



READY...

ONE, TWO, 3G

The curtain is about to rise on a new world of 3G multimedia communications and one company is pulling out all the stops to make showtime an unforgettable experience.

By Justin Quillinan



A picture is worth a thousand words. That's one of the crucial differences between 3G (third generation) mobile multimedia communications and 2G. Soon, when we communicate via our mobile handsets we will be able to not only talk to each other as we do with 2G but also to *show* each other what we mean.

With the launch planned for the UK in autumn this year, and with Italy, Hong Kong and Sweden on track to follow soon after, 3G is set to make a real difference to people's lives, and Hutchison will be in the vanguard of that change.

In the past two years, telecoms operators have spent billions buying 3G licences in the hope that they could do something spectacular with them. However, when the buying frenzy abated some analysts concluded that prices paid were too high for what amounted to little more than pieces of paper entitling them to a slice of the wireless spectrum.

But not everyone is writing off the value of these licences. "The UMTS spectrum is like real estate," says Jeremy Green, a research director at Ovum in the UK. "It's a limited commodity that will not go out of fashion – and Hutchison knows a thing or two about real estate."

The Group has so far secured eight licences, each within strict budget limits, and walked away from others that didn't make sound economic sense.

Unfettered by 2G legacy networks



MIRANDAYIU (4)

and services in Europe, Hutchison has been building out infrastructure and striking high-profile content deals to ensure that spectacular things will happen.

Says Matthew Mo of J.P. Morgan: "In contrast to many European telecom analysts, [Hutchison] believes that a 2G operation is a burden as 2G operators do not have the right organisation to manage, monitor, and generate products for 3G users. We should bear in mind that the negative sentiment surrounding 3G is created by 2G operators, which have good reason to be bearish as their 3G rollout might eat into the profitability of their current 2G operation."

Group Managing Director Canning Fok is unequivocally upbeat about 3G: "The more I get involved, the more I feel confident," he says. "The building blocks are 99% complete and we are now in execution mode."

TRAILBLAZING

The rollout will begin in a few short months, with Hutchison 3G companies launching the new services under a new global brand. Starting in the UK and Italy, followed by Hong Kong, Sweden, Australia, Denmark, Israel and Austria, these companies will blaze a trail into a new world of mobile multimedia that promises to be as different from existing offerings as TV was when it overshadowed radio.

Analysts differ over the timing, but they generally agree 3G will be a key driver into the next technology era.

"In the short term we are being pragmatic about 3G's business prospects," says Declan Lonergan, Research Director, Wireless at Yankee Group Research in the UK, "but in the long term we fundamentally believe 3G will be a success. Hutchison is coming into an exciting market with some interesting ideas."

The ink has already dried on contracts to offer richer content than ever before.

Voice will still be there, of course, but 3G will go far beyond 2G's low data rates to harness the power of multimedia. It will create a wireless environment offering complex colour graphics, quality audio and video, and high-speed file transfer for business use. New services will include entertainment, news, current affairs, sport, and multimedia messaging in a way never seen before.

Those companies that do make a success of 3G stand to reap rich rewards, though opinions differ on

how much revenue will be involved.

The UMTS Forum, the independent body that promotes the uptake of 3G, recently published a study that concludes annual 3G service revenues will reach US\$322 billion in 2010.

Forum Chairman Dr Bernd Eylert says the opportunities ahead aren't just for "techies" and early adopters, but for everyone. He advises operators to "reach out to their customers" and learn from the current 2G boom in text messaging (SMS) where children usually end up teaching their parents what to do. SMS's multi-media alter ego (MMS) should be simple and enjoyable to use, he said.

Such ideas have been on Hutchison's agenda from the word go. The technical nuts and bolts behind the scenes will be crucial, but equally important to 3G's success will be the greatly enhanced customer experience, which Canning Fok describes as "adding eyes to the ears" that everyone is accustomed to in 2G.

Film clips and video postcards will soon become commonplace. Parents will be able to eyeball their children from their offices and not only wish them a good day at school but also tell them to comb their hair before they go! Business partners will video conference and exchange complex data without ever meeting up. In medical emergencies, patients' vital signs will routinely reach hospital staff before the patient arrives, saving many lives.

