



# Mobile Media

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Search

# Search brands offer better terms than white-labels, but at what price?

The share of revenue obtained by operators from the likes of Google and Yahoo is more generous than that from white-label mobile search providers, according to, surprisingly, white-label sources.

It is commonly thought to be the other way around: that the market weight of Internet giants Google and Yahoo means they haggle down operators on the share of revenue they can claim from search advertising. White-label providers might not have the brand appeal, it is thought, but they at least offer operators more favorable terms.

But Dan Olschwang, CEO of leading white-label search provider JumpTap, readily admits that Google and Yahoo tend to offer better terms. "They give more-aggressive revenue shares," he told *MM*.

Olschwang warns operators, however, that the search brands' apparent generosity comes at a terrible price. Their strategy is to get a foot in the mobile door at any cost and

then drive users away from operators.

"It boils down to traffic-acquisition costs," Olschwang says. "The lower the TAC, the stronger the share performance [of the the Internet search giants]. And the more revenue they are forced to share with the operators, the higher the TAC. So they will do their utmost to drive the traffic away from operators." That's their ultimate strategy, he says.

A source at another white-label provider, meanwhile, says that Google and Yahoo also offer operators a minimum guarantee on advertising revenue, in exchange for exclusive placement of their search box in a prime location on the operator portal – even if it means initially losing money on the deal.

"It is quite clear that Google and Yahoo are offering more via the guarantee than the total revenues will provide in at

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Data analysis

## Games publishers continue to be fixated on action titles

Action games continued to buoy the mobile gaming market in 2H07, according to a straw poll conducted by *MM*, though other gaming genres also grew in popularity.

Throughout 2H07, action games accounted for roughly one-third of the titles published by the surveyed companies (see fig.). However, some publishing companies, namely EA Games and Gameloft, increasingly opted for alternative genres, such as puzzle-themed games, to bolster their respective portfolios.

Other popular genres included sports games, which accounted for almost one-fifth of the titles released in the period. Card and strategy games and titles associated with TV shows all accounted for just over 5% of the games released in the period.

Games publishers also attempted to cash in on major global sporting events. For instance, Gameloft released *Real Rugby* to coincide with last year's Rugby World Cup (see data, pp. 12-13).

Additionally, Glu Mobile and Vivendi paired with ma-

lor Hollywood studios to cash in on blockbuster movies, such as *Transformers* and *The Bourne Ultimatum*, in the buildup to their release. EA Games also emulated this strategy by introducing games based on the movies *The Simpsons* and *Beowulf* before they were released in theaters.

Mobile game releases by genre, 2H07

| Genre        | No. of releases | % of total    |
|--------------|-----------------|---------------|
| Action       | 27              | 31.76         |
| Puzzle       | 16              | 18.82         |
| Racing       | 8               | 9.41          |
| Sports       | 8               | 9.41          |
| Strategy     | 6               | 7.06          |
| TV show      | 5               | 5.88          |
| Card         | 6               | 7.06          |
| Adventure    | 2               | 2.35          |
| Arcade       | 3               | 3.53          |
| Platform     | 1               | 1.18          |
| Simulation   | 1               | 1.18          |
| Quiz         | 1               | 1.18          |
| Casual       | 1               | 1.18          |
| <b>Total</b> | <b>85</b>       | <b>100.00</b> |

Sources: Publishers

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least the first year, and perhaps the first two years, of the deal," he says.

But he doesn't go as far as Olschwang in asserting that Google and Yahoo offer a more generous revenue share. "It's not clear in all cases which side is offering the bigger share," he says.

He agrees with Olschwang, though, on the ultimate need for Google and Yahoo to shake off the TACs they are initially committing to with operators.

"These near-term revenue-sharing deals are no doubt tactics to clear the marketplace of white-label alternatives and to teach subscribers to use Google and Yahoo services, bypassing the operator portals, and ultimately removing the need to share anything with the operators," he says. "That may sound a bit paranoid, but this is exactly how Google became the leader, first powering Yahoo's portal and then striking off on their own."

Miika Mantyvaara, founder of consulting firm Avanto and formerly with white-label search provider Medio Systems, says that regardless of the revenue split, the revenue fed to operators by the search brands is likely to be greater than that from white-label providers.

