List. To unblock contacts, tap entries in the My Block List and tap the arrow pointing toward the My Allow List.

To unblock a contact, tap-and-hold on its entry, and tap Unblock on the pop-up list.

Change MSN Messenger Options

If you want to block multiple contacts, the simplest way is to tap Tools | Options, and then tap the Privacy tab, which displays the screen here:

MSN Messenger	- (€ 7:50 🚯
My Allow List	My Block List
All other u Andrew Far Andrew Far Andy Sjostr Arne Hess (Bill Boonn Carrle Craig Craig Craig	
Alert me when I am contact list	added to a Passport
Users who have me in t contact list	heir View
General Privacy Accor	unts
and white site	-

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At the bottom of the Privacy tab there is a check box to alert you when another MSN Messenger user ads you to their Contact list. If you want to receive these notifications, make sure to select the check box. To see who has you in their Contact list, tap View.

To change your name as it appears to other MSN Messenger users, tap Tools | Options and enter the new name in the Name field of the General tab. To change the MSN Messenger sign-in name and password, or to configure MSN Messenger to work with the Exchange Instant Messaging service, tap Tools | Options, and then tap the Accounts tab.

Send and Receive Instant Messages Using Yahoo Messenger

Yahoo Messenger is an instant messaging client for Pocket PCs and desktop computers that works with the Yahoo Messaging service. The program runs on Pocket PC 2000 and 2002 devices, and you can use it to send instant messages with other people that use the Yahoo Messaging service.

Before you can use Yahoo Messenger, you need to create a free Yahoo account. Open http://messenger.yahoo.com on a PC, click the Acct Info link, and then click the Sign Up Now link. Remember your Yahoo User ID and Password because you will need to enter that information on your Pocket PC.

Download and Install Yahoo Messenger

To download a free copy of Yahoo Messenger, open http://messenger.yahoo.com on a PC, click the Windows CE link, and then click the Download For Windows Pocket PC link. The setup program will download to a directory that you specify on the hard disk of the PC. Connect the Pocket PC to the desktop computer, use Windows Explorer to open the folder on the desktop where you downloaded the setup program, and run ymsgr-ppc.exe.

To start Yahoo Messenger, tap Start | Programs | Yahoo Messenger. To sign on to the Yahoo Messenger server, you'll need to enter your Yahoo User ID and Password by tapping Sign In | Change User/Sign In. Enter your Yahoo User ID and Password on the screen and tap Sign In. If you want Yahoo Messenger to remember your User ID and Password, tap the Remember My ID And Password check box. To sign off from the Yahoo Messenger server and exit the program, tap Sign In | Exit.

TIP

If you want to sign in to Yahoo Messenger, but not let other Yahoo Messenger users know that you are connected, tap the Sign In Using Invisible Mode check box on the Sign In screen.

Send and Receive Messages

After you sign in to Yahoo Messenger, you'll see a listing of all your Yahoo friends on the main program window (friends that are online appear in bold on the screen). To send a message to a friend, double-tap a name on the screen, enter the message, and tap Send. Sent messages appear at the top of the screen, which is where you also see messages sent to you.

Facebook's Exhibit No. Ex. 1112 0173 Snap Inc. Ex. 1112 Page 0173 You can exchange messages with more than one friend at a time by using the tabs at the top of the screen to switch between conversations. The Pocket PC version of Yahoo Messenger does not support conferences with multiple users.

When someone sends you an instant message, the program automatically displays the message window. The window automatically displays if you are currently in Yahoo Messenger or another program on your Pocket PC. You will also hear a sound when you receive a message, which you can change or turn off by tapping Edit | Preferences | Sounds.

Yahoo Messenger provides a way to quickly enter text into a message by enabling you to select text from a drop-down list in the message window. However, there is no way for you to edit the text in the list.

Manage Friends

To add a friend to Yahoo Messenger, tap Friends | Add A Friend/Group, enter your friend's Yahoo User ID, and specify the group you want your friend to be listed under. You can also specify how your name will appear in your friend's Yahoo Messenger list, as well as provide a message that will be sent to your friends when they are notified that you added them to your list.

To delete a friend from Yahoo Messenger, tap Friends | Remove A Friend. Enter the Yahoo User ID to be deleted, select the group that contained the User ID, and tap Delete. Tap OK on the confirmation message box that appears, or tap Cancel to cancel the deletion.

If you want to ignore Yahoo Messenger users so that they cannot tell whether you are online or they cannot send you messages, tap Edit | Ignore List. Tap Add and then enter the Yahoo User ID of the person you want to ignore. To remove a person from the list, first select their User ID and then tap Remove. You can also automatically ignore all Yahoo Messenger users that are not in your Friends list by selecting the Ignore If Not On My Friend List check box.

