Gordon Laing warns that there are more differences than you might think between ISPs.

Variety is the IPSpice of life

It's an indication of how the consumer IT market's developing that the second question any new buyer asks after what system should they purchase, is which ISP they should sign up with. My friends and family ask me all the time, and while I can wax lyrical about which hardware configuration currently represents the best value for money, I tend to stumble on the old ISP question.

The trouble is that ISPs can be so variable. Lesser-known providers may rarely be engaged, but once popular, will demand outstrip supply? Then again, is it fair to compare complaints made against larger ISPs when statistically they're going to have more problems?

You'd be fair to ask who I use for internet access and, unsurprisingly for anyone who knows me, the answer's ever so convoluted. Technology for technology's sake I say. Right, here goes: in the UK I use Demon Internet as an ISP and outgoing SMTP mail server, but not as an incoming email provider. Not that there's anything wrong with Demon's POP3 service, er, apart from that recent hitch where its mail server refused to talk to anyone for a few days.

No, my POP3 mailbox is provided by EasySpace, an American-based company which also hosts my glnow.com website – EasySpace registered it with Network Solutions too. So I dial up Demon, which connects me to the internet and in turn to EasySpace's POP3 mailbox. Demon looks after the outgoing SMTP mail, and everything's hunky-dory.

Well, until I go abroad that is. Like so many UK ISPs, Demon does not offer access outside the country unless you can wrangle a non-0845 number out of it and are happy to suffer international call charges. You can always access any POP3 mailbox by entering your details into various websites such as Hotmail and Excite, but you'll still need an ISP to get there, and web cafes are not always readily available.

I recently discovered a solution with Pipex Dial. With UUNet behind the scenes, Pipex boasts local points of presence to dial around the world. When abroad, dial the nearest local access number and enter your account username and password as usual. You will need to enter UUNet's country-specific SMTP server to send email, but your incoming POP3 details can remain the same.

Brilliant, even if Pipex does charge a few quid for the privilege of roaming – there are more details in this month's *Hands On* Hardware column of my wandering ways. Oh, and PDA users needn't be put off by Pipex's site claiming you need their Windows client software – just type your account details straight into the relevant control panels.

But the reason I'm telling you all this, is that over the past few months of being slightly more demanding of my ISPs, I've discovered a wealth of differences between them. Let me tell you for one thing that not all web space is created equal. There I was happily testing Sharp's Internet Viewcam, a tiny gadget that captures video, compresses it into web-sized portions, and even formats it into streaming media so that visitors to your site don't need to download the entire thing first. Great stuff, but when I uploaded video onto EasySpace's server it suddenly didn't want to stream any more. One technical enquiry later and I was informed EasySpace did not currently support any streaming media on its servers – and it turns out this is not uncommon, so anyone interested in Real Video, Microsoft ASF or Quicktime had better look closely at their ISP's specs.

> There are rules against that too: **NO DATA ALLOWED** that does not directly pertain to your website – I've had stuff removed

So what precisely was I supposed to do with my 100MB of free web space? My website already contains a disproportionately large number of photos. They may be heavily jpeg'd, but there are hundreds of them – and you know how big my entire site measures? 5MB on the button. Hey, maybe I could use the other 95MB as secure off-site backup. No, hang on, like every other web-space provider, there are rules against that too: no data allowed that does not directly pertain to your website – I should know, I've had stuff removed that wasn't actively participating. Kind of makes a mockery of those ISPs that generously offer unlimited web space, doesn't it?

You know what? I'm going to create a 95MB tif of me with my tongue sticking out and upload that to my web server, complete with an active link from the homepage – you will come and visit, won't you? Even using my scorching 32Kbit/sec '56K' access at peak rate, it'll be the most satisfying £16 I've ever spent.

gordonl@pcw.co.uk

When it comes to ozone detection, the best advice is to follow your nose, says Barry Fox.

Something in the air
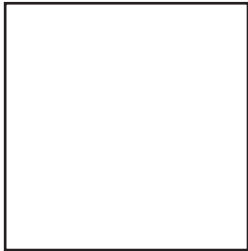
'Did you know,' asks a company that has started selling a strange-smelling device like an air-freshener, 'that ozone is a toxic gas emitted by electrical equipment found in most offices, such as photocopiers, fax machines, computers and laser printers, and can cause respiratory difficulties when inhaled?'

Thereby hangs a whole string of tales.

First, forget the old idea that ozone is good for you and there is a lot of it by the sea. What you smell on the beach is usually rotting seaweed. Ozone is an unstable form of oxygen (O_3 instead of O_2), generated by electrical sparking, high-voltage discharges and ultra-violet light. It has a pungent but sweet odour, and this is often dubbed the 'smell of electricity'.

Ozone acts as a powerful bleach and disinfectant. Twenty years ago ozone-generators, with a UV lamp, were sold as home air-cleaners. Then people got wise to the fact that although ozone is a good thing in the upper atmosphere, where it shields us from the sun's ultra-violet radiation, it is a bad thing to have in the home or office. The bleach reaction harms the eyes, nose and throat, and triggers allergies.

