

Smart codes

SCAN WITH YOUR MOBILE AND CONNECT TO THE WORLD

WHAT THE SYDNEY MORNING HERALD IS DOING

Smart codes, known as QR codes, are a technological breakthrough: scan the code box with your mobile phone camera and the phone will connect to a website.

From today, if you have this technology, you can scan the Herald's QR code box and it will take you to the top five stories at smh.com.au.

If you don't have the technology, you can download it free from www.mobius.telstra.com.au.

Starting today, the QR code will appear on Page 2 of the Weekend Sport liftout.

From Monday, the QR code will appear every day on Page 2 of the Herald.



See the back page of this liftout for our guide to using the QR code to access the Herald's website.

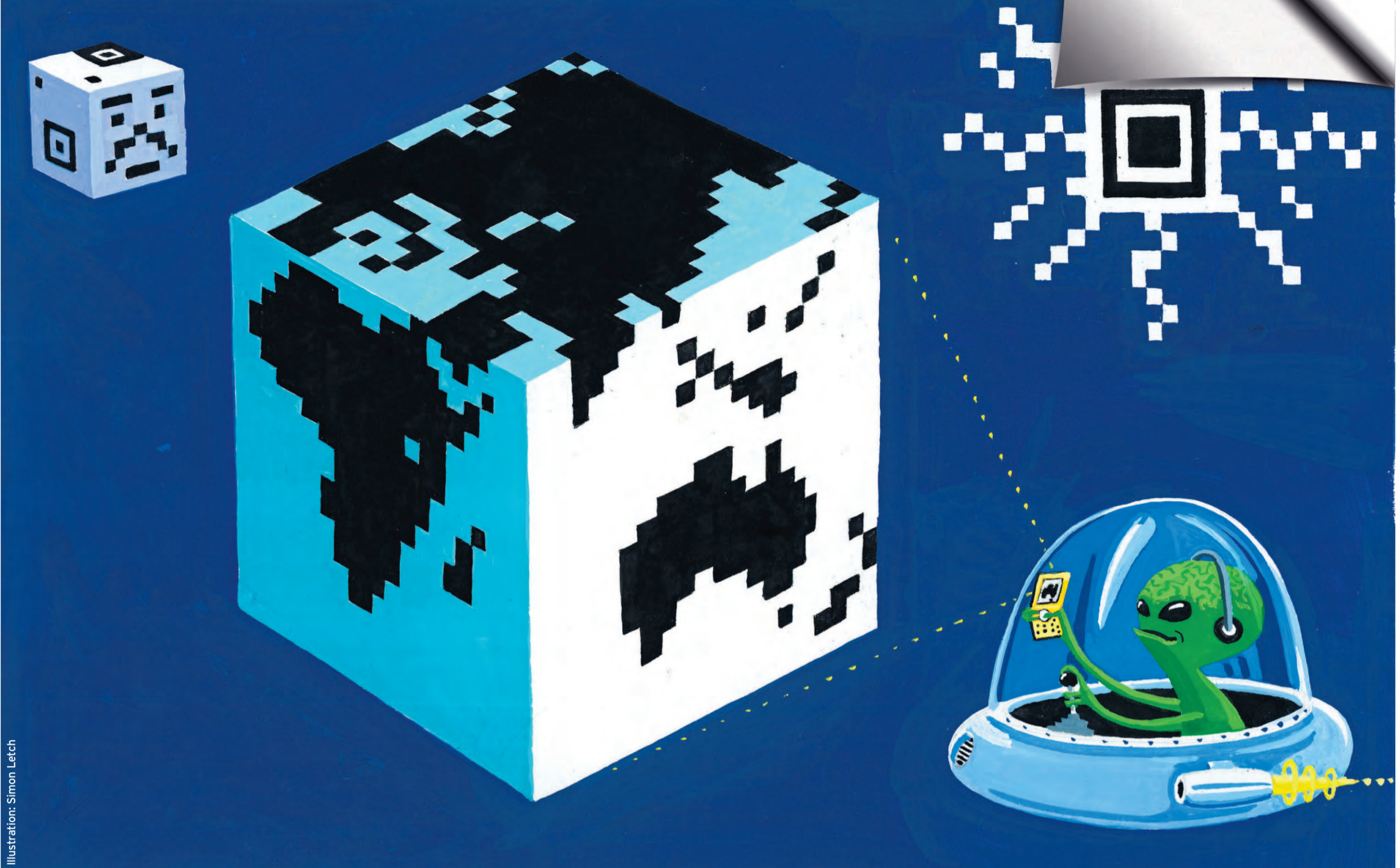


Illustration: Simon Letch

Think outside the box

A new type of barcode opens up a world of opportunity on your mobile phone. By **Maria Nguyen.**

Imagine you're waiting at the bus stop. It's cold and the bus is late. Again. A poster at the bus shelter for the latest blockbuster movie catches your eye, especially what looks like a small, square black-and-white barcode.

You grab your mobile phone and scan the code with your phone's camera. This action instantly connects your mobile to a website where you can watch the movie trailer and video interviews with the film's stars and find out where and when the film is showing that weekend.

You're then prompted to sign up for a two-for-one voucher, which can be sent to your handset and redeemed at the cinema. The bus has finally arrived. Quickly, you hop on and catch up on reading today's paper.

There's an ad for a special package deal to Bora Bora in the travel section, and when you see a similar black-and-white square barcode alongside the photo of an exquisite beach, you scan it with your phone's camera.

This time, the square barcode connects your mobile to a website that features a video tour of the Bora Bora resort, information on various package holidays and contact details for the travel centre.

You're asked to choose between saving the travel agent's phone number onto your mobile or be connected to a sales consultant to discuss trip options.

A MOBILE REALITY

By now, many of you may be thinking these are nothing but pie-in-the-sky

