Problems with the 820 chipset have prompted an interesting offer from Intel, says Gordon Laing.

See ya later, translator

If only everything in life was as reliable as a PC. Funny how you don't see that emblazoned on adverts, isn't it? Downloading patches, fixes, service packs and driver updates has become an everyday activity that we've grown used to. But there's nothing like something going wrong with hardware to set the spine tingling.

Regular followers of technology news must have heard about the problems Intel is facing with its 820 chipset. To be accurate, it's not actually the chipset that has the problems this time, but a pesky accompanying chip Intel had to produce in the face of customer demand.

The 820 chipset was never designed to use slow old SDRAM. It was to support shiny new RDRAM from Rambus. At the introduction of the 820 chipset towards the end of last year, RDRAM was expensive and in short supply – just like now. Many of Intel's customers expressed a preference for using more competitive and readily available SDRAM, so last November the chip giant came up with the Memory Translator Hub (MTH), which let an 820-based motherboard talk to DIMMs instead.

If you've got an Intel CC820 motherboard, you're ENTITLED TO A REFUND or a swap for an Intel VC820 with 128MB of genuine RDRAM

It seemed like the perfect solution, with Intel and Taiwanese manufacturers shifting an estimated one million motherboards equipped with 820/MTH. Well, it's a perfect solution apart from two points: first is that SDRAM memory performance under the 820/MTH is poor, and second, in mid-May Intel revealed that newly discovered problems with the MTH were sufficiently bad to start a programme of replacements or refunds.

Apparently, some PCs using the MTH intermittently reboot or hang when subjected to certain system noise. While I've never been a fan of the 820/MTH's SDRAM memory performance, I haven't experienced spontaneous system reboots on 820/MTH systems I've tested. Intel is keen to point out that the issue is not on all MTH-equipped systems, but is sufficiently concerned to start a recall programme it refers to as a 'replacement option'.

Intel recommends that you first identify whether you've got an MTH in your system – if it's an 820 chipset with SDRAM, then the answer is a big 'yes', although an 810KB download from Intel's website will also give you the bad news. Note that although the higher end 840 chipset was also designed for RDRAM, its SDRAM solution uses the different MRH-S chip, which while recently revealed not to like ECC memory, appears to be in the clear – for now. I've had one running almost non-stop for two months with no unwanted reboots so far.

Now while you can't prove your MTH is on the blink, Intel will apparently honour your request for some kind of action. If you've got an Intel CC820 motherboard, you're entitled to a refund or a swap for an Intel VC820 motherboard with 128MB of genuine RDRAM, although no-one's sure whether it's the nice PC800, not so nice PC700, or downright nasty PC600 variety. In fact, at the time of writing, no-one seemed entirely sure how this whole process would work. Who's going to physically replace your motherboard? Is there enough RDRAM to go round? What if you had more than 128MB of SDRAM and who gets your old DIMMs anyway?

Taiwanese motherboard manufacturer Asus seems to be the only company publicly stating its position on the MTH, but, as the largest supplier of boards using 820s with SDRAM, it has the most to lose. Asus seems to be happy with a refund-only policy, which is in line with standard warranties.

The 820 with SDRAM was always disappointing and this is a perfect opportunity to upgrade for free. Ask your system or motherboard supplier what they're offering. Try for the RDRAM replacement, but consider selling it, as in our SYSmark tests everyday performance is often matched by cheaper SDRAM on BX-based motherboards.

So buy one of these new BX boards instead, or swap your 820/MTH for one if your supplier isn't going for the RDRAM offer. Then again, Intel's new 815 'Solano' chipset designed for PC133 SDRAM should have arrived by the time you read this, but it isn't being offered as an official replacement to MTH customers.

Like many people, I'll wait for the 815 before committing – after all, new motherboards using the reliable BX chipset and SDRAM are arriving every day and beating everything I've tested. Intel is being honest about the MTH problem, but in terms of customer confidence, it may be a case of once bitten, twice shy.

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Even after being bitten by the Love Bug, we're still sending VBS emails around, warns Barry Fox.

Basic precautions

The UK Government spent tens of our millions scaring us about the Y2K bug with roadside hoardings. But it never did tell us what to do – even though it had the answer on a plate.

In August 1998, Robert Clark and Duncan Cooper of the Information Systems Division at University College London were looking for an easy way to check their 5,000 PCs for Y2K compliance, without putting date-sensitive data at risk by advancing the clock.

Clark and Cooper soon twigged that the different BIOS versions used in PCs are uniquely identified by release date. So they suggested that the DTI's Action 2000 team should cross-reference BIOS version dates with Y2K compliance and put the list on a free disc and Internet site, along with a simple BIOS date-check utility.

Action 2000 visited UCL in November 1998 and said it was interested. UCL heard nothing further, so in January 1999 chased Action 2000 which said it 'would have someone on the case soon'.

'We never did hear back,' said Clark, 'but we did receive a Christmas card and CD-ROM that recommended manually advancing the date.'