That's because Google and Yahoo have more "bid-up" than their white-label rivals – i.e. they have a far bigger network of advertisers and can therefore fetch much higher prices from advertisers to get their sponsored links on the search-result pages of key words, Mantyvaara says.

The more people bid for a key word, the more the price for that key word goes up. And a small slice of a bigger pie can translate into more revenue than a big slice of a smaller pie, he says.

Many white-label search providers appear resigned to the fact that the brands might have won the off-portal-search battle. The huge head start and brand recognition that Google and Yahoo have in web search means that they are the natural choice for that on

phones, as well as for the seemingly closely related off-portal WAP search – even though the WAP indexing problems they have encountered might jeopardize their position in that respect (*MM*, 5 Oct, 2007).

Where they are on much shakier ground is in on-portal search. Where operators have handed that task to the brands, the results have left much to be desired. That seems to have been the case with Google's performance on Vodafone UK's Live portal, according to complaints from content merchants (*MM*, 27 Jul, 2007).

Industry insiders say it's highly likely that operators will backtrack and cede the on-portal-search ground, at least, to the white-labels – as in the case of Spanish carrier Telefonica Moviles, which has made up for the shortcomings of Google on its E-mocion portal by deploying JumpTap's search engine alongside Google's.

**Combined approach**

Operators will increasingly take a combined approach to search, relying on white-labels for on-portal search – and possibly off-portal WAP search – and on the brands for mainly web search, insiders predict.

Mantyvaara also says that operators wanting to go it alone with white-label deployments but still match the might of Google's and Yahoo's search-ad networks could band together and pool their respective search traffic and advertisers to beef up their "bid-up."

"The operators are going back to white-label search," says Jorgen Nordin, vice president of product management and marketing at WAP-portal-outsourcing company End2End. Based on conversations he has had with contacts at the various operator customers End2End works with, he says that "there's definitely a market for white-label search."

Sven Halling, CEO of multiplayer-gaming-platform provider Terraplay –

which was recently acquired by End2End – says it doesn't make sense to have a web search engine like Google managing the content search on a portal. "Who on the web gets Google to do their web-site search?" he asks. "Just imagine a mail-order site doing that. It wouldn't make sense."

Mantyvaara says that it helps to think of the white-labels as system integrators as well as search providers. Operators can have much more control over the information that a search engine will return by deploying a white-label service, he says. On the portal, operators' main interest in terms of search is to drive users to their content stores and those of their partners. It's not so much about search advertising, which is what Google and Yahoo excel at, he adds.

Insiders say that operators have been dazzled by the brand allure of Google and Yahoo and the big financial carrots they have dangled, without fully understanding what was required in terms of search.

"Not all operators understand the strategic implications of what they're doing," Olschwang says. "It's not a very sophisticated industry. The herd phenomenon is very common."

"It's nothing more than panic and a lack of clear thinking," he says about O2's recent announcement that it too was teaming up with Google – after being one of the last major European operators to resist that trend.

"Yahoo's strategy is to partner with carriers and publishers in order to create long-term value and new revenue streams for both parties," says Michael Bayle, general manager of global mobile monetization at Yahoo. "Advertisers see mobile advertising as complementary to their online digital advertising strategy, and Yahoo is uniquely positioned to lead, thanks to our vast experience in Internet advertising on both the mobile and PC, in search and display." *MM*

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Operator strategy

## Ops see data plans as next cash cow

Operators have shifted away from viewing SMS as the big cash cow in mobile data services, banking instead on data-plan subscriptions as their main source of incremental revenue for the next few years.

They are no longer as fearful about teaming up with messaging-over-IP providers, whose services are a cut-price alternative to both SMS and MMS, says David Whitewood, co-founder of TruTap, which in its previous incarnation as Hot Text described itself as the "Skype of SMS" (see "IP-messaging providers," p. 5).

"A year ago, they [operators] wouldn't have deigned talk to us," he said. "But their focus has shifted to selling data plans and getting users to use the Internet on their phones, and they see our kind of product as a good introduction to the mobile Internet."

Fears of SMS cannibalization among operators are not as pronounced as they were 18 months ago, when SMSes were still largely charged per message, rather than in bundles, he says.

Israeli carrier Celcom, for example, is using the WAP messaging portal of TruTap rival Tj'at as an incentive for young subscribers to take all-you-can-eat data plans.