scenarios, dreamt by fanciful marketers who have, themselves, been bored witless waiting for too many late buses. These scenarios and many more like them, however, are already the daily realities for most of the 90 million-plus mobile phone users in Japan, a mobile phone-mad society where consumers and advertisers (from corporations to the local store) have come to embrace these barcodes as part of everyday life. They're a simple, convenient way to share and store information on mobile phones.

Called QR codes (short for quick response codes), these two-dimensional square barcodes are set to become a familiar site in Australia, following Telstra's decision to sink substantial investment dollars into the technology.

In partnership with its business divisions BigPond, WhereIs, Sensis, City Search and Foxtel, as well as media (including this newspaper's publisher, Fairfax) and major entertainment and sporting brands, Telstra will deliver information and services, including news, weather, sport, music and videos.

More importantly, to fast-track the technology, Telstra is again following in Japan's footsteps by developing mobile phones that come standard with QR code readers, a huge investment that involves partnering with handset manufacturers.

Tim Copper, Telstra's executive director of consumer and channels, says the carrier expects 1 million handsets to be QR code-reader enabled by the end of the year. Copper says many Telstra

advertisements will feature QR codes – called Telstra Mobile Codes – with the initial focus on drumming up interest in the barcodes and what they can do.

"We've got a range of content and we're doing a range of things and promotions to encourage people to use codes and get excited about what codes can do for them," Copper explains.

"We want to capture the customer's imagination ... we're looking for customers to have those water cooler conversations, about what these codes are. We want them to be curious and to try it out and experience what they can get through QR codes," he says.

The Telstra Mobile Codes are already appearing on Telstra-related advertising material including joint promotions with Sony Ericsson, Sony Australia and dance music group Sneaky Sound System.

CAPTURING YOUTH

Industry experts say Telstra is introducing QR codes to attract a younger audience. The telco already dominates the business sector and older demographics, but youth is still an elusive, untapped market for a telco that is trying to work on developing a "cooler" image.