Change Preferences

Yahoo Messenger provides preference settings to specify how you connect to the Internet, what alerts you see, and what sounds you hear. To change the Preference settings, tap Edit | Preferences.

The Connection tab provides a way for you to specify which modem connection to use when you connect to the Internet. If you tap the Auto-Dial check box and select a modem connection, Yahoo Messenger will automatically dial that connection when you sign on to the server. If you use a proxy server to connect to Internet, you can also provide the proxy server information on the Connection tab.

Yahoo provides free e-mail and a calendar, and Yahoo Messenger can notify you when you receive e-mail or when an appointment is due. Yahoo Messenger provides a hyperlink to a textonly My Yahoo page with links to e-mail and calendar, which opens in Pocket Internet Explorer. To turn these alerts on or off, tap the Alerts tab on the Preferences screen and select or clear the check boxes.

Yahoo Messenger can play different sounds when you receive a message, when a friend comes online, or when you get an alert. Specify what you hear on the Sounds tab of the Preferences screen by selecting a sound for each option from drop-down lists on the screen. To turn the sounds off, select None from each drop-down list.

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Send and Receive Instant Messages Using AOL Instant Messenger

The America Online Instant Messenger (AIM) is one of most popular messaging services on the Internet. Fortunately, there is version of this program that runs on Pocket PC 2000 and 2002 devices. Before you can use AIM, you need to create a free screen name. Open http://www.aol.com/aim/aim4wince.html on a PC, click the Register link, and complete the forms. Remember your screen name and password because you will need to enter that information on your Pocket PC.

NOTE

Even though a version of AIM for Pocket PCs is still available, AOL has stopped supporting this program, so AOL may not release new versions of the program in the future.

Download and Install AOL Instant Messenger

To download a free copy of AIM, open http://www.aol.com/aim/aim4wince.html on a PC, and click the Get It Now link. The setup program will download to a directory that you specify on the PC hard disk. Connect the Pocket PC to the desktop computer, use Windows Explorer to open the folder on the desktop where you downloaded the setup program, and run aim.exe.

The installation program adds a shortcut to the Pocket PC Start menu. To start the program, tap Start | AIM. To sign on to AIM, tap Sign On on the Command bar, and then enter your screen name and password on the Sign On screen. To exit from AIM and disconnect from the server, tap File | Exit.

TIP

If you want AIM to automatically log in, tap the Auto-Login check box in the signon window.

Send and Receive Messages

When you start AIM, you'll see a program window with two tabs: one for showing buddies that are online, and one for managing your buddy list. AIM provides four default categories for grouping buddies, and you can create additional categories as well.

To send a message to a buddy, either double-tap the buddy's name on the screen, or single-tap the buddy and then tap Send Message at the bottom of the screen. You'll see the Instant Message screen where you enter messages and receive replies.

AIM does not provide a shortcut for entering text, but it does provide a window for selecting *emoticons*. Emoticons are a clever way of using standard punctuation to express emotion. For example, a smiley face is made with a colon and right parenthesis like :). On desktop computers, AIM displays emoticons as graphics; but while you can select a graphic on a Pocket PC, you will see the punctuation marks in the message area.

When you receive a message from someone that you are not chatting with, AIM flashes a Notification icon at the bottom right of the screen. Tap the icon to open the message window and send a reply.

Facebook's Exhibit No. Ex. 1112 0175 Snap Inc. Ex. 1112 Page 0175 To start a new message session with another buddy from the message window, tap Start A Session. End a message session by tapping End Session. You can be chatting with more than one buddy at a time, but the Pocket PC version of AIM does not support conferences. To switch between conversations, expand the drop-down list at the top right of the screen, and then tap the buddy's name.

Manage Buddies

To add and delete buddies, create buddy groups, and rename buddies, tap the List Setup tab of the Buddy List screen. To add a buddy or group, tap the appropriate buttons and enter the buddy's screen name or a group name.

AIM provides a way for you to rename a buddy in your buddy list, but you need to be careful with this feature. If your buddy does not change their name, you will not be able to send messages to that buddy, nor will you be able to see whether they are online. To rename a buddy, tap Rename Buddy and then enter a new name.

To delete a buddy or a group, first tap the buddy or group name, and then tap Delete.

Change Preferences

AIM provides preference settings for privacy, instant messaging, news headlines, stock quotes, and general settings. To change the preferences, tap Edit | Preferences. The privacy settings enable you to control who can send you a message. The options include Allow All Users, Allow Only Users On Your Buddy List, Block All Users, Allow Only The Users You List, and Block The Users That You List.

On the instant messaging, or IM tab, you specify whether AIM plays a sound when you receive a message, and whether AIM shows an Accept Message dialog box when you receive messages from people not on your buddy list. You can also create a customized message that is automatically sent when you receive a message while you are away from your Pocket PC.

