



If you ask me the clock latency of the Ram in that desktop PC, I'll look at you with a blank stare

Dave Lee, page 3

the guardian Thursday 02.03.06

Show and tell online

Social networking sites have gone from being the next big thing to the thing itself. But, asks Sean Dodson, can they continue to hold the fickle attention of today's teens?



<blondolphin>



<manga_29>



<minty101>



<XJane214>



<crazyCap>



<cupcakes>

After decades of devotion, the British teenager is falling out of love with the television. For many, the old TV set is no longer the first thing they turn to after a day at school. Sadly for teachers, it's not always homework that kids are turning to as a substitute, but rather a group of fast-growing websites that let them watch – and communicate with – each other. In the past 12 months, “social networking” has gone from being the next big thing to the thing itself. Last month, MySpace, the site that famously propelled the Arctic Monkeys to pop stardom, overtook the BBC website in terms of visitor numbers. Along with competing sites Bebo and Facebook, MySpace has formed one of the fastest growing sectors on the internet. Latest data from the internet traffic monitor Hitwise reports that visits to MySpace, the market leader, have grown sixfold year on year, while those to rivals Spaces.MSN.com are up 11-fold and to Bebo.com an amazing 61 times more. To their users, social networking sites fill a number of functions: part diary, part shareable contacts book, part social club. For a generation of teenagers, they are increasingly becoming as important as ownership of a mobile phone. The fastest growing is Bebo.com, which, like its US counterpart Facebook.com, bases its membership around lists of schools and colleges, a kind of Friends Reunited for people who are still there. And teenagers

are taking to Bebo quicker than they can pop a can of paprika-flavoured Pringles; there are 4 million in the UK alone. Each Bebo user – or Beboer – is given their own mini-homepage that they use to represent themselves. Some list favourite bands or movies or display their football allegiances. Others generate delicate illustrations comprised entirely of ASCII characters, while more set polls and arrange topical debates or simply wallow in the latest school gossip. Bebo is based in California but the company's founder, Michael Birch, was raised in the Hertfordshire village of Cuffley, before moving to London to study physics at Imperial College. There he met his wife Xochi, a native of California. The pair hatched two websites: Birthday alarm.com and Ringo.com, a virtual address book. The latter they sold to Tickle.com, an online dating service, for a significant, but undisclosed, sum. The pair now live in the suburbs of San Francisco with their two children.

Purely personal

“Email is very limited in what you can do with it,” explains Birch. “With Bebo, everything you get is purely personal mail. When you get a mail you can click on their name and learn so much about the person who sent it.” So much so that the standard email exchange feels naked by comparison.

So what do Beboers do that is so compelling? The simple answer is nothing radically new. Beboers send email, exchange voice messages, share photos

and, naturally for teenagers, trade insults. And as of last month, members can also make voice calls over the Bebo network thanks to a partnership deal with internet phone company Skype. “It's pulling all the different media together,” says Birch. “It used to be phone, then email, then SMS. But now Bebo does all of these things but with photos, quizzes, drawings and blogs thrown in.” The big difference is that they are using the individual tools – email, chat, voice calls, photo-sharing – together, as if they were all part of a single tool. Together they form a kind of interactive, multimedia channel for the whole school. No need for lots of multiple downloads, no need for multiple accounts and passwords for lots of different services. All your means of communication are available on Bebo and so are all of your mates. But it's one thing to pull the kids in, another to keep them happy. According to Heather Hopkins, director of research for Hitwise, the “net community and chat” sector – to which Bebo belongs – can be as fickle as teenage love. “At least 40% of this year's top 10 will be nowhere this time next year,” she says. This is because the