Around 10 years ago the world woke up to the fact that laser printers and copiers could produce ozone as they relied on high voltages to make the toner powder stick to a print drum, before its transfer to paper. A thin corona wire carried around 7,000 volts and generated ozone.

Although printers and copiers were usually fitted with filters, containing activated carbon, to break down ozone, they clogged with dust and stopped working. Changing the filter was a tricky job, and seldom explained in the manual. The manufacturers did a rotten job of communicating the risks and remedies.

Offices in Denmark were first to play safe, with external filters fitted to existing machines. Dansk Teknologi of Copenhagen started making its Minozon unit in the summer of 1988 and sold 8,000 in the first year. In 1990 over 40 per cent of the laser printers in Denmark had add-on filters. The Minozon was a large, flat, metal plate containing a big bed of activated carbon. The printer sat on top, connected by a flexible tube. It cost nearly £500.

Japanese company Canon has always made the laser 'engines' used in most western-brand printers, including those from market leader Hewlett-Packard. In 1990 Canon redesigned its system to reduce ozone emission and make filters unnecessary. Instead of a corona wire, the engine has a charge transfer roller. A long, thin roller, made of electrically conductive rubber, presses hard against the drum surface and transfers the high voltage charge without generating ozone. Kyocera also switched to a roller system.

Only very large office machines still use a corona wire, and they are usually serviced under contract. So the Minozon filter was largely redundant by the time it was launched in the UK.

Now, after some production delays, Atmospheric Solutions of Gloucestershire has launched an L16 freshener pad that is soaked in 'natural oils' to get rid of ozone. The British Allergy Foundation (BAF) has given Atmospheric's Nozone its Seal of Approval and Professor Robert Davies, president of the BAF, says it is 'highly effective'.

But is it necessary?

A transfer charge roller engine emits only two parts of ozone per billion (ppbn) of air. Natural clean air contains at least 25 ppbn. Paul Burwood, Hewlett-Packard's UK marketing manager, says: 'There is no health hazard from an HP Laserjet printer'.

> **People are able to sense concentrations of 10 ppbn, ONE TENTH THE LEVEL at which humans feel irritation in the eyes, nose and throat**

Stuart Maxwell, technical director of Atmospheric Solutions, says there is 'plenty in the literature' but could only cite one article which quantifies the ozone output from copiers. And that was published in 1983. 'But there are still plenty of older machines in use,' he warns.

The tests run with the BAF relied on an ozone generator. Davies was unaware of the sweeping changes made in engine design and acknowledged: 'We don't know what the levels are in offices.'

The best test remains smell. When they walk into a room most people will be able to sense concentrations that are below those at which the eyes, nose and throat are irritated.

If you have an old personal laser printer or copier and can smell it when it is printing to paper, then try a Nozone. If you work in an office with a big machine that smells, ask the boss to get it serviced or buy some Nozones. The cheap fix is to stick the offending beast by an open window.

barryf@pcw.co.uk

The Java office revolution hasn't happened, but the OS still has its niche , says Brian Clegg.

How do you take your Java?

How do you take your Java? That's a question many companies have been re-examining over the last year. Inspired by that classic duff film title, *Krakatoa, East of Java* (Krakatoa is actually west of Java, but when did those people in Hollywood pay attention to facts?), I can't help but wonder if the Java world is in need of a Krakatoa-like eruption to revive interest. The big IT success story of late has been the magnificent Linux, not Sun's linguistic baby.

In case you live in a Java-proof bunker, the topic here is not the place, nor the coffee, but a computer language from the workstation manufacturer Sun. Java is not dissimilar to the widely used professional language C++, but has a unique attribute. It operates in a 'virtual machine', effectively a language interpreter that separates it from the workings of your computer as a whole. In theory, a program written in Java will run on any computer with a Java virtual machine, whether it's a

> **I don't think this will involve Java. Most people don't want to ROLL THEIR OWN, they want to take something off the shelf and use it**

Unix workstation, a Mac, a PC or a PDA. This concept was crucial for Sun, as a move to Java products could break Intel's stranglehold on the desktop.

In the heady early days, Java seemed ready to conquer the world. Larry Ellison, supremo of database giant Oracle, felt he had the weapon he needed to triumph against the Dark Side – Microsoft and Intel. The future, he trumpeted, was NCs (Network Computers) not PCs. These devices would not store anything locally, downloading programs and data from a network. Instead of Unix or Windows, they would run JavaOS, a new operating system optimised for Java. This would be great for businesses, Ellison argued, as it meant a return to centralised control. There would be no need to install the latest Office suite on 10,000 PCs – you just have to pop it on your servers and *voilà*. What's more, centralisation would protect data, because no-one backs up their PC.

The other big name rivals of Wintel saw an opening too. Memories arose at Lotus of when the company was queen of the spreadsheets, while WordPerfect (now part of Corel) pined for its place at the top of the word processing tree. Both announced office suites using compact Java components that could be downloaded when required. Java was to be a route for the downtrodden business community to regain control from Bill Gates and his monolithic monsters.