"Telstra dominates the market here but it's mainly an older customer base and business customers," says Antony McGregor Dey, the chief executive of QM Codes, a QR code marketing specialist.

He says QR codes are a platform for Telstra to earn more money from the

content it already owns across BigPond, Sensis, CitySearch and Foxtel. It will also generate more income from data-usage charges levied on customers accessing the content through the \$1 billion high-speed Next G mobile broadband network.

Industry observers also agree the timing and approach are right – as Australians are increasingly developing an appetite for multimedia content on their mobiles.

Experts say the fact that, like NTT DoCoMo in Japan, Australia's largest telco is driving the adoption of QR codes is a positive. And Telstra's decision to preload many handsets with a reader is also seen as a smart move to help overcome any apathy consumers may feel towards manually downloading the software.

"There will be some general consumer apathy," McGregor Dey says. "It's about giving them that reason to bother and making it easier for them ... [and in terms of Telstra's investment] the most expensive bit is shipping the handsets and pre-installing the software readers. But I think it's a bloody good thing and the industry here will kick off over the next two to three years."

THE POWER OF THE BARCODE

The big advantage of QR code technology is its simplicity. It acts like a fuss-free short cut that quickly and easily links, for example, a static ad in a magazine, an outdoor poster or a newspaper classified to a website or other media content.

Instead of manually opening your

mobile's web browser, typing the web address and surfing for content using the small keypads of your phone, the QR code, once recognised by the reader program, automatically opens the web browser on your mobile and activates the information embedded in the code.

While QR code trials are taking place worldwide, according to Telstra, Australia is the first country, outside of QR code leaders Japan, to develop, champion and launch preloaded handsets on a mass scale.

The preloaded Nokia 6120 mobile is already available in Australia, while the Sony Ericsson W760i and Samsung U900T handsets will be sold, installed with Telstra's code readers, over the next week.

All new-model Next G mobile phones will be preloaded with the Telstra Code Reader, which is similar to the i-nigma reader that is standard in more than 90 per cent of mobiles in Japan.

Telstra says its existing 3G and Next G customers will, in the coming weeks, be able to download reader software to access QR codes that will offer free promotional and paid content and services, across Telstra's business divisions and marketing partners.

In addition to company QR codes, anyone can create their own QR code online, embedded with their personal details and then printed, for example, onto business cards or clothing.

In Japan, people wear T-shirts printed with their own code so friends and passers-by can scan and instantly upload

their details, such as Facebook sites, to a mobile handset.

Copper and QR code specialists agree that another key challenge to getting QR codes off the ground is teaching consumers to recognise the barcode as shorthand for "reward".

"We're trying to educate consumers that the code means they will get a benefit by scanning it," Copper adds.

"Customers are fickle. These days they will try something once, maybe twice. So the first experience needs to be so good that they will come back."

"Our content will have a strong push for the youth market to use it as part of social networking, and go all the way through to advertisers picking this up and using this as a whole new way to bring physical media to life."

Adam Dunne, sales and marketing director of Aura Interactive, a Sydney mobile marketing agency working with telcos and big brands such as LG, Ford and Virgin Mobile, describes QR codes as "physical world connectors".

"When you create a piece of print advertising for example, it's fixed, but obviously, once you can click through to, say, multimedia content on your mobile via the QR code, it makes that once-static ad dynamic and interactive."

McGregor Dey, from QM Codes, even refers to the black-and-white square code as a "brand in its own right".

"Nothing in the market looks like it and, once you know how it works, it really will be like a call to action," he says.

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Smart codes

SPECIAL PROMOTION

The choice is yours

Phone users have been slow to embrace the advantages of 3G, writes **Lia Timson**.

Scanning QR codes is yet another clever trick that today's accessory of choice, the 3G phone, can perform. But carriers, manufacturers and advertisers will be hoping consumers make better use of the newest function than they have to date with the handset's other functions.