Curiously, football – a European obsession – could hold the key to open a treasure chest of opportunities for 3G. Whilst Hong Kong fans might favour horse racing and Australians cricket, some of the biggest content deals struck so far have involved football action – 20-second clips of championship match highlights, allowing fans to keep close to the action wherever they are.

Illustrating the power of football to get people talking, mobile phone companies had to put up temporary base stations near the stadium to cope with some 50,000 extra calls made during the Scottish Cup Final played in Glasgow in May this year.

Such deals don't stop on the pitch either. 3G's ability to personalise services to suit customers' interests includes location-based offerings. If you follow a particular team, you might want to know that its star player is doing a book-signing event a few miles from where you happen to be. Your 3G device will not only alert you to the information, but also show you how to get there!



"The building blocks are 99% complete and we are now in execution mode."

Such capabilities have long been the stuff of science fiction, now they will soon be accessible to the general public. 3G has the speed to deliver content and applications in a way that 2G and even 2.5G – General Packet Radio Service (GPRS) – couldn't hope to match.

"Some mobile operators claim that 3G gives the same services as GPRS, only faster. This is absolutely untrue," insists Bob Fuller, joint CEO of H3G Italy.

"3G is an entirely new market that has nothing to do with previous technologies. The network is broadband and 10 times faster than GPRS. As regards services, only 3G can guarantee true multimedia and interactivity in real time, where the quality of the customer's experience feels 'real'."

With the launch a few months away, observers will be watching closely to see what has been achieved so far and what exciting opportunities lie just ahead.

BUILDING BLOCKS

Hutchison 3G UK won Licence-A – the highest bandwidth of five – in the British auction in May 2000. In just 18

months it grew from a handful of staff to 1,500 full-timers and 600 contractors. Employee numbers will rise to around 3,000 over the next couple of years.

Managing Director Colin Tucker confirms that the building blocks of 3G are largely already in place in the UK, namely the 3G devices, the network and the middleware.

Hutchison has no intention of following the example of some GPRS operators who had nothing to sell when they launched. Customised 3G devices, manufactured by Motorola and NEC, will be available from Day One. These handsets will support multimedia capabilities and allow seamless transition between 2G, 2.5G and 3G systems.

Equally important will be the core network infrastructure that will make the devices work.

"We can look at the infrastructure behind the handset in two layers," says Tucker. "There's the radio network which provides the connectivity out to the handset, and then there's the applications platform which ensures that content can be deciphered."

The radio network is the connectivity bit – switches, transmitters, fibre-optics etc. Several vendors have been chosen to help build the networks, including Nokia, Siemens-NEC, 186k, Nortel Networks, Ericsson and Motorola.

"On top of the network is the applications platform," Tucker explains (*see sidebar, p.13*). "As we needed to move fast, we decided to take ready-made large blocks of software – a billing system, the ISP to deliver the content and so on. We modified these, and then tied them all together with the EAI (Enterprise Application Integration) level. The EAI acts as a highway between all of these pieces. All the communications are done across this layer."

In the past, most of the 2G architectures were effectively one piece of software and therefore much harder to upgrade. However Hutchison's approach allows it to quickly build complex functionality by taking significant pieces of ready-made software and plugging them together through this standard interface.

"If we decide to deploy a more sophisticated system, we can remove one piece and replace it with another without replacing all the pieces," says Tucker.

Care has also been taken with the location of base station sites using existing sites where possible to speed things up and reduce environmental impact.

Services will embrace content from

many sources and the technical “translation” work to enable content to be broadcast to 3G devices has been outsourced to the BBC.

“We can save a significant amount when buying equipment and software because we’re buying in bulk,” Tucker adds. “The same goes for content – we get a good deal because we will bring large audiences.”

RINGING THE CHANGES

In contrast with the current mobile market, which is all about a limited number of packages usually based on tariffs, 3G will enable person-to-person

marketing by amassing information on people’s interests, spending patterns and physical whereabouts. Lisa Gernon, Hutchison 3G UK Marketing & Strategy Director, describes 3G as a “category shift” in the mobile industry.

