Going global

Mark Whitehorn shows you how to put the worldwide web on your handheld.

A couple of months ago I touched on connecting to the internet using a PDA and covered the basics: namely that you need a PDA, a modem, a phone line (or mobile phone) and an account with an Internet Service Provider (ISP). Now we'll have a look at the process in more detail. *(This will put last month's OPL tutorial on hold for now — sorry about that).*

The underlying mechanism is more or less the same no matter what PDA you are using so the theory part, below, is equally applicable to Psion practitioners, WinCE wanderers and Pilot pilots.

▲ FIG 1 THE CONTROL PANEL

Theory and background

In the days of Windows 3.1, connecting to an ISP was conceptually simple. You ran a program supplied by the ISP on your PC and that operated the modem and dialled in. The ISP's machine ran a piece of software which could communicate with the software running on your machine and everything was hunky-dory — except in practice it was often neither hunky nor dory because it could all be a real pain to set up but at least it was conceptually simple.

Under the more recent versions of Windows, the situation is quite different. Essentially, your PC uses TCP/IP to talk to the machine at the ISP-end of the connection. TCP/IP is the standard protocol which allows machines to communicate with each other on the net. So, when you establish a TCP/IP connection to an ISP, your machine is not simply talking to the ISP machine. It becomes, in a broader sense, connected to the internet.

Your PDA can be attached to the internet via an ISP

Is this distinction important? Yes, because it means, for instance, that if your PC were also running as a web server other machines on the internet would be able to 'see' your machine. In turn this would mean that they could see the web pages which were being supported on your web server without even having to know about your ISP — in practice, ISPs often run firewalls to stop this sort of thing, but you get the idea.

For all this to function correctly your PC needs to be given a number that uniquely identifies it on the internet. Such a number is called an IP (Internet Protocol) address. This number is made up of four values between 0 and 255, separated by dots (for instance, 124.56.78.9).

A specific IP address may be given to you by the ISP when your account is first set up, or it may be dynamically allocated to your machine each time you dial in. This means that every time you connect you may get a different number. But that doesn't usually matter as long as the number you are given isn't being used anywhere else in the world at the same time. As an aside, only (256 x 256 x 256 x 256 =) 4,294,967,296 machines can be connected to the internet simultaneously — a worryingly small number isn't it?

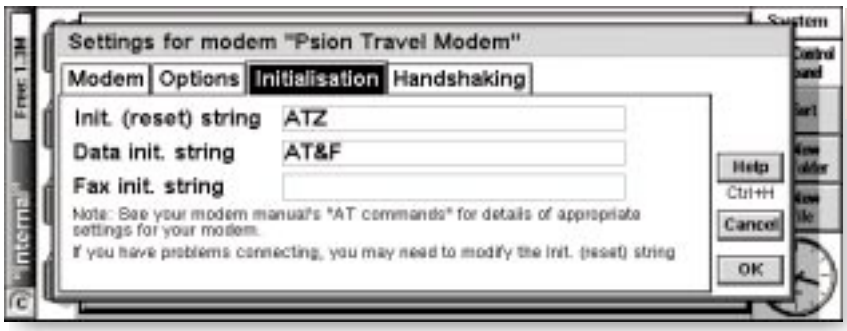
Now don't get me wrong. I'm not suggesting that you want to run a web server on your PC (or even on your PDA!). However, the fact that your PC and the ISP's machine use TCP/IP is important because it means that the communication is actually divorced from the need to run the ISP's software on your PC.

For example, I have a CompuServe account and an IBM laptop running Windows NT. To browse the internet I fire up a program called dialup networking on the PC which has been configured with the phone number to dial, the modem details and so on. This connects to CompuServe for me. Then, without ever having to fire up the CompuServe software on the laptop, I can use NetScape or Internet Explorer to browse the web.

In order to perform this magic my laptop needs to be running a TCP/IP stack. Any software on the laptop which wants to communicate with the internet (be it Internet Explorer or the CompuServe client itself) talks to the TCP/IP stack which in turn talks to the ISP and hence to the internet.

OK, we are nearly through the theory so the only bit left is mail. I can read mail sent to me at CompuServe by using the CompuServe software on my laptop.

