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Too slow, too late?

For ten years I have waited patiently, if a little frustrated, for UK telephone companies to provide me with the services I need to operate a digital business. One sees other European countries with extensive and cheap ISDN. Across the Atlantic, America has ADSL and cable modems. Whereas us poor Brits are stuck with ordinary analogue and highly expensive, relatively slow ISDN lines for the foreseeable future. The only glimmer of light is BT's Business Highway.

This is a twin channel ISDN solution for people whose file transfer needs are served by up to 128kbs throughput. This equates to roughly 10 to 15k per second compared with a V90 modem's 3 to 4k per second when sending files. Business Highway running costs are identical to two ordinary telephone lines as long as you use more than £50 of calls per quarter. You can even get BT's standard discounts and special offers. Fitting Business Highway into a location costs £99, the same as an ordinary telephone line and just £1.50 per quarter more on two line rentals. Even if you don't have ISDN capable equipment it is worth considering if you are installing new lines or in the process of moving.

Once Business Highway is installed a smart new box is fixed to the wall. It has four telephone sockets in it, two digital and two analogue. In addition Business Highway gives the advantage of three (or more) telephone numbers of which any two can be used at one time. This allows double-speed ISDN connections by coupling up two 64kbs lines or they can be used as two ordinary telephone lines.

Business Highway should work with non-ISDN equipment such as fax machines and telephones but Macintosh analogue modems will not work in Business Highway's two analogue ports. This is apparently the fault of BT whose software engineers have made no allowance for computers not using Windows. Sounds familiar, huh?

A real problem arises when deciding what high-speed digital devices to connect. As a minimum, a terminal adapter is needed to get your Mac onto the new digital lines. BT do not supply these for Macs even though their glossy advertisements for Business Highway show a range of Apple Macintosh computers. BT's terminal adapter card for a PCI slot in a PC costs less than £50. Mac users have to buy from mainstream suppliers who charge between £150 to £800 for the same device.

The terminal adapter will surf the Internet and do everything an ordinary modem can do, but faster. This is fine if your file transfer needs are via the Internet though you will still suffer from the same slowdowns when the Net is busy. Expect to get about 8k per second (28MB per hour) throughput on a good day using single line connections. Your ISP may charge you more to connect to ISDN though ISP's such as Connectfree are offering 128k ISDN connections at no cost.

It is important to make sure that the ISDN equipment is compatible with your ISP's set-up. Most of the technical support people are Windows-only so don't expect them to give much help. Again, ISP's seem determined that only Windows is capable of ISDN connections and use the Windows standard Multilink PPP protocol. If your hardware is not capable of this you will be limited to single line connections.

There are other ways to use ISDN and most graphics professionals will need a different set of hardware and software to send files to output bureaux, printers and the like. These will probably be using software called 4-Sight Manager, a legacy from when ISDN first became popular. Naturally the hardware needed to send to 4-Sight users is non-standard and costs considerably more than a terminal adapter. It is available from two main companies - Hermstedt, a German hardware manufacturer and WamNet, an American solutions supplier. Hermstedt makes the hardware for WamNet who are now combined with 4-Sight. Hermstedt cannot supply 4-Sight software and instead supply their "compatible" software called Grand Central.

WamNet supply software and hardware on a monthly fee basis (£50 to £5,000). They also offer a managed service that includes ISDN installation and monthly file-transfer allowance. They claim that it is better to use them because they guarantee to get your file to its destination. Interestingly, Hermstedt UK charge more for their own equipment

than mail order warehouses. According to Hermstedt UK this is because the warehouses are selling grey imports from Germany with no English language instruction books. Hermstedt UK complained to me that it shows how much profit the warehouses are making though wouldn't accept the point that their cards also come from Germany and they are charging even more for them! Expect to pay Hermstedt from £350 for a PCM card for a Powerbook, rising to £900 for a card for a Nubus or PCI slot.

It becomes blindingly obvious that unless you intend to transfer large amounts of data to 4-Sight users it is cheaper to use couriers with gold plated motorcycles. If you are transferring lots of data, is Business Highway suitable for your needs? After all, a 50MB file that takes 4 hours to download off the Internet at V90 speeds (double that to send) will take an hour to send over Business Highway. At the same time, whilst this would cost about £5 at peak local call rates both telephone lines would be tied up during the sending. The real gains come from transmitting smaller files for longer distances. Sending files to far-away printers used to involve couriers (same day delivery Brighton to London is £45) or guaranteed next-day postal delivery of a Zip disk (£4.00), can now be accomplished for the cost of the postage and arrive within an hour or two.

So what is ISDN like to use? Absobloodylutely brilliant. The Hermstedt Marco card slotted into a Powerbook 3400/240 and after an initial set of teething problems, it ran perfectly. The problems were largely caused by outdated software and a call to Hermstedt's helpline and an ISDN link to their server sorted things out. There are helpful manuals accompanying the Marco card that explain the Hermstedt software and how to configure TCP/IP and PPP for ISDN. Connection to a bureau using 4-Sight was almost instantaneous and the 5MB test file transmitted incredibly fast. So much so we couldn't believe that it had been sent.

Internet connections no longer mean going through the connection palaver associated with analogue modems. Just open a browser or Internet application and you are on-line, closing the application closes the Internet link. Data throughput from WWW sites is a reliable 6k or more per second using the single line option, compared with the creeping 1.5 to 4K with a V90 modem and a 52000 connection.

he Marco PCM card [pictured above] must be the cheapest way to get full implementation of ISDN and access to 4-Sight and WamNet users. The only down side is the cost of Leoshare, the networking software for the Hermstedt cards to make them available to others on your LAN. At £399 it is more expensive than buying an ISDN router or terminal adapter for two or three machines. Hermstedt needs to address this

problem and especially to remove the dongle protection on Leoshare.

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