Business models

## Apple's music and video controls criticized

Apple's insistence on tight controls over its music and video businesses is putting off content providers and will eventually frustrate consumers as they grow to expect more-open access to content, according to some industry players.

Apple and the iPhone dominated many of the mobile entertainment sessions at this month's International Consumer Electronics Show in Las Vegas. Most observers hailed the iPhone for its technological and marketing breakthroughs but found problems in its business model, which might not hold up as the mobile industry evolves.

"You have to have scale and you have to have a much broader reach than what [Apple's iPhone has] done so far," said Jason Rubinstein, who works in a new group at Motorola that is focused on future applications, including mobile TV, video and games. "I think we applaud it because they've broken certain barriers that no prior traditional handset manufacturers have been able to break.

"But on the flipside, if I were one of these folks at a content company, I would be a little bit nervous. The media companies that we've talked to, they kind of don't want to have their content on that [iTunes] network ... because there's too much control, because the interests of that platform are not in line with what a content com-

pany needs to accomplish."

The disadvantages extend to consumers, added Joseph Cantwell, vice president of marketing for the advanced-services division of movie-content provider Starz Entertainment. "There are really two problems from a consumer standpoint, not just a content-provider standpoint, with Apple," said Cantwell, who identified the problems as Apple's tight control of its DRM technology and the company's refusal to offer subscriptions.

Cantwell noted that Starz content is not available on Apple iTunes. "Apple is famous in not letting any other company use its DRM, FairPlay, which is ironically negative if you ask me," he said.

Although he acknowledged that the user experience is great on an iPod, Apple's avoidance of the subscription model limits the content it can offer, he said.

"When it comes to movies, how do most people view movies? Through subscriptions, right?" asked Cantwell, citing broadcaster HBO, Starz and even mail-order movie house Netflix as examples. "We have exclusively 43% of Hollywood under subscription rights for years to come. If iTunes wants to be in subscriptions – and we've tried to get them to think that way – they're going to need to work with Starz on that.

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# Mobile Entertainment: Country Profiles

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Key questions and issues covered in the **country profiles** include:

- Learn which standards have been adopted in which regions, the pros and cons of adoption and how the mobile TV landscape is likely to evolve
- Learn the importance of localisation of content and how international artists are failing to break into key markets
- How are successful operators managing their games portals?

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Regulation

# U.S. carriers breathe down off-deck providers' necks due to litigation fears

It is the fear of getting sued, and not commercial considerations, that make U.S. carriers so controlling of "off-deck" content providers.

Companies selling mobile content directly to end-users in the U.S. must first have that content, and pricing, OK'd by the operators through which it will be billed.

These are extraordinary lengths to go to – time-consuming for both operators and content providers. But in the U.S.' litigious culture, operators would rather be safe than sorry.

The carriers' litigation fears are not unfounded, a U.S. lawyer told *MM*. "These fears have been actualized," he says, explaining that attorneys general in at least three U.S. states are investigating alleged malpractices in the "mobile content ecosystem."

The investigations are taking place in Florida, Georgia and California, and all kinds of players in the value chain – content providers, aggregators and operators – are being scrutinized, says the lawyer, who asked to remain anonymous.

There are no examples yet of big fines having been meted out, since all investigations are still being conducted, he says.

The typical offenses being investigated are associated with misleading advertising – "things like advertising a service as free or no-cost, and then users finding that they've been unknowingly roped into to paying a monthly subscription fee," the lawyer says. Such cases are reminiscent of the scams that undermined public confidence in premium SMS-based content services in Europe two to three years ago.

Some of the investigations are also into the sale of subscription services to users below the legal age to enter into a

contract, he adds. "In some states, such as Florida, there are strict rules in that respect," the lawyer says.

Vetting off-deck offerings also provides an opportunity for operators to filter out any, to their mind, unacceptable content. This is the other main reason U.S. carriers have to do things the way they do, says Mark Denton, director of product management at mobile-billing-platform provider Valista.

"Firstly, [they do it] for litigation reasons," he says. "Secondly, they're worried whether the content will match their demographic. There's some content they will just not tolerate."

Attorneys general in at least three U.S. states are investigating alleged malpractices

So, unlike most other mature mobile content markets, where operators push potentially offensive content, such as hard-core pornography, off-portal, in the U.S. that kind of content is also out of bounds off-portal. U.S. operators recently sat down together and agreed to not allow any hard-core adult content on their networks, either on-portal or off-portal, until they have proper age-verification systems in place, the lawyer says.

