



All mapped out

Mark Whitehorn puts you on the right road to **GPS systems and mapping software to use with your PDA, and ponders PDA/PC connectivity.**

I love my Psion 5, I really do. I have to keep writing that because I keep on complaining about the poor thing in this column, and that makes me feel mean. I suspect the very fact that it approaches perfection makes me rage at the bits that work less than optimally.

My current moan traces its origins back to the Psion 3 — and yes, I still have one and it still works. The PC connectivity software for version 3 was DD (DOS-based and dreadful). The main problem lay in the unreliability of the connection. I would optimistically plug the £70 cable into the Psion and the PC, then fire up the software. After the connection failed I would spend a happy half-hour restarting PC and Psion in different orders until a connection magically appeared. When and how a connection actually appeared seemed to be on a wing and a prayer.

Over the years I have moved up through the Psion range, changed to PsiWin in its various guises, and also changed PC and Windows version multiple times. Despite all these changes, I swear that the same problem still haunts me. As a matter of course, I expect to spend time restarting machines if I want the Psion to talk to the PC. The net result is that I back up the Psion less frequently than is wise.

To their credit, though, Psions are so stable that I have never lost data from a system or application crash. The only time I *have* lost data was a regrettable incident that involved a Psion 3, a concrete floor and gravity. The bits (physical) that I recovered couldn't be reassembled into bytes (data). Ultimately, I talked to the people at Psion, who suggested some fixes:

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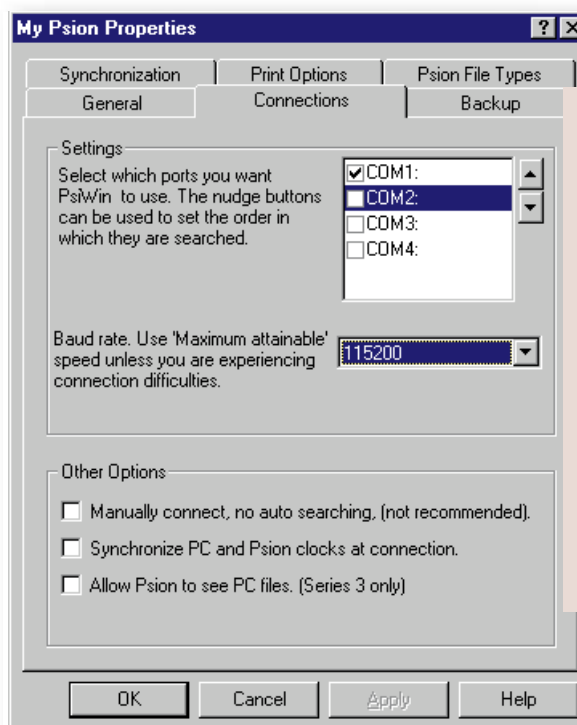
➔ **Disabling** the auto com-port detection and auto-baud-rate facility [Fig 1].

➔ **If you are** also using Windows CE services and getting this problem, remove CE Services and PsiWin. Then re-install PsiWin followed by CE Services. I tried both the above fixes and the problem is still there. They may help you, though, so if the problem sounds familiar, try them. The people at Psion also told me that this is an isolated incident, but although I like and trust them, I have also become sick of watching cables wagging ineffectively in the air [Fig 2]. So, let's do a test: if you

have experienced similar problems, email me and I'll forward the lot to Psion. Remember that problems with earlier versions of PsiWin

are now water under the bridge and that other problems with PsiWin don't count, so the questions are quite specific:

- 1. Do you currently** use PsiWin 2.1 to connect a Psion to a PC?
- 2. Do you experience** the same kind of problems that I have described,



◀Fig 1 IF YOU ARE HAVING INTERMITTENT CONNECTIVITY PROBLEMS, TRY THESE SETTINGS. BUT FIRST, OF COURSE, FIND OUT WHICH COM PORT THE PSION IS USING! IF THIS STILL FAILS, TRY DUMBING DOWN THE BAUD RATE — ONCE AGAIN, MAKE SURE THAT THE PSION IS USING THE SAME SETTING

establishing a connection?

3. Have you tried the above fixes?

If the answer to *all* the

above is an honest "yes", send me a blank email with the header "Me Too!". If the answer to question 2 is "no", then send me a blank email with the header "Well, it works for me!" I'll report back



▲Fig 2 THIS IS HOW THE PROBLEM APPEARS ON SCREEN

either way, and if it turns out that I am a voice crying in the wilderness, I'll apologise and stop bothering Psion's helpline.