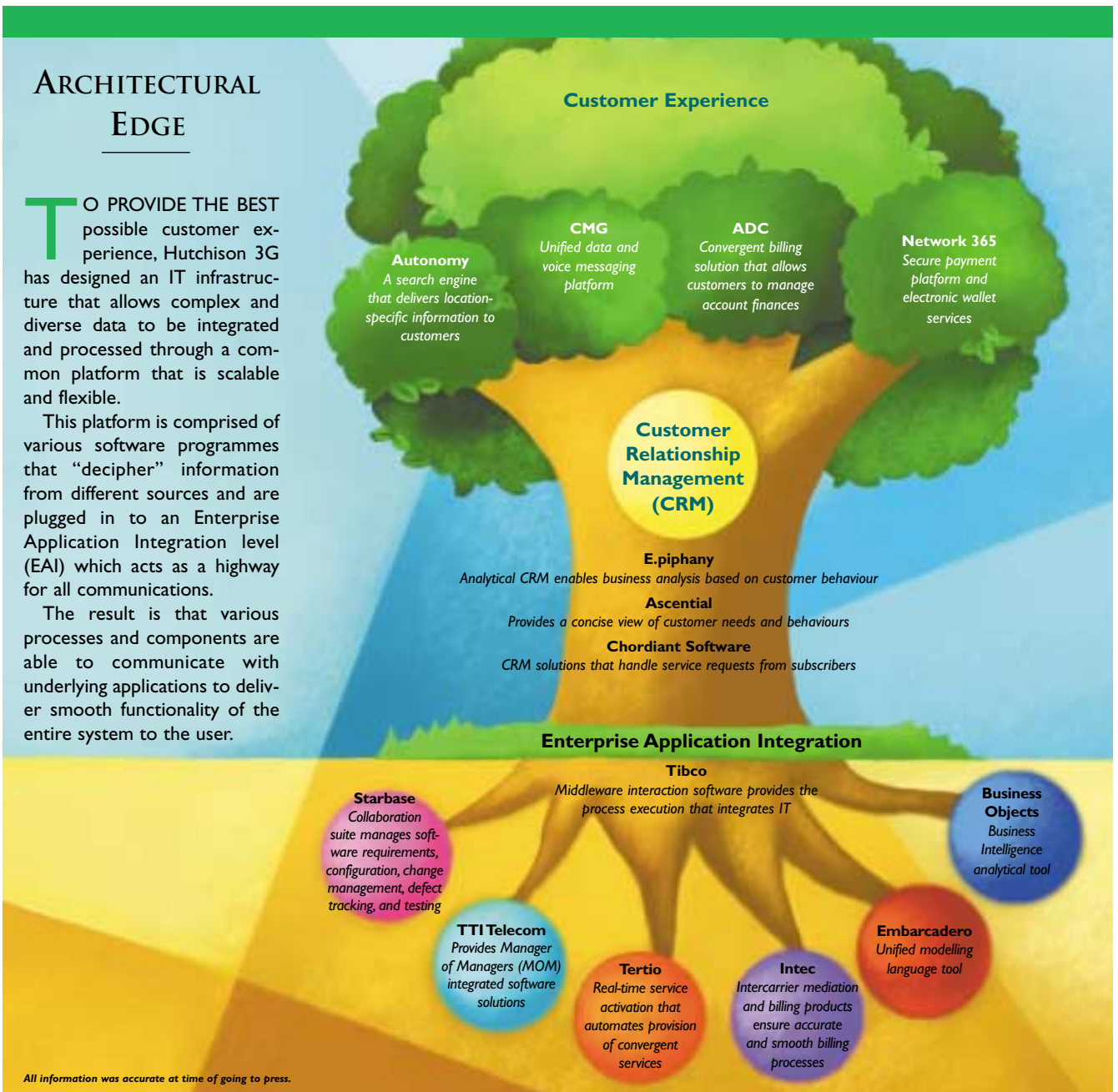
“We’re not a traditional mobile company. 3G is about bringing broadcasting, media and the Internet into one experience,” says Gernon.

“Our services will empower all the senses to give customers a personalised experience that will reflect their lives. People are on the move or at work all day, so it’s about extending their interest throughout the day – everyday stuff

plus everyday exploration.”