U.S. carriers are also getting together with industry associations to create "transparency" regarding what kind of content they find acceptable and which way they expect it to be packaged and priced, to encourage self-regulation among content providers, the

lawyer says.

"It's not only about the type of content that's acceptable," he says. "It's also about procedures: about how customers should be opted in, how terms and conditions should be disclosed, et cetera."

Denton, whose company manages billing for U.S. carriers Cricket and U.S. Cellular, says that about 3,000 off-deck mobile content "campaigns" are going on at any one time in the U.S. "This works out to about 10 a day coming in per operator [for approval]," he says.

Carriers employ full-time staffers to sift through off-deck campaign applications. To apply, content providers – or more likely aggregators – have to fill in a form on a web page or send in an Excel spreadsheet. "At the most, it takes up to two weeks to process, but it's normally much faster – just a few days," Denton says.

U.S. operator portals now regularly provide links to the WAP sites of third parties, but not normally to those of off-deck content merchants, because, says Ted Wugofski, CTO of mobile software provider Handmark, "operators want to drive download sales to their own-branded storefronts." They do, however, provide links to the sites of all sorts of service providers, such as Facebook.

But such links are rationed according to quality and choice, Wugofski says. "First, the operator wants to ensure that the resulting site meets their quality and customer-care requirements," he says.

"Second, the operator does not want to have 20 sports sites. There is considerable evidence that 'less is more' when it comes to choice. Too many choices, and customers give up out of indecision."

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Messaging

# IP-messaging providers disagree on whether to link to communities via clients or browsers

Providers of messaging-over-IP on phones are revamping their offerings to tap into the huge popularity of social-networking sites, but they are disagreeing on how to go about it.

One of the latest to extend into social networking is Tjat Systems, which started out as a WAP messaging portal linking mobile users to their online instant-messaging buddies but has gone a step further by enabling photo uploads, via the portal, to online blogs and file-sharing sites.

Similarly, TruTap, which started life two years ago as the self-styled "Skype of SMS" under the name of Hot Text, has rebranded and relaunched its offering, with a new emphasis on connecting mobile users with their online communities.

"Now, we see ourselves as an enhanced messaging service, connecting people with their online life when they're away from their PC," David Whitewood, co-founder of TruTap, told *MM*. "The typical mobile web user doesn't see any connection between what he does on the Internet on his phone and what he does on the Internet on his PC. We believe that messaging is the key to bridging that divide."

After all, messaging is the killer data application on phones, he says, and social networking on the Internet has its roots in chat and messaging. Messaging is the common denominator of the two spheres, he says.

Tjat and TruTap are taking different approaches to delivering connectivity to online communities from phones.

Tjat is taking a mobile-browser-based approach, since anything requiring a download is a big barrier to adoption, it says. TruTap says it is expecting users to go through the hassle of downloading

an application, since only via a handset client will they find a satisfying experience and the ability to upload photos to web sites.

"You can't upload photos from WAP," Whitewood says. "It's impossible." It's not even possible on MySpace's recently rolled out WAP service, he adds.

But Gideon Drori, Tjat's CEO, says his company has a "full worldwide patent" that enables users to upload pictures to sites via a virtual-storage system on the Tjat WAP portal.

Whitewood acknowledges that requiring users to download a client to their handsets is a big barrier, but he says users who overcome the barrier tend to stick with the service for longer and use it much more frequently than offerings they can access via their WAP browser. You might get many more users accessing a browser-based service, but they won't be as loyal, he says.

## Compromise on quality

"WAP services don't offer a good-enough user experience," he said. "You can certainly cut down on your R&D costs [in terms of porting] by taking the browser route, but it's a big compromise on quality."

There's also the question of data costs, he adds. "WAP-based services eat up a lot of data," he said. "It's 2.5 to 10 kilobytes every time you reload a page." There are ways of minimizing the amount of data used, but such measures can also compromise the user experience.

But Drori says the users who have handsets suited for downloading applications don't usually belong to the core social-networking demographic. "The Web 2.0 freaks that make up the bulk of social-networking-site users are

youngsters who can't afford the latest high-end devices that most of these handset clients are designed for," he told *MM*.