I was reminded of this when the 'I Love You' virus struck and infected government systems. If the money the DTI squandered on Y2K-scaring had been used to tell the public about the risk of opening binary attachments, a lot of people would have been spared the misery and file loss which the Love Bug and copycat VBS viruses are causing.

Most binary attachments are unnecessary. They waste space on pointless pictures, fancy formatting, macro routines, graphics and sound. Words in plain ASCII text are all that is necessary to convey most messages and there is no way (yet) that ASCII can infect. Radio stations such as LBC in London automatically refuse to accept incoming attachments. Internet, game and email systems that bolt on to a TV set and standalone emailers do not handle attachments either.

As the Love Bug proved, it is not safe to assume anti-virus software will trap an incoming infection. There are several dozen new viruses every week and even if you update your anti-virus software each day by downloading a new signature file, the software company needs a day or so to analyse the new virus and write a fix for it.

Even updated, my Panda software was still missing 'I Love You' because the default setting regarded Visual Basic Script files as safe and not worth scanning.

New viruses such as Melissa and the Love Bug spread by automatically emailing a copy to every address stored in Microsoft Outlook. Microsoft's website (http://officeupdate.microsoft.com/downloaddetails/Out98sec.htm) offers a Security Update that is free to download. It stops Outlook receiving risky attachments and automatically forwarding them to others.

Describing it as a 'significant security enhancement', Microsoft fends off legal claims by assuring that although 'this update limits certain functionality in Outlook to provide a higher level of security, it was not created to address a security vulnerability within Outlook'.

Avoiding Outlook is no protection against infection. AOL and Compuserve say they cannot block delivery of a known virus because it would amount to tampering with private mail. I was sent several copies via Compuserve. Soon after, I received a message from Compuserve's general manager David Fischer. Did it warn about the risk of opening attachments labelled 'I Love You'? No, it was a puff about the benefits of using Compuserve.

For over a year I have been politely begging IT companies and their PR people to email press information as plain ASCII text. Some have sneered and carried on sending binaries. Others have sulked and stopped sending anything. I am a lot less polite now.

AOL and Compuserve say they CAN'T BLOCK DELIVERY OF A KNOWN VIRUS because it would amount to tampering with private mail

Since the Love Bug proved that binaries really are a no-no, I've received safe text press releases from Compaq, Alta Vista, Novell, Tivoli Systems, Texas Instruments, Electronic Arts, Motorola and BT. Of course, some things never change. Despite the Love Bug, BT Cellnet is still cheerfully sending out Word binaries. And Microsoft's PR agency sent out a few words of text – dressed up as a fancy binary graphics file.

Others have gone overboard on safety. A trade magazine has installed an email filter that rejects any text message that contains the words I Love You.

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Brian Clegg asks whether the digital camera is step forwards or just a gadget for the boys?

Digital dilemma

I love gadgets as much as the next man, but it's also far too easy to completely lose your rationality when faced with a shiny box and lots of exciting buttons. Actually, when I say 'as much as the next man' I am being literal not sexist. I don't have any scientific evidence to back up my theory, but anecdotal evidence suggests that techno-toys appeal more to men than they do to women. Does the very thought of a global positioning device get your adrenaline flowing? How about the newest WAP phone or MP3 player? If the answer is yes, the chances are, you're male.

Whether this obsession is simply down to never growing up or something more mysterious, gadgets have a fatal attraction, and today's gadget keyword is 'digital'. In George Orwell's book *Animal Farm* the sheep chant 'four legs good, two legs bad', getting all worked up about a slogan. Fifty years on the chant is likely to be 'digital good, analog bad'. Digital TV, digital phones, digital video, digital MiniDisc, digital cameras – we've gone digital crazy.

Fifty years on the chant is likely to be 'DIGITAL GOOD, ANALOG BAD' – digital TV, digital phones, digital video – we've gone digital crazy

In the past, the gadget urge has taken us to ridiculous extremes. Take, for example, the digital watch (yes, I know that's a different kind of digital), which was mocked mercilessly in the classic radio series/book/TV series/towel *The Hitchhiker's Guide to the Galaxy*. For normal use an analog dial is so much more effective – it's quicker to read, easier to estimate differences – it even looks better. If you take a wander down your local high street and glance inside any jewellery shop, you will find that the digital watch has definitely had its day. We've got onto the 'four legs good, two legs better' stage. I can't help wondering if the same thing could happen to digital cameras.

I bought a digital camera about six months ago. For the business it's superb. No wasted film, easy incorporation of images into electronic documents, no need to scan an image to send it down the line, and total control. If, for instance, you're attending a conference and you want to incorporate pictures from the morning session into the presentation for the afternoon, it's no sweat with a digital camera. I'm equally ecstatic in gadget-loving mode. Which analog camera would allow me to transform a picture to sepia or beef up my optical zoom with digital muscle? I never run out of film (even if I occasionally forget to recharge the batteries), and I can cram in an incredible number of low-resolution shots if I need quantity rather than quantity.