Gernon points out that the deals with the UK Football Premiership will be the tip of the content iceberg. “This isn’t just for blokes. A lot of women follow football anyway, but there will be much more, such as music, games, entertainment and dining information – the list is endless.”

It is hard to predict which applications will take off, but crucial to success will be a sophisticated customer relationship management system (CRM), which will provide a marketing edge. The platform to be used globally is called E-piphany and is similar to the



system used by Amazon, the online retailer.

"We don't intend our devices to be a mini-TV" says Gernon. "It's all about 'snacking' on the information that you as an individual are interested in. In five years time I believe people won't know how they managed without 3G. It's the natural next step in the evolution of communications."

H3G Italy's Bob Fuller predicts that 3G will open up thousands of new opportunities. "Italians love TV, fashion, soccer, and mobile communications," he observes, "in fact, Italy is the second biggest mobile-phone market in Europe with 87% of its 58 million population

using wireless phones. Mobile expenditure accounts for 2% of the GDP."

Ericsson and Siemens-NEC are building the network for H3G Italy and the company has a roaming agreement with the main Italian mobile operator – Telecom Italia Mobile (TIM) – for interconnection and site sharing. H3G has also signed content agreements with 11 soccer teams, which include the winners of the last 10 Italian championships.

H3G Italy is also in the process of closing agreements with some of its shareholders, who are major players in publishing, Internet and new media. These include CIR, which controls *La Repubblica*, HDP, which holds *Il Corriere*

della Sera, and Tiscali, the leading European Internet service provider.

3G services will be available in 50 major Italian cities from the last quarter of this year. Expected coverage will be 45% by the end of 2002 and 80% by 2004. In the meantime, roaming agreements will fill in the gaps.

"Our clear objective is to succeed with an 'explosive' development of the market," says Fuller. "We have more frequencies, the best technologies, the best content and the best human resources to satisfy our customers' needs."

Sweden and Denmark will follow after the UK and Italy. This, says Hi3G Access Managing Director Chris

3G-WHIZ!

PERSONALISED MULTIMEDIA communications are about to become an everyday reality. Your 3G device will give you the power to process massive amounts of data in the blink of an eye – without cables.

Just think: here is a "phone" that will provide video and audio streaming such as live news and sports broadcasts, music-on-demand, multimedia messaging, instant access to area-specific information, mobile e-commerce, interactive games and even remote surveillance.

3G will add an invaluable dimension to modern life. It will open up a world of services tailored to suit you, as well as help you explore the world. It will enable new, more flexible working practices with users enjoying access to vital data whether they are in the office or not, and it will greatly improve distribution systems for goods and services.

As 3G is put to work it will unleash a tidal wave of possibilities. Imaginative new applications will no doubt emerge, further enhancing both business and leisure, adding variety and colour to our experiences and making life simpler and more enjoyable.

Here's a glimpse of possible things to come.

Note: Names and activities depicted are fictitious, serving only to illustrate possible 3G applications.

Fun and Games

London art student Emily Jones finds her 3G useful for almost everything.

It's the perfect tool for staying in touch with family and friends. She has great fun swapping "postcards" and cartoons with them and can even show off her latest "masterpieces".

Emily can't resist the fashion, beauty and horoscope sections which she's bookmarked along with the listings section of London's dance club scene. She loves the fact that her 3G lets her watch her favourite music video clips whenever (and wherever) she wants to – on the bus, in the park, at her studio. The device actually tells her when her favourite stars will be performing in the city, allows her to buy tickets and alerts her when she's

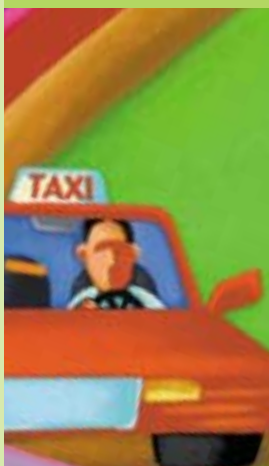


reached her budget limit for the week.

Besides all the fun aspects, her 3G is also a powerful research assistant, giving Emily access to a vast inventory of information on the Web to help with her art history research.

"I get the material I want quickly and with the minimum of effort," she says.

Emily's only gripe about her 3G device is that her boyfriend, Ron, keeps borrowing it to watch football clips and to play interactive games!