GPS on the map

I said I'd have a look at PDAs and GPS (Global Positioning System) in this month's column. Even now, several years after the first implementations became available, I still think that the most exciting thing you can do with a handheld is to have a moving map on it. The PDA supplies the map, a GPS unit supplies your position, and you're in

business. For reasons outlined in the "Garmin" box out (p270), the need to tie the two together has essentially disappeared. But PDAs aren't just about need, they are also about fun. And this, in my book at least, is still serious fun.

A GPS unit looks like a portable phone with a small LCD and a selection of buttons but no number pad. The Americans have put a number of satellites in orbit around the Earth, taking paths which ensure that at least three of them are visible from any point on the Earth's surface, at any time. When you turn on the GPS unit, it takes a little time to acquire signals from the satellites in the sky above it. The unit then interprets these signals and triangulates its own position on the ground to within 50m or so. The accuracy could be much greater, but the Americans cause the signal to wobble in order to confuse the enemy — good thinking, as I for one will feel grateful when a thermonuclear device misses me by just 50m. (Currently, right-thinking people are trying to dissuade the US government from this paranoid view.)



◀ **THIS IS HOW WE'D ALL LIKE MAPPING SOFTWARE TO APPEAR ON PDAs. THIS IS TAKEN FROM PERSONAL NAVIGATOR RUNNING ON A LAPTOP AND IT ALSO PLAYS GPS. THE PROBLEM IS THAT THESE MAPS ARE BITMAPS AND HENCE HUGE — MAPPING THE UK ALONE COMES TO ABOUT 300Mb**

For the technically minded, detailed information about the GPS satellites is available from www.garmin.com. Given this piece of kit (that knows exactly where it's at) and a cable to relay the information to your handheld, all you need is software to interpret the data. This is available in several flavours.

▶ **Mapping software and GIS**

Mapping software has been available for PDAs for years and, with GPS support, for about the last three years. The GPS extras allow a pointer to be placed on the map that will move to track the

movement of the GPS unit. Take a cross-country ramble and it follows your every step. In fact, mapping software is a broad church. There is software that displays maps, there is software that can be used for route planning, and then there are GISes (Geographical Information Systems). GISes are best at "displaying large amounts of pre-supplied geographical data (i.e. where things are) in a useful form," to quote Steve Litchfield, author of Psi-Mapper.

▶ **Software**

The first GPS-aware application I used was Psi-Mapper. It was, and still is, great. Psi-Mapper/GB and Psi-Mapper/France were mentioned briefly in last month's column; see Steve Litchfield's web site at 3lib.ukonline.co.uk for more details.

The most recent version of **Mapper** (version 6) for the Psion 5 will not have GPS support due to problems with OPL/32 and serial-port communications. However, the version of Mapper for the 3a/c does have GPS support. Despite its name, Mapper displays relatively minimal road information (motorways and primary routes) and has no route-planning abilities. Its strength lies in the GIS component. A host of overlays (aircraft crash sites, Little Chefs, etc) are available on Steve's web site. The reason for the huge number of different "overlays", as they are called, is simple. Steve has made it easy (and free) for people to develop their own and then place them in the public domain.

AutoRoute, a PC program that migrated successfully to the Psion 3a/c platform, was another good mapping program. It has better maps than Mapper but no GIS. GPS support was eagerly awaited, but Microsoft acquired the application and immediately announced that there would be no further development of the Psion version

TIPS AND TRICKS

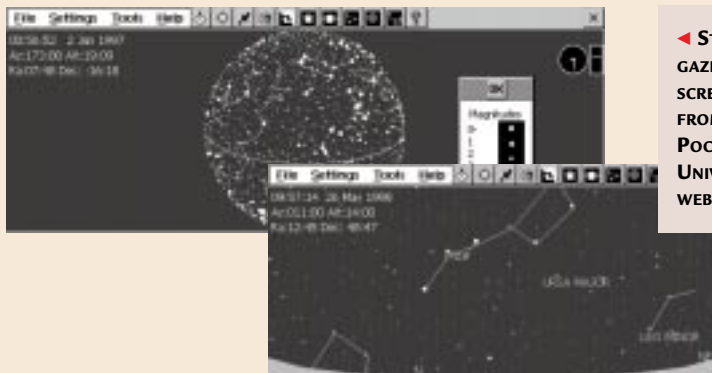
▶ **Check your GPS output**

Reader Steve Litchfield suggests that the best way to check what your GPS is outputting is to install the "Comms" app on your Psion (you'll find it on the C drive). Set the parameters to 4,800 baud, 8 bits, no parity, no handshaking, and see what appears on your screen.