4m

The number of registered Beboers in the UK. This results in more than 700m page impressions a month

launch of a new social networking site is like the opening of the latest uptown bar. They are events in themselves, meaning sites experience huge swells in traffic before receding as certainly as the onset of the next day's hangover. Bebo.com is, indeed, on its second bout. More than half its users registered when it was essentially a photo-sharing site back in January last year, but traffic stalled until, last June, it relaunched, focusing on colleges and high schools. It has not looked back. Marketing blizzard In its first year, Bebo – thanks mostly to a blizzard of email marketing campaigns (the site spent nothing on conventional advertising) – has attracted 21.4 million registered users worldwide, 4 million of whom live in the UK. And while only about a quarter of registrations become highly active, that still equates to more than 700m page impressions every month. However, the backlash to social networking sites has begun. Two years ago, prominent blogger Russell Beattie famously chose to opt out of LinkedIn (linkedin.com), an early precursor to Bebo, saying he was overwhelmed with personal data about people he didn't know nor particularly cared to know. But what many affluent adopters and super-connected bloggers fail to realise is that a younger generation, native to the internet, would feel quite different. To them, social networking technology is fast becoming a default rather than an option.

Inside

2 Gadgets Pricey fun for travellers



3 Technological class warfare How companies can snub you

4 Technobile Why so many useless USB cables when two would do?



5 Spectrum's playground Easing the pressure on a scarce resource

6 Industrial protection Tempers rise over software to prevent CDs being ripped

Jobs index

7	IT & T
7	New Media
8	Senior Research
8	Science & Technology

guardian.co.uk/jobs

Feedback Send your thoughts and comments to our blog Ask Jack Find a solution to all your technological troubles Direct delivery Let Guardian Unlimited's Newspoint keep you up to date with all the latest news on the web



Newly asked questions

What is Microsoft's Origami project?

Apparently, a handheld "Ultramobile" PC that's also a media player – so, a sort of iPod, PlayStation Portable (PSP) and Tablet PC rolled into (a not very comfortable) one. After a teaser post by Microsoft überblogger Robert Scoble last week, more details have begun to leak out, including a video of the project showing someone listening to some music, using handwriting recognition on the screen, reading a map with GPS and playing Halo.

Microsoft has promised to reveal more today but had already been forced to admit that a video spotted on the site for the marketing company Digital Kitchen did feature "an early version", though it insisted that was a year old.

There is a Project Origami teaser site (www.origamiproject.com) if you're into pointless Flash sites. The company has also been giving mixed messages, saying it wouldn't announce anything this week. A number of manufacturers are expected to show off their versions at the CeBIT trade show next week.

Over-excited online journalists have been quick to label the device as Microsoft's answer to the iPod or PSP. This follows speculation in Business Week, and older rumours going back to last year, about Microsoft's desire to enter the handheld market. Indeed, last April Bill Gates talked up a prototype



Researchers are trying to crack codes encrypted by the Enigma machine, below. One report from a submarine has already been cracked Photograph: Hulton Archive

Can I break an uncracked Enigma code message?

You can certainly have a try. Point your browser at <http://tinyurl.com/lj94b>, read the instructions, download the software and let your PC do the rest. The M4 Message Breaking project, led by Stephan Krahn in Utrecht, has two still-uncracked messages encoded by the German Enigma system from the second world war and monitored by the Allies in the North Atlantic on November 25, 1942. Now, advances in computing power mean that we can apply what the geniuses at Bletchley Park could not: an optimised brute-force solution.

The Enigma machine, invented in 1924, used three or four "rotors"; given a "plug-board" extra, the four-rotor version could encode plain text into any of 158 million million combinations. Its only flaw, from a cryptographer's point of view, was that it never encoded the same letter the same way. Thus original signals with identical beginnings – because they were made at the same time of day, for example weather reports –

revealed some of the underlying codes used. (We did say the Bletchley folk were geniuses.)

Since the project began in January, one of the signals has been cracked: it was a report from a submarine that had been forced to submerge after an attack.

The software being used to crack the codes was developed by Krahn, who is intrigued by cryptanalysis, and aims to create an ad-hoc supercomputer by getting as many people as possible to use spare capacity on their PCs.

As he points out, not even today's computers are quick enough to do a pure brute-force solution (of trying every possible answer); instead he uses a "hillclimbing" optimisation, which sees whether a failed answer seems "nearer" the potential solution.

If you want to crack the messages, you might have to be quick. A burst of online publicity earlier this week means that people have rushed to download the software and are plugging away for a brief taste of the glory of finding out what weather conditions were like that day (cloudy, we imagine).

