

# INNOVATION ON THE INTERNET



Computer Weekly teamed up with internet service company Netscalibur to find the most innovative uses of internet technology in the UK. The response was remarkable and ranged from anti-vandalism surveillance to nationwide Quake tournaments. Ross Bentley reports on the best

## What the winner wins

Our winning entrant walks away with the latest Macintosh i-book laptop computer, while his



## Newport keeps an eye on schools

Our winner, Phil Cox, is a Newport City Council IT consultant, who told us about a project that uses the internet to deter vandals while maximising the use of an existing broadband network.

"Traditional closed circuit TV solutions are generally standalone systems, which are not monitored, and therefore do not activate an integral response service. They also include a heavy administration requirement, such as VHS tape maintenance, Data Protection Act registration or training."

The council had installed high-capacity fixed lines as part of its National Grid for Learning initiative, which provides schools with broadband internet access.

"Students and staff generally only use the installed systems and network for eight hours, so for about 16 hours a day this huge investment in infrastructure was unused. This meant that out-of-hours IP-based networked surveillance was possible with no extra infrastructure cost," he says.

"The linking of dome cameras installed in more than 20 schools was made possible through the use of IP video servers that feed images directly into the network. This also made it possible for



Watching brief: with the CCTV set-up, staff can catch graffiti artists in the act

authorised staff to view images from the cameras by accessing the IP address of each server on an internet browser.

"The surveillance software supplier provided additional software that enables the monitoring centre to have full control of the cameras and images to be recorded. Motion detection in the target areas is via passive infrared devices, which trigger alarms. Staff at the monitoring centre can call on community safety wardens or the police to respond. IP-based digital recordings provide easy storage and retrieval of images held on workstations that are used as monitoring devices.

"It has enable the council to dramatically reduce the level of

vandalism, saving £45,000 in glazing costs alone in a year. It is also safer for teachers to work late and provides active support for lone workers."

### Judge's comment: Les Brand, Ovum

"This represents a really good cost-effective use of IP technology and bandwidth to provide much-needed remote security of sites. The solution extends the idea of the internet as a common resource. By using the infrastructure already provided under National Grid for Learning scheme, the council has created a 'double whammy'. Although a DIY approach, it demonstrates how IP can be used to good effect without the need for highly integrated solutions that cost a lot more to implement."

## Consultant's idea wins £10,000 of services for the people of Newport

Netscalibur is a UK provider of managed internet services. The company supports more than 10,000 businesses, including blue-chip clients such as Harvey Nichols, IG Index and Lycos.

Netscalibur offers a range of services:

**Connectivity**  
Offering a scalable service, Netscalibur's portfolio includes dial-up connections, ISDN, broadband and leased lines, with both managed and unmanaged options available. These services are both resilient and cost effective and can evolve with a business' needs

**Webhosting**  
A broad range of services from shared web and co-location to dedicated and managed servers,

all with an emphasis on offering clients access to the most appropriate technology at a reduced total cost of ownership



Newport, Wales: community wins

**Messaging**  
Helping to provide messaging and collaboration functionality throughout a business, Netscalibur offers a range of services from Webmail to Managed Microsoft Exchange 2000

**Network security and VPN**  
A range of managed services to protect corporate networks against external security threats and enable disparate sites and remote users to securely exchange information across the corporate network.  
→ [www.netscalibur.co.uk/ipchallenge](http://www.netscalibur.co.uk/ipchallenge)



## Remote space watch

Astrophysicists, at the Cavendish Laboratory in Cambridge, use the internet to monitor and control a radio telescope in the Canary Islands. The telescope is called the Very Small Array and is set on Mount Teide in Tenerife. The images it provides show the beginnings of the formation of structure in the early universe.

Computer officer David Odell says, "From the properties of the image, scientists can obtain vital information about what happened in the early universe and distinguish between competing cosmological theories."

The Very Small Array telescope detects very faint variations in the temperature of relic radiation, the radiation left over from the Big Bang. "Today we can see this radiation in all directions on the sky at a temperature of just 3° C above

absolute zero, giving a picture of the universe when it was just 1/50,000th of its present age. Because galaxies must have formed out of the primeval fireball, astrophysicists have predicted that their seeds will have left imprints in the radiation," says Odell.