Phone companies and manufacturers would have consumers believe an internet-enabled 3G phone is the epitome of a connected lifestyle. A way to watch sport, download music, share videos, trade emails, get news updates, find restaurants,

and even stay in touch on Facebook and MySpace.

Some phone users are doing just that but the latest research shows they tend to be a small group of young technology embracers. The rest are using their phones just to make calls and send text messages – the basic services provided by the old 2G phones.

One of them is Dr Karl Kruszelnicki, mathematician, physicist and broadcaster. He's ditched his internet-enabled phone for a "bare-bones" one. "In most cases, I don't need a fancy phone; therefore I don't bother with it. I went back to a phone that just makes calls but it's getting harder to get one of those."

Australia now has more than one mobile phone for every man, woman and child. Last June, there were 21.1 million official subscribers, with a third of users having more than one service or SIM card to their name.

This represented mobile phone ownership of 81 per cent, according to research conducted for the Australian Communications and Media Authority. One in three subscribers had a 3G phone.

Annual sales now exceed 10 million handsets, mostly 3G.

For the moment, however, nearly 70 per cent of 3G phone users indicated they are not interested, think it's too expensive or don't

know how to surf the internet or access any of the new services available on their headsets.

The research also highlighted how "confusing, complex and difficult" it is for many people to make informed decisions about phones, services and plans. Often they are confronted by jargon and incomparable phone packages.

Dr Marisa Maio Mackay, director of research for m.Net Corporation, responsible for the Australian share of the worldwide annual Wireless Data Services Study with the University of Adelaide, says that's all about to change. "By now we would've expected (mobile internet use) to have transferred to the masses, but in the last 12 months we've started to see that moving. People are more comfortable using it," she says.

Bundled voice and data packages

and capped plans have convinced some consumers to try the services.

Jana Kotatko, head of communications and internet at 3 Mobile, says 64 per cent of the company's personal and business subscribers are using their phone for data services.

Telstra says access to internet content on its 3G phones is growing at 45 per cent a month. Better browsers, Qwerty keyboards, the ability to run multiple applications simultaneously and a defined cost are key factors. "Being able to confidently use the service and know you won't get a nasty shock at the end of the month is essential," Kotatko says.

But telecoms analyst Paul Budde says consumers are not yet convinced. "There are still too many problems with far too high charges for any mass-market development."