Krahn estimates that 100 users could work through the "search space" of solutions in four days if they dedicated their computers to it. "Easy messages break on the first walk through ...

tougher ones require more," he notes. "Based on my experience with messages of this length, there should be a good chance that one to 10 walks will yield a break."

Bobbie Johnson and Charles Arthur



What has Google been up to lately?

Busy launching products, as usual. Last week it unveiled a beta version of Google Page Creator (<http://pages.google.com>), which enables anyone to create good old-fashioned web pages. However, you must have a Gmail address that you are willing to expose to the world, and to get in you had to sign up at the launch. Within hours, Google was unable to handle the demand and stopped accepting users. How odd that Google didn't figure out that people might want to try it.

Before that, Google launched beta versions of Google Desktop 3 (<http://desktop.google.com>), with an enhanced Sidebar, and Toolbar 4 (www.google.com/tools/toolbar/T4). Desktop 3 created a small furore because of its "Search Across Computers" feature. This provides an option to search one of your computers from another of your computers, even if it's turned off. (The data is actually stored on Google's servers.) This is nice only if you don't mind Google storing your data. SAC could be particularly attractive to any hackers who can get hold of your Gmail account details. (A security flaw was found in Gmail in October 2004, though none has since surfaced.)

Google's Toolbar 4 has some neat features, such as buttons. Instead of using bookmarks with vanishing icons, you can



Google's new payments system: a threat to papers that sell classified advertising?

create buttons for sites and stick them on the toolbar. (They also go on to a Google server.) Toolbar 4 also lets you send web pages via Gmail. Unfortunately, it created so many other problems with Windows XP, I had to uninstall it.

This week, the excitement is about Google's forthcoming payments system, now available to a select few (<https://services.google.com/inquiry/sell>). If you sell things on Google Base, Google can handle the payments – making it a potential threat to eBay and PayPal, as well as to Craigslist, and newspapers that sell classified advertising. And Amazon. And everyone.

Google points out that it is already in the payments business: "Google has billed advertisers in 65 countries more than \$11.2bn in 48 currencies, and made payments to advertising partners of more than \$3.9bn." All it wants to do is extend that to your purse or wallet.

Jack Schofield

Gadgets

Beauty in the beast



Sony Ericsson's latest music-playing mobile, the W900i, is something of a beast, largely because in addition to its two mega-pixel camera and basic smartphone facilities, it has 3G facilities. Users can experiment with mobile TV, make video calls and use the phone as a modem via its easy-to-install

software. The W900i's ample storage (470MB) can be supplemented by a Memory Stick Duo card. Almost all the features can be operated without opening the screen. Bizarrely, though, it has a poor-quality speaker. Sony Ericsson also loses points for the MP3 loading software, which is tricky to operate, and a fiddly remote control. This is a quality handset, but music phone buyers are probably advised to wait for the arrival in summer of Sony Ericsson's W950i, with 4GB storage, and a superb screen that will display album art. **Ashley Norris**

Multitasking companion

Garmin is billing its latest GPS device as more than just an in-car satellite navigation system. With extra software, the Nuvi 350 moonlights as an electronic travel guide, language translator and personal entertainment system.

It performs GPS brilliantly, delivering excellent 3D maps and clear voice instructions. The translator harnesses the device's text-to-speech system to say the words you need to hear. On board is an MP3 player, 700MB of internal memory, an audio book reader, currency converter, world clock. It can also view JPEGs.

Using it is a little odd, for if you are carrying it around you need to ensure the antenna has a clear view of the satellites. While it looks great, performs the GPS basics with aplomb and proved great fun on travels round Spain, the Nuvi 350 falls down on price – £600 for the unit, plus a further £75 for the language guide and £150 for the travel guide sadly take this great little GPS unit beyond most people's pockets. **AN**

PC to grace the living room

Philips's first XP Media Center PC, the MCP9350i, scores highly for an excellent wireless keyboard and an interface that can be operated by a remote. Sockets include Scarts for hooking up video to a TV, as well high-end DVI (video) and optical digital audio outputs. The PC is also easy to install and use, thanks to a clever menu system. The PC has integrated 802.11g wireless for instant internet access and to enable audio and video streaming from other PCs in the network.