▼ FIG 2 CHOOSING A MODEM



◂FIG 3 SETTING THE INITIALISATION STRING FOR THE PSION TRAVEL MODEM

However, if CompuServe also supports SMTP (Simple Mail Transfer Protocol) and POP3, then I can use a program like Microsoft Outlook to send and read mail; again without recourse to the CompuServe software on the laptop.

It is (hopefully) obvious why this is all relevant to PDAs. Although ISPs provide client software to run under Windows they don't provide the same software for PDAs. But given a TCP/IP stack that is written for your particular PDA's operating system, your PDA can become attached to the internet via an ISP. Then, given a browser for the PDA you can surf the web. And, given a mail client and support for SMTP and POP3, you should be able to send and read mail.

Choosing an ISP

It should be clear from all this that you need to choose your ISP with some care. First, you need to make sure that any one you select supports TCP/IP connections, SMTP and POP3. Second, you need to make sure that they are 'sympathetic' to connections coming in from PDAs.

In theory, this shouldn't make any difference and if you are totally confident about your abilities to drive the relevant software on your PDA, this won't matter. In practice, if you think that you might like some support in the initial stages of setting up a connection, then this is vital. Imagine the following conversation:

You: 'Hello, I can't seem to get my connection working'.

Helpline: 'OK, we'll start by checking your settings. Open up "Dialup Networking" and...'

You: 'I'm not using dialup networking.'

Helpline: 'Ah, that's the problem. Go to the Start menu and...'

You: 'No no, wait. I'm not using Windows, I'm using a Psion.'

Helpline: 'What's a Scion?'

At that point, you might as well give up.

I'm not suggesting that all ISPs have an obligation to know about every machine that might be used to connect to their service but it is my painful experience that some are more open to non-Windows machines than others.

The best ISP I have found is Demon Internet. I don't mean to suggest that others know nothing about PDAs, nor that Demon will guarantee to provide helpline people who know about every possible PDA. Nevertheless, of the ISPs I have tried, Demon was undoubtedly the most helpful and sympathetic to the idea that there are, in fact, operating systems other than Windows out there in the big, wide world.

Connecting a Psion 5

OK, let's get down to the practical bit. I'm going to describe the connection of a Psion 5 to Demon Internet. As outlined above, Psion supplies the TCP/IP stack, browser and POP3 mail client that you will need. These are available on the PsiWin 2.2 CD-ROM.

◂FIG 5 TELLING THE PSION ABOUT YOUR ISP; IN THIS CASE, DEMON

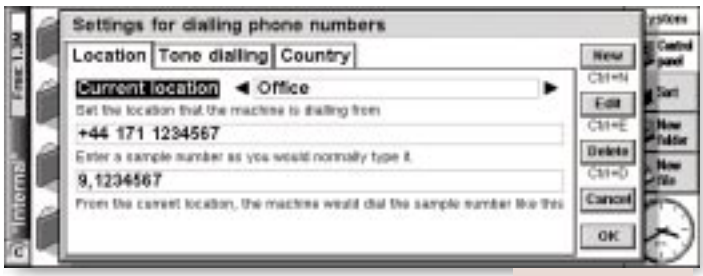
So, from the CD-ROM, you simply follow instructions to install the software and the relevant files should be shunted down to your Psion 5. Once this has been done, you should find that a couple of icons have appeared on the extras bar.

Now, before you can do the exciting bit (connecting to the net) you are going to have to do the boring bit. This means providing the Psion with three types of information:

- about your modem
- about your dialling preferences
- about your ISP.

About your modem

From the system screen, fire up the control panel and select Modems [Fig 1]. If your modem is listed (e.g. Psion Dacom Modem) simply select that. If it isn't, select New and enter the appropriate details [Fig 2] — don't you just love instructions like that? When I read something like that my brain screams 'What *are* these "appropriate" details? I'm reading this article precisely *because* I don't know the details!'



▲FIG 4 DIALLING PREFERENCES

The thing is, there are lots of modems out there and so I cannot cover them all. Anyway, you will need to know such things as:

- the speed at which the modem will run
- the way in which it is connected (IR or serial port)
- initialisation strings.

If you are reading this thinking 'I hate this man! What is an initialisation string?' — well, it is a string of characters sent to the modem to reset it. Typically it might be ATZ or even AT&F [Fig 3].