Browser-based applications have become all the rage on the fixed Internet, and there's an even greater demand for the same thing on mobile, he says.

"Anything to do with browser-based applications on mobile was seen as a bad idea one or two years ago, because the handsets and networks were not ready," he said. "But it's a different story now. The technology is in place."

The use of a browser-based application is more vital on mobile than it is on PC, because of the technology fragmentation that afflicts mobile handsets and infrastructure and the big porting headaches that go with it, he says.

There is also a limit to how many applications can be downloaded to a phone before the device runs out of memory, he adds. Many people belong to several social-networking services, and it might not be possible for them to download a separate client for each.

That is a good reason for relying on an intermediary service, such as Tjat, to connect to all online communities, rather than relying on the individual mobile extensions offered by each of the sites, Drori says.

But Whitewood says the problem is not so much the limited memory space on phones as the difficulty of switching from one application to another. "Mobile is not a Windows-type environment, where you can have applications opened at the same time on the screen," he says. If you're using a MySpace client on the phone, for example, and you receive an instant message from a friend, you need to exit the client you're in and

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open the IM application to access the message, he says.

Users can avoid such a hassle by relying on a single client, such as TruTap's, to give them simultaneous access to all their IM services and online communities, he adds.

Whitewood says he disagrees with the assertion that client-based applications are suited only to expensive, high-end devices. "I wouldn't call a £40 [US\$80] Sony Ericsson high-end," he said, adding that such a handset model is typical of the type of phone TruTap's client is designed for. "We support around 200 handset models ... mostly basic multimedia phones from the likes of Sony Ericsson and Nokia."

Tjat's picture-uploading service is still in beta testing, with about 1,000 users. The company says it hopes to launch it commercially this month. Users take a photo on their phone and upload it to their personal storage space

on the Tjat portal, from where it is posted on predefined sites.

The Tjat portal is designed both to connect to online communities and as a mobile community forum in its own right. Whitewood says he questions the need for such a forum.

It might be perfect in developing countries, where PC penetration is low and where Tjat might be people's first experience of a social-networking site, he says. "But you don't need to belong to some funny little community on WAP if you live in a developed country, where you already do that kind of thing on PC," he adds.

Tjat and TruTap differ not only in delivery technology but also in their routes to market and business models.

Tjat piggybacks on operators and big off-deck content providers to reach customers. Its messaging portal is deployed with Israeli operator Celcom, Vodafone in the Czech Republic and Spanish off-

portal player Movilisto in Spain, France and Portugal. And at the end of last year, it signed a global deal with Vodafone's Live portal.

TruTap, on the other hand, has traditionally been a direct-to-consumer player, with its cut-price IP alternative to SMS incompatible with operators' strategies and fueling fears among them of SMS-revenue cannibalization.

But it too is beginning to view operators as potential partners as cannibalization fears wane (see "Ops see," p. 3).

TruTap has a typical Web 2.0 business model: Concentrate first on building critical mass, and worry about how to make money later. The money-making options it's considering include premium extras, sponsored extensions and ad-funded content.

Tjat has been forced to follow different business models with each of its partners.