AIM displays general news headlines, business, sports, and entertainment news. You can specify which of these items you want to see by selecting a check box for each on the Preferences News tab. Likewise, the Stocks tab provides check boxes for displaying market indices, and a field for you to enter stock tickers of the companies for which you want to see stock quotes.

The General tab provides a way to remove all the screen names on your buddy list and to reset all the preferences. Be careful using this feature because the process cannot be reversed; AIM will display two confirmation messages to make sure you really want to delete screen names.

Send and Receive Instant Messages Using ICQ

ICQ was released in November 1996 by the Israeli company Mirabilis Ltd., and later sold to AOL in 1998. Despite little advertising or marketing, there are now over 100 million people who use ICQ to send instant messages across the Internet.

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With the success of ICQ, it is not surprising that Pocket PC users have long sought a version of the program for Pocket PCs. If you use ICQ on your desktop, you'll be happy to know that an alpha version of the Pocket PC program is now available.

If you already use ICQ on your desktop PC, you'll want to upgrade the program to version 2001b because it now uploads all your ICQ contacts to a server. Putting your contacts on a server makes it easier to use those same contacts on Pocket PCs or other desktop computers.

If you have never used ICQ, you'll need to first download and install the software for your desktop PC in order to create an ICQ ID, otherwise known as a *Universal Internet Number*. The Pocket PC version of ICQ does not provide a way to create an ID, and there is not a web-based method for registration. To download the software, go to http://www.icq.com and click the Download ICQ link. During the installation process, you'll register yourself with ICQ and receive your ID, which you'll need in order use ICQ on your Pocket PC.

Download and Install ICQ

To download ICQ for the Pocket PC, go to http://www.icq.com and click the PDA/Handhelds link, which you'll find on the right side of the page under the heading ICQ Anywhere. The direct link to the program is http://www.icq.com/pda/pocketpc/alpha/, but this may change in the future.

Download the setup program to the hard disk in your PC, connect your Pocket PC with the desktop, and then run the setup program. The installation program automatically adds an ICQ link to the Pocket PC Start menu, and you start the program by tapping Start | ICO.

When you first start ICQ, you'll see the Sign On screen where you enter your ICQ ID number and password. There are check boxes available to save the password and to auto-login, which bypasses the Sign On screen and connects directly to the ICQ server. To exit ICQ and disconnect from the server, tap File | Exit.

Send and Receive Messages

After ICQ connects to the server, you'll see the main program window. In the middle of the window are all of your ICQ contacts, categorized into different groups. You can double-tap the categories to contract or expand the listing of contact names.

Along the right side of the screen are buttons for performing all of the program functions: send an instant message, send a Short Message Service (SMS) message, display information about a contact, delete a contact, display your information, change preferences, and display stock quotes. SMS is a text messaging service that works with mobile phones, so you can send a text message from your Pocket PC using ICQ to a mobile phone.

To send a message to a contact, either double-tap the contact name on the screen, or tap a contact once and then tap Instant Message. Enter your message and then tap Message. After a message is sent, you'll see it at the top of the screen, which is where you also see messages that the contact sends to you. ICQ also provides an emoticon menu to easily select and send various emoticons in your messages.

When you receive a message from someone that you are not chatting with, ICQ flashes a Notification icon at the bottom right of the screen. Tap the icon to open the message window and send a reply.

Facebook's Exhibit No. Ex. 1112 0177 Snap Inc. Ex. 1112 Page 0177 To close the messaging window and return to your Contact list, either tap Back at the bottom of the screen, or tap the drop-down list at the top left of the screen and then tap Contact List.

Manage Contacts

To add a contact to your Contact list, tap Add/Invite Users at the bottom of the screen. ICQ will search for a contact by first and last name, e-mail address, or ICQ ID. To delete a contact from your Contact list, tap the contact name and then tap Delete.

Change Preferences

ICQ has general preference settings, along with settings for stock quotes and privacy. To change the preferences, tap Edit | Preferences. On the General tab, you specify whether or not you want ICQ to play sounds when receiving messages, whether or not you want to only receive messages from people on your Contact list, and whether or not you want to see a confirmation message when you sign off.

The Stocks tab provides check boxes for selecting stock market indices to display when ICQ retrieves stock information. You can also add and remove the display of a company's stock market ticker in ICQ. You change your ICQ password on the Privacy tab.

Wrapping Up

You can use your Pocket PC to chat with friends, family, and coworkers using the MSN, Yahoo, AOL, and ICQ instant messaging services. All you need is the free software provided by these companies and a connection to the Internet, and you can chat whenever and wherever there is a need. E-mail and instant messaging are two of the popular ways people use the Internet, while everyone browses the Web for information. In the next chapter, you'll learn how you can use Internet Explorer on the Pocket PC to open web sites and download content to read when you are not connected to the Internet.

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