However, let's take off those rose-tinted specs just for a moment. For domestic, rather than business use, the advantages of digital cameras are less clear cut. I might not have to pay for film but, like many camera owners, I probably only used three rolls a year, which hardly breaks the bank. With the digital camera I take three pictures where I would have taken one before, increasing the chances of a good result, but the quality of image isn't as good as it was on film.

And then there's processing. I don't have to take my film into the local photo processing outlet to be printed any more, but keeping the images on the PC somewhat misses the point. I want to be able to bore my friends and colleagues by showing them my pictures, rather than dragging people into my office to check out my photo library on the PC. Of course, I can make prints on an inkjet printer, but this isn't ideal. It brings the cost back up, and it's time-intensive, especially with the temptation to reframe each picture before it's printed. The other problem is fade – like it or not, those inkjet photos won't be the same in a year's time. In some ways, the step to digital has been a backward one.

The digital camera is such a versatile gadget that it will overcome the negatives (excuse the pun). It's only a matter of time before your friendly local photo shop will be able to handle a memory card as easily as a traditional roll of film, giving you lasting prints to pass round your friends and relations. Add to this the fact that Sony already has a digital photo frame for displaying your pictures direct from memory card, and it's only a matter of time before the photo album is a thing of the past. As good as the real thing, more flexible, and it's digital too. Or am I just giving way to that primeval urge? Analog bad, digital good, analog bad, digital good...

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The Love Bug fiasco demonstrated that the PC was never designed for the masses, says David Fearon.

The nerd's revenge

I've got to admit to initially feeling completely snobbish about the whole Love Bug virus affair. On the morning of the day in question, I checked my email and noticed that, among the messages, was one from a company PR rep, with that now infamous subject heading.

'Hang about,' thinks I, 'why is a woman I've never met telling me she loves me?' So I drag the message attachment into Notepad. It's clearly a very nasty piece of Visual Basic Script, so I promptly delete it and think no more of it. Until six hours later when I come home and switch on the telly. 'Computer virus causes worldwide chaos,' announces Ceefax. Margaret Beckett is quoted as telling a semi-paralysed House that there's 'no known cure'.

My first reaction is one of complete incredulity. How can people be so stupid as to double-click on such a dodgy-looking attachment? Are they really that clueless about the effect it could have on their systems? Well, yes, but it's hardly their fault.

Our esteemed editor, Mr Emeran, has often been heard to say that PCs will never be consumer-friendly appliances, despite efforts such as the EasyPC initiative and Windows Millennium: they're simply too arcane. And after the Love Bug affair, I'm sorely tempted to add a footnote stating that the Internet will never be consumer-friendly just as long as PCs exist.

To bring myself back into the real world of people who don't spend their lives reading about TCP/IP, I sometimes like to sit down in front of a Macintosh. This is always a sobering thing for me to do, the reason being that I've never had any cause to use an Apple computer in anger and consequently haven't a clue how to work one. I'm hopeless: can't even start up a web browser. After a few minutes' aimless fiddling with the mouse, wondering how to right-click, I slink back to my PC with a fresh sense of appreciation about the way most people view computer technology.

The more I think about the Internet revolution the more absurd it seems to me. Two generations of nerds grow up treating computing as a hobby, while the rest of the world edges quietly away from the anoraks with the body odour. But suddenly it all actually matters.

Sitting on the tube this morning, nearly every advert along the top of my carriage had a URL placed more prominently than a phone number. The thing is, most people can use a phone – considerably less than 20 per cent of the population can tell you what 'URL' stands for or what to do with one.

I did a short email interview with author and noted technology evangelist Douglas Adams a couple of years back and he drew a parallel with chairs. Chairs, he pointed out, were considered high technology once. But now we don't notice them, the implication being that computers will eventually mature and melt into the background in the same way. Chairs, however, were invented with a single purpose: to sit on. Food mixers were invented to mix food. Cars were invented to get us from A to B. And hey, they work.

However, the origins of modern desktop computers were way back in the late 1970s, when they didn't matter all that much and there was no clear reason for their existence. They were designed by nerds for the sole purpose of giving themselves something to tinker about with. And the reason that they are so complex is because that is precisely the way nerds like them. They were never supposed to actually work: where's the fun in that?

Considerably less than 20 PER CENT OF THE POPULATION can tell you what 'URL' stands for or what to do with one

But now, here we all are, largely as a result of the Internet boom, attempting to get to grips with twisted, evil and generally awful bits of machinery, bravely acting as if they were designed for the express purpose of empowering society from the word go. It's the strangest thing in the history of the world. When was the last time a minority hobby became capable of bringing down the House of Commons? If people started telling us we had to have tapestry frames on our desks or build matchstick replicas of famous Napoleonic galleons, we'd tell them where to go.

So my message is simple: if the Internet is to merge with society, we need to abandon the conventional computer: nerds and normal people don't mix.

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