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## Data

### Mobile browsing vs. other methods of purchasing ring tones

m:metrics

| Method                       | Total           |             | 3G subscribers  |             |                | Non-3G or unknown subscribers |             |                |
|------------------------------|-----------------|-------------|-----------------|-------------|----------------|-------------------------------|-------------|----------------|
|                              | Projected subs* | % of subs** | Projected subs* | % of subs** | Benchmark (%)† | Projected subs*               | % of subs** | Benchmark (%)† |
| <b>France</b>                |                 |             |                 |             |                |                               |             |                |
| Via mobile browser           | 1,141,400       | 2.5         | 226,263         | 3.7         | 45             | 915,138                       | 2.4         | -7             |
| Via short code               | 605,497         | 1.3         | 82,677          | 1.3         | 0              | 522,821                       | 1.3         | 0              |
| Via PC, retrieved on handset | 349,878         | 0.8         | 68,082          | 1.1         | 43             | 281,796                       | 0.7         | -7             |
| <b>Germany</b>               |                 |             |                 |             |                |                               |             |                |
| Via mobile browser           | 1,292,430.00    | 2.7         | 369,165         | 4.4         | 60             | 923,265                       | 2.4         | -13            |
| Via short code               | 657,490.00      | 1.4         | 113,494         | 1.3         | -3             | 543,996                       | 1.4         | 1              |
| Via PC, retrieved on handset | 533,260.00      | 1.1         | 126,909         | 1.5         | 34             | 406,351                       | 1.0         | -7             |
| <b>Italy</b>                 |                 |             |                 |             |                |                               |             |                |
| Via mobile browser           | 1,043,705.00    | 2.30        | 545,326         | 3.7         | 61             | 498,379                       | 1.6         | -29            |
| Via short code               | 625,635.00      | 1.40        | 254,170         | 1.7         | 25             | 371,465                       | 1.2         | -12            |
| Via PC, retrieved on handset | 622,963.00      | 1.40        | 267,913         | 1.8         | 32             | 355,050                       | 1.2         | -16            |
| <b>Spain</b>                 |                 |             |                 |             |                |                               |             |                |
| Via mobile browser           | 889,663         | 2.7         | 298,941         | 3.3         | 22             | 590,722                       | 2.5         | -8             |
| Via short code               | 804,069         | 2.5         | 228,818         | 2.6         | 3              | 575,251                       | 2.4         | -1             |
| Via PC, retrieved on handset | 246,468         | 0.8         | 78,330          | 0.9         | 15             | 168,138                       | 0.7         | -6             |
| <b>UK</b>                    |                 |             |                 |             |                |                               |             |                |
| Via mobile browser           | 1,138,629       | 2.5         | 373,692         | 3.8         | 53             | 764,936                       | 2.1         | -15            |
| Via short code               | 399,106         | 0.9         | 104,646         | 1.1         | 23             | 294,460                       | 0.8         | -6             |
| Via PC, retrieved on handset | 357,331         | 0.8         | 91,561          | 0.9         | 20             | 265,770                       | 0.7         | -5             |
| <b>U.S.</b>                  |                 |             |                 |             |                |                               |             |                |
| Via mobile browser           | 16,251,516      | 7.6         | 5,029,153       | 11.2        | 48             | 11,222,363                    | 6.6         | -13            |
| Via short code               | 1,993,389       | 0.9         | 405,580         | 0.9         | -3             | 1,587,809                     | 0.9         | 1              |
| Via PC, retrieved on handset | 4,379,712       | 2.0         | 901,884         | 2.0         | -1             | 3,477,828                     | 2.0         | 0              |

Notes: Monthly average for the three months ending Sep-07. Results in italics fall below minimum sample size and are included for directional purposes only. \*Projections, based on sample results.

\*\*The percentage of all mobile users likely to use the service, based on sample results and M-Metrics calculations. †The likelihood that a particular segment of subscribers will use a service compared with the whole market. Bases: France (12,785), Germany (15,989), Italy (13,226), Spain (12,688), UK (16,075), U.S. (33,813) mobile phone users

Source: M-Metrics September 2007 Benchmark Survey. The data is drawn from an extensive survey that collects mobile-content-consumption, device-model and carrier-subscription information from each month's sample of subscribers. The data is statistically balanced and projected to the number of subscriptions in each country

# Publishers skeptical of porting quick fix, as single standard remains elusive

Is there a quick technology fix for the huge costs associated with “porting” games to mobile phones? Games publishers are skeptical, putting more stock in a de facto standard arising from the influence of big industry players, such as operators.

Yet UK-based startup Antix Labs is preparing to roll out a game-developer kit in 1Q08 that it says will enable the mobile games industry to emulate the ease with which music files are transferred from one device to another.

Francis Charig, Antix Labs’ founder and CEO, says that the company has developed an ecosystem for embedding the developer kit in handsets and that it eventually plans to embed the software in the games themselves.

The kit can also be downloaded over the air or installed from physical media, such as SD cards, onto higher-end devices, such as smartphones, he adds.

Antix says its processor is unique in that it enables a game to be independent of the underlying hardware and operating system of handsets, by converting its binary code into native processor code, in conjunction with industry-standard APIs, such as OpenKODE.

It enables mobile users to play a single version of a game, or SKU, on different devices and platforms.

Charig hints that the company “conservatively” expects to ship 25 million units in 2009 via a soon-to-be-announced alliance with some of the industry’s “big five” handset makers.