MOST POPULAR 3G SERVICES

Have 3G phone but don't use 3G services **68%**

Use mobile internet **18%**

Video calling **14%**

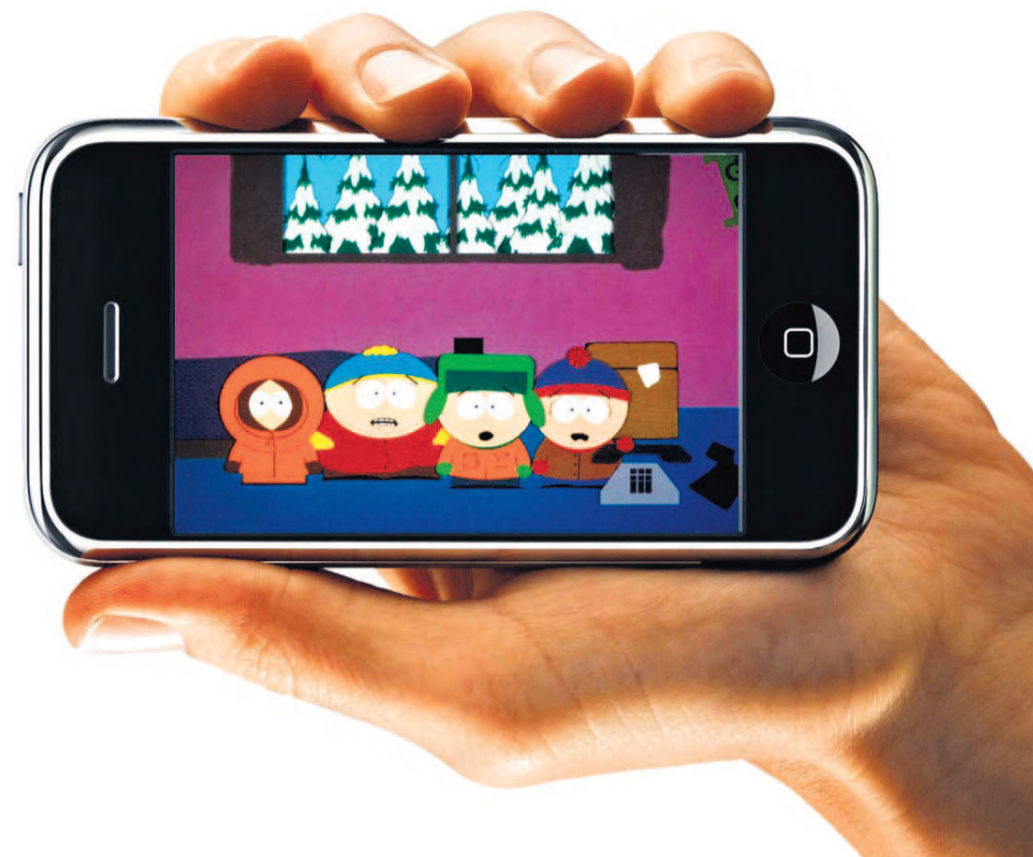
Music streaming/download **7%**

Mobile TV **3%**

Gaming **3%**

Sports/news/weather **1%**

Source: Woolcott Research 2007/ACMA (Telecommunications Today, Report 5, 2008) Source: 3 Mobile



WHAT YOU NEED TO KNOW ABOUT QR CODES

By Maria Nguyen

What are QR codes?

QR codes are similar to the price barcodes found on the packaging of supermarket items. However, QR codes, which are also known as smart codes, hold much more information, including website addresses, extensive text and phone numbers. A price barcode can hold only about 20 digits but QR codes can hold up to 7000 digits and 4300 alpha-numeric characters.

What do they look like?

They look like a square black and white puzzle usually measuring 2cm x 2cm. See Page 1 of this guide for the code created for our website with the i-nigma software (see "Can I create my own QR code?" below).

How do QR codes work?

They can contain URLs, text and numerical information, such as phone numbers. This information is encoded into the square barcode and is decoded by a mobile handset that has code reader software installed. The program uses the phone's camera to scan and decode information stored within the code.

How does my mobile phone scan the QR code?

Once the reader software is installed, your mobile uses its camera to scan the information embedded in the QR code. Depending on your phone model, the camera will either automatically scan the code when you place the viewfinder over the code, or it will prompt you to snap a photo of the code – after which, it will decode the information.

What can QR codes do?

They can direct your phone to automatically open its web browser and connect to a website. The code

might also direct your phone to call a number, save a number to your phone's address book, or to save a date to your mobile's calendar.

Where can I find QR codes?

They are commonly seen in Japan where they were developed and have grown to become a ubiquitous marketing and social networking tool, typically linking ads in newspapers, magazines, billboards and packaging to interactive websites and media-rich content. They are also becoming popular in South Korea, with Asian, European and US markets also conducting consumer trials of QR codes. In Australia, Telstra's investment in the technology means we'll be seeing more QR codes from now on.

Will I have to pay for content after I scan the QR code?

Depending on what's embedded in the code, once you scan it, the reader program will ask if you want to connect to the website, or store or connect to a phone number. Whether content is free or paid depends on each QR code offering. Generally, the codes are simply a short cut to link your phone to a mobile website where you would normally pay for accessing and downloading data on your phone. You would also have to pay the normal charges associated with making phone calls. Reading text or saving a contact to your address book would usually be free.

What do I need to start scanning QR codes?