The Very Small Array has 14 aerials, each similar to a satellite TV dish but only 15cm across. The signals from each aerial are combined, forming an interferometric array – a technique pioneered by Cambridge physicists.

"A webcam provides a realtime view of the telescope aerials so that we can check on their performance," says Odell. "We had to have some way of monitoring things from Cambridge and putting in a dedicated line would have been far too expensive."

**Judge's comment: Chris Poulsen, chief technology officer, Netscalibur**  
"This illustrates how the ubiquity of the internet and its inter-networking capabilities extend the reach of individuals and organisations far beyond their physical constraints.

"These capabilities sweat very expensive and remote assets that otherwise would make projects such as these unaffordable."



Canary skies: but the VSA is run from Cambridge



## Files found with P2P

Matthew Hayhurst, a programmer at a large trading systems company in central London, has come up with a bona fide use of the peer to peer software Kazaa, which is usually associated with the illegal sharing of MP3 music files across the internet.

"Having a large office over two floors and offices worldwide its often difficult to track down a file on someone's machine or on a file server.

"By running Kazaa on our local intranet and using its powerful search and index feature, finding something like January's sales report on the network is easy and painless," Hayhurst says. Users can also search for files created on a certain date or with certain metadata keywords.

"It is a simple and easy-to-set-up service on any Windows machine. By firewalling the right ports we can restrict Kazaa to our intranet and index only the files we want so there are no security issues. And it reduces the time taken to find files."

Inter-office bandwidth is also saved when a file is mirrored on someone's machine within the office, instead of having to download it from New York.

Hayhurst says the use of Kazaa in his company has grown organically and is not something



Sharing information: P2P makes it easy

that is used company-wide.

"It is mostly just something we toy with, but we are trying to push this as a company policy – although if someone was to write a similar application with a company-specific focus, we might have more luck. It is probably best to think of it as a super advanced version of the Windows file search," he says.

### Judge's comment: Chris Drake, senior research analyst, IDC

"Speeding up the way in which employees are able to use the company intranet will always bring direct benefits to a business. The simplification of search and indexing features makes the process of finding the relevant data faster and more efficient. The process is also made quicker by the use of file duplication or file 'caching' on computers that are nearer to the end-user."

## The close, but not quite winning, entries also showed a lot of imagination

### Football focus

George Simitis, a senior analyst and programmer at a large IT supplier, says, "Last year, our company decided to treat us all to some live World Cup football at our desks. It had a PC with a TV card installed that was tuned to the channel showing the England and Eire games. This PC was shared to the network and an e-mail explained where to point our browsers. Some staff viewed it full screen, while others kept it in a corner of their desktop. It was very well received."



### Portrait of a website

Michael Ward at BT paints a picture of IP innovation at work. "The Tate website displays more than 50,000 images of art online. As part of Tate Britain's centenary development, BT and Tate developed a parallel virtual method of navigating the collection online called Explore Tate Britain.

This enables visitors to interact with the permanent displays via the gallery floorplan and a chronological timeline."

### Testing the line with Quake

Gaming enthusiast Eddie Summer says, "At a previous employer, we techies could often be found playing Network Quake out of hours. One person would be the server and colleagues from three offices around London and one in Glasgow would battle it out. You would be surprised at the number of managers who believed us when we said we were 'only testing a network connection'."

### Drinking up the perks

James Masson, from Holsten UK, sent this thirst-quenching idea. "Our nationwide salesforce now has access to the full range of office IT services, thanks to VPN and broadband. These include being able to order their personal 'beer

allowance' faster than ever and watching videos of themselves at recent conferences, plus e-mail, network storage, ERP, financials, stock planning, instant messaging and business intelligence."

### Culinary competition

Karen Morris at Interserve says, "The management decided to provide a free buffet for staff one day a month to encourage communication with other teams. Webcams were set up in the Bristol and London offices and hosted over a general IP address so all staff could view London and Bristol at the same time in different Internet Explorer windows. Rivalry between the offices was rife; champagne flowed at Bristol while London had a pot of tea. The event was so successful our West Bromwich office is considering getting a webcam as well. It brought out a whole new side to networking."