

chalk it up to experience

As we enter a wire-free age, where internet access doesn't require a fixed connection, some of the latest ways to get online push the boundaries of legality. Andrew Charlesworth looks at the warchalking phenomenon and what it means for the future of the web

Broadband internet access is great when you're sitting at home or in the office, but you can't take it out and about with you. Or can you?

Increasingly, if you have a wireless access card, there are places offering you the chance to get online with no need to physically plug your PC into a network. Some of these are intentional: some very unintentional. Both are changing the way the internet is accessed and organised.

Stormy reception

For the last couple of years, wireless PC networks based on the 802.11b or Wi-Fi protocol have been gaining acceptance as a means of setting up a LAN (local area network) using radio waves to connect PCs together instead of cables. Such networks have been installed in offices, schools and even homes.

A Wi-Fi LAN means you can site PCs anywhere within the 'cloud' of wireless signals given off by the base station. These signals link each PC to the network server and via that server to the internet.

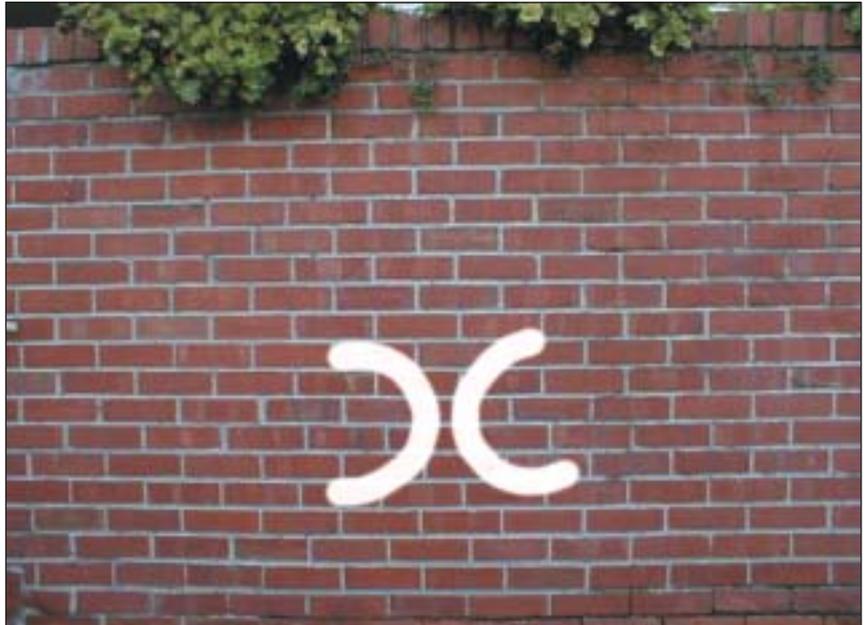
But the cloud doesn't stop at the walls of the building. It radiates out for 100m or more, into the street, the office car park or even into your neighbours' houses.

For a business that wants to create an area of public access, such as the Starbucks coffee chain or Birmingham airport (both of which have recently rolled out hotspots to offer customers wireless access to the web), this feature of Wi-Fi is to their advantage.

But for a business or home user that wants to keep their network private this ease of access presents a problem. Unless the default security settings used when the network is installed are altered then anyone within range, armed with a laptop and 802.11 card, can tap in.

Hey you, get off my cloud

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the web and the contents of your computer at your expense.

Of course, Starbucks wants customers to sign up for its wireless network service. If the company decides to charge people then it will pull in extra cash, if it doesn't charge then you still might stay and drink an extra latte as you surf. But a City law firm probably wouldn't be so keen to open up its network to any random passer by in Chancery Lane.

But this is just what one particular group of people are hoping to do: find unprotected networks and tap into them. This practice has been dubbed 'warchalking' and a search on Google will turn up numerous websites by and about people on both sides of the Atlantic who spend their time locating bleeding wireless networks that can be accessed from outside the premises.

