Barry Fox finds his analogue modem under threat from digital phone lines in hotels.

Frying tonight

Well, that didn't take long. PowerQuest has already abandoned the copy-protection system which crippled the recently launched Lost and Found disc repair and data recovery utility. I tried three separate shrink-wrapped discs and each played the same horrid trick: the software refused to load, and an error message claimed the disc was an 'unauthorised copy' and put the floppy drive out of action until the PC was re-booted.

I spent a long time on the phone to the USA, while they talked me through a test procedure based on new program files sent by email. The result was the same. PowerQuest admitted that other users had encountered similar problems and they had no idea why.

A statement from PowerQuest ('Innovative solutions for changing environments') now admits defeat and apologises for any inconvenience caused. Yes, a lot of inconvenience. Apart from the time spent persuading PowerQuest, I found their product flakey, and I wasted hard cash and a lot of time replacing my floppy drive because PowerQuest had decided it must be faulty. This a shame, because I'd hoped PowerQuest might be offering some much-needed competition for lost-the-plot Norton.

Another product I've been trying is aimed at travellers needing to use laptops in hotel rooms. Even old hands who carry a full range of plugs and crocodile clips, and know how to defeat non-standard dial tones (by adding X3 to the dialling string so that ATDT123... becomes ATX3DT123...) are now facing a more serious obstacle.

Modern hotels often use digital switchboards to route and bill calls. Some send digital code to room phones which have built-in converters. The plugs and sockets are the same, but if a conventional analogue modem is plugged into a digital line, it will not work and the higher current, up to 0.5 A, fries the modem. Analogue phones should be marked 'Complies with Part 68, FCC Rules', but some are wrongly labelled. Passive fuses and trips may not work fast enough to protect a modem.

At Comdex I saw Konexx, of San Diego, which sells a fix. The $200 AutoSet exploits the fact that all phones, whether digital or analogue, send an analogue signal to the handset. The Autoset plugs between the main body of the phone and the handset, relying on the digital-to-analogue converter inside the digital phone to provide a safe working connection for a conventional analogue modem.

This brought back memories of the very early days of mobile computing, when the Tandy 100 and 200 models were leading the industry and Radio Shack in the USA sold a delightfully simple gadget: you just unscrewed the microphone cap on the telephone handset and replaced the mic capsule with a cap and phone jack. You got direct connection to the phone line because of the way phones are wired.

These gadgets disappeared when phone companies began using moulded handsets. But most modern handsets use a removable mini-jack connection to the phone. So I made a lead which connects a modem to a phone body in place of the handset (the two outer wires of the miniature handset plug go to the outside wires on a BT plug, or the inside two wires on a US RJ plug), so providing the necessary electrical link.

So why would I need an Autoset? Two reasons, say Konnex. Digital phones use a higher gain amplifier for the handset than an analogue phone; if you connect a modem direct to the body of a digital phone, you risk overdriving the amplifier, distorting the signal, corrupting data and possibly frying the phone amplifier. Modern laptops use switched mode power supplies, to cope with anything between 100 and 240 volts. Some have poor isolation which lets a 30–40 volt AC voltage build up on the chassis. If this feeds through the modem to the phone you get 50 or 60Hz hum, corrupted data or possibly a fried phone. The Konnex uses smart circuitry which matches the signal level from the modem to the phone, and blocks stray voltages. The downside is the cost ($200, which probably means £200 in the UK), the instructions are a mishmash, and with some phones, dialling may have to be manual.

I haven't yet plucked up courage to try my home-made simple link on a hotel phone instead of the Konexx, but I guess I will.

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