Logistics

Gotland-based taxi company GotCab understands the benefits of offering excellent, speedy service. To streamline its operation, the company has provided each of its drivers with a 3G device. Using the "always on" Global Positioning System (GPS) function, the central control office is able to keep tabs on the location of each taxi in real time. In turn, the drivers enjoy superb navigation assistance, with instant access to street maps, traffic reports and weather information. When a customer calls the control centre, the nearest available taxi can be deployed immediately. Furthermore, customers calling via a 3G device can be directly linked to the nearest cab and located easily, again through the GPS. Customers can also pay using their 3G electronic wallets.

Bannister, will give the company a chance to learn from the pioneers.

Like its sister companies, Hi3G will offer top-tier sports content, including football and ice hockey.

“But the Scandinavian mobile market has always been highly sophisticated, and Hi3G will initially target business professionals who are not impressed with hype. In Europe, Scandinavia leads in PC penetration, Web usage, Internet banking – they are a very technologically savvy people,” says Bannister.

“There are more m-commerce trials going on in this region than in the rest of Europe. There’s a hunger for technology which we aim to satisfy by bringing

a keen marketing edge to our services and delivering real benefit rather than gimmicks.”

Hi3G and two of its competitors have created a JV company, 3G Infrastructure Services, to build a common UMTS infrastructure outside Sweden’s major urban areas. This will significantly cut costs while leaving the operators free to compete where it counts – providing content and services.

The full menu of content and applications has yet to be revealed, but with a global footprint covering some 170 million people, the eyes of the world will be firmly focused on Hutchison’s 3G launch this year.

“This is going to happen whatever the cynics say,” Tucker enthuses. “3G will improve people’s lives – it really will.”

Reacting to a presentation by H3G in May, John Godfray, head of conglomerates research at ABN AMRO Asia, said: “This is a seriously exciting story, and I can now understand why Canning Fok told me two years ago this was the most exciting project he’d ever worked on. We (the analysts) were gobsmacked by the whole thing.”

The building blocks are in place, the customers are out there and it’s almost time for the show to begin.

– With reporting by Mark Caldwell



Romantic Interlude

Romeo Galanti, a Milan-based banker, is in Rome on business. Although his day is filled with meetings, Romeo makes time to call florist Maria Rossetti for a special bouquet for his wife Juliet, on the occasion of their fifth wedding anniversary. Using the camera on her 3G handset, Rossetti shows Romeo her selection of floral arrangements. Romeo chooses a bouquet, adds a special email card and also forwards Juliet’s address with instructions on when the flowers should reach her. Finally, Romeo pays for the service by keying in his secure payment pin number. All this in a span of six minutes.

Later, Rossetti hops on her delivery bike and uses her 3G device to find the quickest route to Juliet’s office. Naturally, Juliet is delighted to receive her bunch of red roses and sends a thank-you MMS with kisses and roses to her husband.



Windows of Opportunity

Lucky Wong knows the importance of good timing and values his time. Like many Hong Kong residents, he thrives on business, follows the markets, appreciates quality, and loves the horses. It’s Wednesday evening and Wong, who is returning by ferry from his manufacturing plant in Guangzhou, doesn’t want to miss the Happy Valley races, which are in full swing.

From the form-guide obtained through his 3G handset, Wong thinks “Speedy Money” has a very good chance. With a few clicks he places a bet which is automatically charged to his Hong Kong Jockey Club account. Then he watches the race on the small but high-resolution screen. To his delight, the horse wins by a neck. With odds of 6 to 1, Wong has made

a nice profit.

The windfall will justify his splashing out on the Ming Dynasty vase he’s been eyeing. Wasting no time, he bids for the piece on Sotheby’s auction site. Since fortune seems to be smiling on him, Wong logs on to his UK stock trading account and adds some shares to his portfolio.

As the ferry approaches its mooring, an icon of a limo appears on Wong’s 3G screen. With one click he is in contact with his driver who is waiting outside to take him to the racetrack – in good time to enjoy a light supper and watch the last two races. Approaching Happy Valley, an MMS appears on his 3G screen: he has won the bid for the vase. Ah, timing is everything!

– MC