Almost immediately we saw some neat little Java applications. We just had to wait for the serious programs to be developed. And wait. And wait. Every now and then a prototype Java office suite would emerge. But it would have little more functionality than a freebie like Wordpad, and would run painfully slowly. Even Sun's recently acquired StarOffice, impressively cross-platform though it is, isn't a Java application (though admittedly the next version is intended to be). And strangely, Mr Ellison did not have hoards of customers rushing to abandon their flawed but workable PCs for NCs. Sun and IBM recently dropped development of the JavaOS operating system at the heart of these devices.

This is not to say that Java is a failure. It is being used for small portable programs and web applets. It will be increasingly used in internet devices from webphones to set-top boxes. The Java-derived JavaScript has wiped the floor with Microsoft's alternative as the standard for web scripting. But the Java office revolution hasn't happened. There is still hope, though, for those who are fed up with the current ungainly Office suites. There will be big developments in the next few years, but as always with computing, the direction is likely to take us by surprise.

What we can say with some certainty is that it will involve changes that make it possible to undertake your office tasks quickly and (most importantly) intuitively. I don't think this will involve Java, or components you have to assemble yourself. Most people don't want to roll their own, they want to take something off the shelf and use it. We're more likely to see programs that learn how you work and what you want to do, then reconfigure themselves, pulling in and discarding components to meet your needs. After all, most of us use computers to get our jobs done, not to play with software.

brianc@pcw.co.uk

Paul Smith wants to know if having a website and a baby counts as having twins.

Parental concerns

They say that looking after your website is a bit similar to looking after a small baby, needing almost constant attention and a level of care unimaginable to those who haven't yet experienced it.

This, of course, is the big surprise that comes to all those people and companies that suddenly decide to get on the web and then realise that it sucks up more time than a PlayStation.

I decided to put this theory to the test. Planning initially began about nine months ago, with the congressional involvement of Del, my wife. It is not the function of this column to go into the details of this stage of testing, but those with access to the Internet may find plenty of pictorial examples of the way this sort of thing works.

Finally, the test has entered the empirical stage. This began, ironically enough, on the Y2K bug day, 9/9/99, with the birth of Audrey, a little nipper. I have since been partially responsible for looking after and providing for her and comparing the experience with that of looking

> **While under the stresses of giving birth, Del's guard slipped and SHE CONSENTED TO THE PURCHASE of a 36in, widescreen television**

after my website.

I am now prepared to share some of those findings with you to answer – once and for all – the question of how these two tasks compare.

Straight off the bat, there are a number of striking differences in favour of the website. Firstly, I have never been woken at four in the morning by a website wailing for attention. Second, I have never had to sit around and watch a website breastfeed. And thirdly, I have never yet had a website pee on me while I was changing its nappies. Indeed, apart from one occasion, I have never had to change a website's nappies at all.

Similarly, websites are often a great deal more entertaining. Some of them even do things. Audrey currently does three, often less than entertaining, things: these are sleeping, eating and nappy filling (sometimes two at the same time!). Websites tell you things, play games, alert you to other sites and send you DVDs of films that haven't even been released in this country yet.

On the other hand, no website can claim to have been responsible for delivering into this household the single most exciting thing imaginable, for which Audrey and Del alone I have to thank. Yes, while under the unimaginable stresses of giving birth, Del's guard slipped and she consented to the purchase of a Panasonic 36in flat, widescreen television.

This beauty, which, in our small sitting room, now sits some two and a half feet from the edge of the sofa, giving you that Empire Leicester Square feeling, is the centrepiece of my rationalisation for buying Region 1 DVDs over the web. I get them from www.dvdboxoffice.com, a Canadian wonder (like me) that currently doesn't charge postage (also like me).

Of course, financially, the purchase of a too-big TV and lots of DVDs will, without a doubt, have a significant impact on the household budget. My thinking is this: right now we're keeping Audrey outlay to a minimum – the kid's not paying for any food and all of her clothes so far are hand-me-downs, mostly from the progeny of my outrageously productive sister. And, anyway, by the time we've paid off the TV, Audrey should be out at work, earning her keep and fending for herself.

Now, those who may have had an opportunity to look at my website [would that be at www.paulsmith.com, by any chance? – Ed] more than once, and finding it hardly changed, will not necessarily have the greatest respect for my potential parenting skills. In fact, it is more akin to a site abandoned, although I am now setting for myself the ponderous task of updating the site between the time I finally finish writing this column and the time you get to read it.

Because in the end, there is one very strong similarity between the two: they both need an awful lot of care and attention lavished on them. If you just leave them to themselves, they don't really progress and those looking at your work in this area begin to lose respect and never come back.

They may start talking behind your back: 'You know, I've visited that bloke's website/baby twice and he hasn't updated it/her at all'. Obviously, I don't want any of that sort of talk going on about *my* website, so I really am going to have to make more of an effort. Right after I change this nappy.

pauls@pcw.co.uk