Its video performance is a league above most rival PCs. The lack of a digital TV tuner (it has two analogue ones), a fan that could run a little quieter and a hard drive of just 250GB are its most obvious failings. Nevertheless, this is by some distance the most living room-compatible PC so far. **AN**



Microsoft überblogger Robert Scoble

machines as thin as 10 sheets of paper, with a camera and a six-inch screen which he said Microsoft hoped would sell for about \$800 or less – though he added that he didn't know when that would be commercially feasible.

The device was dubbed "Ultramobile 2007", which may be a hint about when it was expected to come to market. "We do believe this is achievable," Gates said then.

Clearly Microsoft is not going to take the hardware risk this time, and will again license the software and let third-party manufacturers swallow the inevitable costs of slow early uptake. But if the device is too limited – as happened with 2003's Smart Displays (<http://tinyurl.com/qolbu>) – then the market will drop it. However if too many manufacturers pile in, they may find themselves scrabbling for market share and profit while Microsoft rakes it in, as happens with PCs.

Keith Stuart and Charles Arthur

» Show and tell online

And this is, perhaps, what makes Bebo so exciting. Although, hypothetically at least, it is possible for Beboers to contact any one of its 20 million members, most use the network not to make thousands of new friends, but "to keep tabs on people you already know," says David Mosby ("Moz" to fellow Beboers). Like many 17-year-olds, Moz has grown up on the internet. He got into Bebo by accident, being sent an email invitation from a friend a few months ago. Now he's on it every night, talking to friends from school and new ones from overseas.

Bebo caught on at his school, Oakbank in Keithley, at the start of this academic year and spread like a benign, although extremely virulent, infection. So quickly, in fact, that within a matter of days it had been banned from the school servers. It didn't matter. Bebo continued to grow after school because many children have long enjoyed the internet at home. And Oakbank school is lucky: teachers at least knew about the students' double lives, although the site has been placed on ban lists by a number of local education

authorities, which mistake the site for an ordinary chatroom.

Bebo also represents something beyond any school's control. Several teachers contacted by Technology Guardian were alarmed that so much of their pupils' personal lives were paraded in such a way without their knowledge. At the heart of social networking is an exchange of personal information. And many users are happy to casually reveal intimate details of their personal lives, which concern many adults and internet

"The etiquette on these sites is to post accurate information, and to share photographs, which flies in the face of internet safety advice"

safety experts.

Rachel O'Connell advises the government on internet safety. She recently chaired a conference in London looking at the inherent dangers of social networking. "The etiquette on these sites is to post accurate information, and to share photographs, which flies in the face of internet safety advice," she says. "In this particular social networking environment, the premise is affording people the opportunity to network with friends and friends of friends, much as you might do in a school. That's a worry because people detail which school they attend, their age, and provide photos."

Enhancing communication

Bebo says its method of communication is safer than regular email, in a very practical sense. It argues that because each user is required to give so much personal information, it is much more difficult to be abused. "Bebo is all about enhancing Beboers' real life, not replacing it," says Jim. His official title is "the deal guy". He cut his teeth at Friendster, an early



Social networking technology "enhances Beboers' real life" Najlah Feanny/Corbis

example of social networking that blazed for a few years before falling off to nowhere. "We have had a few isolated instances of abuse," he admits, "but these were rectified quickly." The fact that abuse was reported swiftly demonstrates, so far, that it has the ability to self-police.

Bebo may fall the same way as Friendster, but the most net-savvy nation suggests it may be here for good. In the tower blocks of South Korea, the kind of intimacy played out by the Beboers is already being witnessed on a national scale. Although few use names such as social networking, South Korea is hooked into Cyworld.

It is more sophisticated than western equivalents – Cyworld's integration with the mobile phone makes Bebo look primitive – but it carries the same show-and-tell culture. It is a cartoony, super-flat mirror universe but most of Korea's social activity already revolves around it. And according to Jee Hyun Oh, a devotee of Cyworld, "social death awaits" those who fail to link up. Teenagers and parents, take note.