One of the new Next G handsets with preloaded code reader software or a relatively new web-enabled mobile phone with a camera and reader software.

How much does a preloaded Telstra handset cost?

Prices will vary depending on the phone and plan you choose. See www.telstra.com.

I'm not with Telstra, can I still scan QR codes with my mobile.

You can download free, independent software programs from websites such as www.i-nigma.com (similar to Telstra's QR reader) and reader kaywa.com. However, you will need a 3G phone and, depending on the make and model, the software might have issues recognising or integrating seamlessly with your phone, especially if it's an older phone. Once you have the software, you can scan Telstra Mobile Codes and access content that is not exclusive to Telstra customers. QR codes are internationally recognised so you can also access non-exclusive content from any QR code in Australia or overseas.

Will I need to sign up to a mobile phone data plan as well?

It's recommended that you do, as many QR codes will direct your phone to content on a mobile website and you will need a data plan in order to access the internet on your mobile handset.

Can I create my own QR code?

Yes, it's very easy. Go to QR code generator sites such as www.i-nigma.com/personal/Create.asp or reader.kaywa.com/faq/29 and follow the easy steps. Once you have saved the QR code to your computer or flash drive, you can print it onto most surfaces, including paper, business cards and T-shirts.

Can anyone read my QR code?

Yes, if they have a 3G mobile phone with a camera and a QR code reader.

READ ALL ABOUT IT

By Maria Nguyen



The QR codes are being trialled and championed by media companies in markets such as the United States, Britain and Italy, where the main hurdle has been encouraging people to download the QR code reader software onto their mobile phones.

Britain's largest-selling tabloid, *The Sun*, has been leading the push for QR codes. But despite a circulation of about three million, its December 2007 promotion of QR codes led to just 11,000 readers in the football-mad country overcome their apathy to download the QR code software and access football, Page 3 girls, and other content.

In Australia, Fairfax is partnering with Telstra to provide news, entertainment and sporting content, such as coverage of the Beijing Olympic Games.

This media-carrier partnership has been trialled or replicated in many mature mobile markets. The carriers are hoping QR codes will drive greater data revenue growth, while media companies hope the technology will become a distribution platform through which they can make money from their content and build a bridge between the digital and print mediums.

The hurdle of consumer apathy, however, will still be faced by Telstra in Australia to some extent. Telstra may be leading the market with more than 3.5 million 3G subscribers, but unless these customers fork out to buy the new handsets preloaded with the QR code readers, they too, will have to download the software.

And if you're with Optus, Vodafone or Hutchison 3 – who will not be following in Telstra's footsteps – you'll only be able to read Telstra Mobile Codes, or any other QR code, if you've downloaded a third-party reader program that's compatible with, or recognises, your web-enabled mobile phone.

Antony McGregor Dey (pictured), the chief executive of QM Codes, a QR code marketing specialist, says this "challenge of general consumer apathy" is also related to cost.

The data charges associated with using mobile internet services are still relatively high in Australia compared with many Asian and European markets. The result is the majority of Australians do not have data-access plans for their mobile phones (many still won't know they even need a data plan to use the internet on their mobiles), which means they will miss out on accessing 3G content, including QR-encoded content.

The executive director of consumer and channels at Telstra, Tim Copper, says its investment in QR codes and preloaded handsets will encourage mobile internet use, while the free software upgrades for Telstra customers will also help drive QR code content.

Telstra also hopes its Telstra's portfolio of planned services will make the company attractive enough to encourage phone users to switch from competing carriers.

"We want to show that the mobile is becoming a utility beyond just voice and text – it's much more than that, and the code is a shortcut way to enable these other services," Copper says.

"So, yes, this will get us faster adoption of mobile internet usage, but also, the consumer benefits because they get what they want simpler, faster and easier."



World squares ... QR codes are appearing overseas in newspaper advertisements, on shop shelves and even on T-shirts.