You should find all of this detail in the documentation which comes with the modem. If not, don't contact Psion or Demon, contact the supplier of the modem. If you are unsure about all this,

▲FIG 6 (TOP) CONFIRMING THAT ALL IS WELL BEFORE DIALLING

FIG 7 (ABOVE) WEB BROWSING

go to New in Modems/Control Panel now and have a look at the data you will need to supply. Write a list and make sure you have it available before you even begin trying to connect — this should help to relieve potential stress!

When you have got all the information and have at last set up your modem, select OK and get back to the Control Panel. Then select Modem again and make sure that your unit is set as the Current Modem — in other words, make sure that your Psion is actually aware that you want to use this particular modem.

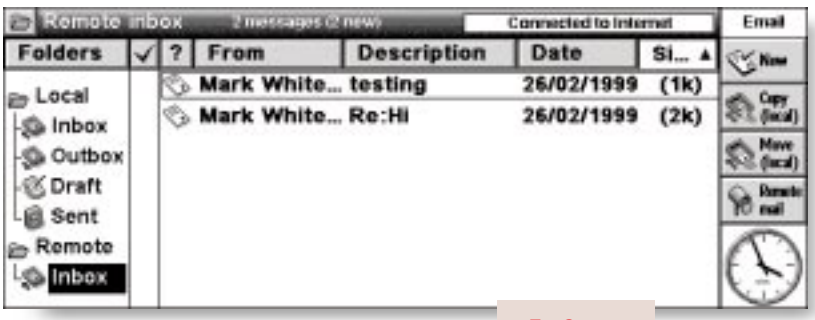
About your dialling preferences

Go to control Panel/Dialing [Fig 1]. Here, you will be able to set your preferences for dialling. Typically, if you dial in from an Office, you need to add a 9 to any number that you need to dial, so as to get an outside line.

If you are a user of a mobile telephone, you typically have to dial numbers more explicitly, so the Psion offers you three distinct default 'locations': Home, Office and Mobile, where you can set up these preferences.

Note that this tab is not asking you for the number you will use to dial your ISP, it is simply asking about how you typically dial numbers from these different locations. So, if you end up with numbers such as 9, 1234567 in the boxes, that's fine [Fig 4].

In the Tone Dialling tab you can usually accept the defaults. But in the Country tab you must set your country, which for most readers will be the United Kingdom. When all is set, choose OK.



▲FIG 8 YOU CAN EMAIL FROM A PSION, TOO

About your ISP

Select Control Panel/Internet. If you are connecting to Demon, Select New. Select Standard Settings and press OK. Note that some of the following entries will have to be replaced with those appropriate to your chosen ISP.

1 In the Service tab [Fig 5] enter a Service name ('Demon' seems appropriate) and choose:

- Connection Type — dialup
- Use 'smart' dialling
- Standard dialup number; +44 845 2120666 (note the 'demonic' choice of dialup number by Demon).

2 In the Account Tab: the Username should be the Domain name that Demon supplies to you, not in fact, the user name they give you. And Password is whatever password you have agreed with Demon.

3 Go to the Addresses tab and deselect 'Get IP address from server'. Enter the IP address you get from Demon. Deselect 'Get DNS address from server'. The Primary DNS address is 158.152.1.58 and the secondary DNS address is 158.152.1.43.

4 In the Login tab select 'Use Login script':

- Port settings — 8 data bits, no parity, 1 stop bit
- Deselect 'display window'

5 Finally, in Advanced, deselect 'Enable PPP extensions' and select 'Allow plain text authentication'. Then press the Done button.

Phew! If you are not used to it, all this may seem like a lot of work but remember that there are lots of modems, countries and ISPs out there. All you have done is to tell your Psion which modem, country and ISP you have decided to inhabit and use. Now, if all is well, you should be able to connect!

To test it out, fire up the browser and type in any web address that you know. I chose www.demon.net but it could be anything and does not have to be the address of your ISP. A dialogue will open up where you can change your location if necessary. See Fig 6.

Once all looks well, click OK and with any luck you will be browsing [Fig 7]. Fire up the email client and you can be messaging as well [Fig 8].

PCW CONTACTS

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