Marking your territory

Some of these champions of wireless squatting tour office districts in cars (known as wardriving), making databases of locations where wireless networks radiate (intentionally or unintentionally). Others proceed on foot or bicycle, marking

talking heads

Mark Rogers has been at the helm of Apple's UK division for the past two years. He talks to Alex Katz about the efforts the company has been making to up the head count of users on the Mac platform

AK Your current advertising campaign targets digital camera users, encouraging them to buy a Mac. Do you think PC users are responding to it?

MR This is all part of our Switchers campaign, encouraging PC users to switch to the Mac. We've got the opportunity to get in front of new people to show them that there are multiple reasons to switch.

AK Is this part of Apple's wider strategy to broaden the appeal of the Mac platform to non-Mac users?

MR Without question – we're trying to go after 'the other 95 percent'. If you're looking to grow your market share then you must target users that are already using something else. There aren't many people out there that don't own a computer these days so you have to go after those who have already made a purchase decision, perhaps on another platform.

AK So if a long-term PC user were to ask you why they should consider the Mac, what would you say?

MR What do you do on a PC that you can't do on a Macintosh? When you've established that everything PC users do they can do on a Mac then you show them the other things they can do as well. I think we've got plenty of applications that bring added value to the platform – iCal, iSync and iTunes, for example.

AK Have you had any success in persuading people to take the Mac more seriously thanks to products like the iPod?

MR If people have a great experience with the iPod then they'll start to associate that with having a great experience with their computer. Having a PC version of the iPod allows them to experience it in an environment they're comfortable with. They get to use it, they get used to the Macintosh ethos of product design and user interface. Hopefully that will encourage them to come and look at the Mac.

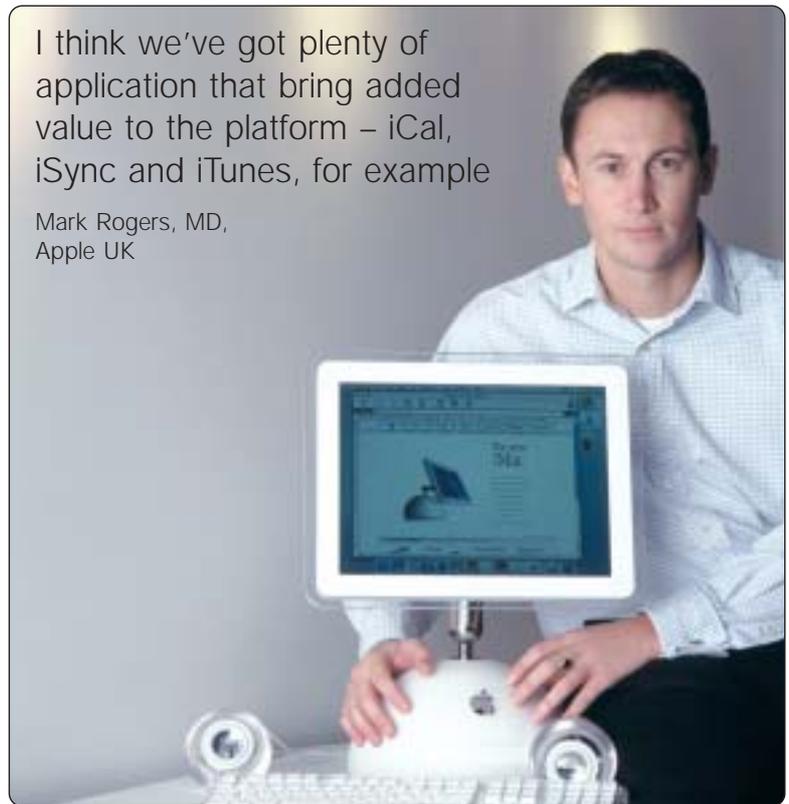
AK How do you respond to the common criticism that Macs are underpowered and overpriced compared with the competition?

MR If somebody just wants the cheapest machine they can get then we're going to struggle against some of the very low-cost manufacturers. But that's not necessarily where we want to be, because those companies aren't making any money and we're not interested in that.

We don't want to play the price game; we are going to play the innovation game and bring new technologies to the market. And if

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Mark Rogers, MD,
Apple UK



we can convince you as a customer that you want this new technology then hopefully you'll get past the gap in pricing.