▶ **Pocket Universe**

Another reader, who signs himself as "John", writes: "Ever been out at night and wondered what a particular constellation was called? Or tried to work out where the planets are in the sky? Or maybe even tried to find the Andromeda Galaxy? Well, Pocket Universe is available for Windows CE and there are full details and a demo at www.sticky.net."

I've had a look at this web site and it is impressive. If you're a star-gazer, check it out.



◀ **STAR GAZING: SCREENSHOTS FROM THE POCKET UNIVERSE WEB SITE**



hands on pda's

— so that was that. Happily, Mike Rudin produced the impressive AutoGPS that adds GPS functionality to AutoRoute 1.0. So those of you who bought AutoRoute can actually play GPS. Then there's **Route Planner**, the software formerly known as En Route. This is essentially map and route-planning software for the Psion 5 and does support GPS. Try www.palmtop.nl/enroute5.html for more information. Other applications with GPS support are becoming available; there will be a review of London Access from Dynamic Systems Research info@dynamical.com in next month's column. I'll also cover general mapping software on PDAs other than Psions.

Sync or swim

Occasionally I get spookily-similar emails arriving almost simultaneously. Consider these two as an example. Reader, Dr Simon Rollins, Simon.Rollins@emballage.boxmore.com, writes: "As an owner/user of neither a Psion nor Windows CE, but wishing to part with some hard-earned cash, I have lots of questions but no answers. Perhaps you and my fellow readers will be able to help recollect their own experiences? "My main machine is a Dell portable with French keyboard, software etc. I use Microsoft Outlook 97, also French, as are my diary/contacts list/email system, to-do lists among the Office 97 suite. I am looking for a handheld that can seamlessly integrate with my portable's Outlook 97 and which automatically remains in synchronisation. Which of the systems currently on the market do you consider to be best adapted to my needs, and why?"

Simon's email was closely followed by one from Phil Mayhall, phil@bradworthy.prestel.co.uk, who wrote: "The Psion box's advertising and documentation claims

'synchronisation with Outlook 97 and Organiser 97' — and this was one of the reasons I got the Psion. In general, it works, except, suppose I were a doctor. I keep contact (patient) data in Outlook or Organiser (the problem seems to be generic). Usually, this is stuff like name, phone, fax, first contact date, and a note containing personal details (e.g.

The claims made by some manufacturers may, in some cases, not match reality

tendency to violence, drug prescriptions or any other relevant information). "Synchronisation loses all the note (memo) data and this loss occurs in both directions." This is not synchronisation as I understand the word, and I wonder whether it is a Trades Description Act violation? I emailed Psion for help and they said that synchronisation of memo fields is not supported — find that in any of the documentation if you can.

Both of these emails are longer than the extracts I have presented here so I have included both as text files on our free CD-ROM. Isn't that coincidental? One email from a doctor about a specific problem, and then a reply from someone else which not only addresses the same

International version (rest of the world). Both versions show coastlines, motorways, A-roads and towns with >70,000 souls. (In places like Africa, where large towns are rare, this can drop to towns with >3,000 souls.) The Americas version shows all of this, as well as street maps for some of the big cities.

In general, this "bundling" of mapping software inside GPSes will only increase. Either that, or PDAs may soon come with GPS technology built-in. Either way, the days of needing a bit of wet string between the two are coming to an end. (but it's still fun to do!).

A NEW LAUNCH FOR GARMIN



◀ **THE GARMIN GPS III COMPLETE WITH BUILT-IN MAPS**

problem, but also uses the example "suppose I were a doctor".

This whole area of synchronisation between PDAs and PC-based organisers is worth examining, since I get the feeling that it is something we are all keen to do. In addition, the claims made by some manufacturers may, in some cases, not match reality. So, I'd be grateful for email on the subject. Emails along the lines of "product X is rubbish" are satisfying to send but less helpful to other people. What would be great are emails like Phil's which identify a problem and provide a possible workaround.

PCW CONTACTS

Mark Whitehorn welcomes readers' correspondence and ideas for the Hands On PDAs column. Contact him via the PCW editorial office (address, p10) or email pda@pcw.co.uk