AK Is it frustrating that just as Apple makes a huge jump with its OS along comes Microsoft with Windows XP, which is a similarly giant improvement over previous incarnations?

MR The competition is always going to do that. But we feel we can continue to innovate and bring better technologies to the marketplace. In some areas our competitors are still trying to catch up.

AK What do you feel about Microsoft's current experimental phase, trying out technologies such as Mira and tablet PC, hoping to find the next big thing?

MR That seems to be innovation for the sake of innovation. Tablet PC is an interesting concept but I'm not sure it has a home right now.

What it has done is create loads of interest, and it's got people excited about technology again. That's great because if they're looking at technology then they'll start looking at the alternatives. ■



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Crisp reception

To access a wireless network your PC needs an 802.11b card equipped with an antenna to pick up the signal. Even when out of range of the antenna provided in such a card, a PC can be connected using a more powerful or high-gain antenna which can be homemade. Most famous of the homemade antennae is the version using a Pringles tin, instructions for which can be found all over the web – for example, www.arwain.net/evan/pringles.htm.



the pavement with chalk symbols to indicate where the vulnerable networks are, hence warchalking. The symbols show where a wireless network is present, what bandwidth is provided and whether the access point is secure or not.

Is this practice illegal? Section 1 of the Computer Misuse Act 1990 makes it an offence to gain unauthorised access to a computer system. But warchalkers don't actually access these private networks. Furthermore, they claim that by calling attention to unsecured WLANs (wireless LANs) they are doing the company in question a favour by alerting them to a security weakness.

"We do not in any way attempt to gain access to the network behind this access point, or try to break into it, or 'take it down', or any such activity. This is of no interest to us," says Michael Puchol, a security consultant at Sonar Security and self-confessed wardriver. "Our only purpose

Wireless public access on subscription



There are currently four companies offering wireless public internet access, at a price, around the UK: BT Openzone, Wayport, UK Explorer and Megabeam.

BT Openzone has 36 locations ranging from Glasgow to Ascot and Ipswich to Birmingham, but with the majority in London. Subscription rates range from £6 for 60 minutes in a 24-hour period to £85 a month.

Wayport is big in the US and has access points in two Four Seasons hotels in London and one in Dublin. UK Explorer, in Birmingham airport, charges £4 a minute or £39 a month. Megabeam plans to open its access points around railway stations in the UK and Europe. A year's pan-European subscription will cost £587.

is to alert users of wireless networks about the risk of not securing them."

Of course, a firm which leaves the keys in its company cars wouldn't be too happy if someone put a big sticker on the car saying 'keys left in ignition'. But then nor should they be surprised if people jump in the cars and take them for a joyride, whether the sticker is present or not.

Public service broadband

While this battle between 'white-hat' benevolent hackers and company lawyers grabs the headlines, there's a whole public WLANs movement intentionally providing subscription-based or even free access.

Organisations such as Arwain in Cardiff and Consume in London are voluntary affiliations of people who set up a WLAN connected to a broadband always-on

internet connection, so that people in the vicinity can get online whenever they need to. Similar organisations exist across the US and Europe.

While the government, Ofcom, BT and its customers argue about the slow rollout of broadband to urban areas, these community groups are solving the issue without the help of vast marketing budgets or the hindrance of company politics. Take a look at these examples: Arwain (www.arwain.net/arwain.htm); Consume (www.consume.net) and Free2air (www.free2air.org). The likes of Consume provide a handy map showing the location of its nodes so you can check whether you are within range.

The back door's wide open

BT and the cable companies are understandably wary of this trend because it could radically change the way the web is accessed by individuals, causing a big shift in the political and economic geography of the internet.

Currently our web access is governed by whichever ISP we subscribe to. The model is of one paid-for connection per person or per company. But Nicholas Negroponte, internet guru and professor of Media Technology at MIT, predicts a quickly evolving 'lilypad' topography, whereby WLANs proliferate to the point where we will be permanently within range of always-on broadband wireless internet access. If that happens, who will pay for connections? Will internet access be reduced to the added value in a cup of coffee? ■

"Our only purpose is to alert users of wireless networks about the risk of not securing them"

Michael Puchol,
security consultant, Sonar Security