However, mobile-games-industry sources have a less positive outlook, with those approached by *MM* noting that recent market activity by leading handset vendors has done little to aid SKU harmonization.

Hugues Wanner, marketing manager at mobile content developer The Mighty Troglodytes, expresses, at best, tempered optimism about Antix’s code generator.

“We have tested a tool that is automatically generating BREW source code, and we saw that, even if it is a professional tool made by a very professional team, bugs remaining [on the device] are still an issue,” he says.

Wanner also says the market take-up of Antix’s product rests largely on the cost of the tool, its user-friendliness and whatever final certification hurdles it needs to clear before it’s “ready to launch” commercially.

## Retort to skeptics

In response, Antix Labs representatives say that the developer kit will use industry-standard developer code and that products developed with it can be tested on the PC before being ported to handsets. They also say the kit will be free of charge to selected developers.

Nokia’s renewed push of its Symbian-based N-Gage mobile gaming platform suggests that handset vendors are unlikely to lead the drive toward a unified standard, according to Eric Huynh, CTO of the Worldwide Studio division of publisher Vivendi Games Mobile.

Commenting on the launch of the Antix Lab product, Huynh shows both interest and skepticism. “If it works, that will be great,” he says. “But I doubt that there is a technology that can be cross-platform across all technologies and languages.”

Instead, Huynh is more optimistic about smaller initiatives, in which companies pinpoint precise areas, such as

porting from Java to BREW. His faith in such initiatives is demonstrated by his company’s deployment of the Alchemo porting platform, supplied by New Zealand’s Innaworks.

“Today we are spending a lot of time in postproduction, even after we get the master for five to 10 handsets,” he says. “Then we have to port it to literally thousands of different devices after that, and that comes at a huge cost.”

Huynh also says that previous attempts by carriers to encourage handset vendors to support Java were let down by a lack of cohesion in the sector, leading to a further proliferation of standards.

“Java was not solid enough in terms of implementation and specification, with every handset vendor coming out with their own Java Virtual Machine that were all quite different,” Huynh says. “In J2ME [Java for mobile], maybe MIDP3 could be something which is still under specification right now, but the future is very unclear.”

The impending launch of Google-owned Android is also likely to further alter the market dynamics of the mobile gaming market, according to Huynh. “Android is open-source, but it still has the ability to implement Java as well,” he says.

It’s difficult to say who will make the rules in the years to come, according to Huynh. “Will it be Java, with MIDP3, or Android or even N-Gage?” he says. “It’s hard to say. What we do know for sure is that the market will remain fragmented for some years to come until a standard comes out.

“Ultimately it will be down to what the carrier wants to do,” he says.

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## Free-to-air alternative emerges on phones, challenging broadcast-mobile-TV players

As DVB-H and MediaFLO continue to battle it out for operators' business, a product has emerged that turns the traditional broadcast-mobile-TV proposition on its head.

Telegent Systems says it has developed a chipset that does what had been dismissed by many as impossible: turn mobile phones into free-to-air-TV receivers.

Rather than go to the expense of rolling out special broadcast networks, operators would just need to procure phones fitted with the chipset to give subscribers the ability to view on their handset the TV channels they are used to viewing at home.

And because there is no retransmission or reusing of content involved – with the phone acting as just another TV set – operators are spared the content-rights and licensing headaches that normally accompany the rollout of a mobile TV service, says Weijie Yun, CEO of Telegent Systems.

“Operators don't have to spend a lot of money building a service from the ground up,” he told *MM*.

But how can operators make money from a service that is essentially independent of mobile networks? A similar type of service exists in Japan, where phones are equipped with antennas to pick up regular TV signals – made possible by a nationwide broadcasting standard that supports mobile devices – but cellcos there are still working out how to make money from the service.

Yun says the technology offers several potential financial benefits for operators, even if users are able to tune in to TV channels on their phones completely free. One, he says, is the ability to poach subscribers from other networks, although that would work only

if the operator could ensure exclusivity in offering the free-to-air-enabled phones in a given territory.

He mentions AT&T's exclusive launch of the iPhone in the U.S. as an example, with 50-60% of those purchasing the sought-after Apple phone churning from other networks. But handsets equipped with Telegent's TV chipset are being sold on the open market through independent retailers in China, India, Southeast Asia, the Middle East, Southern Europe and North Africa. Between 30 and 40 handset makers – including ZTE and TCL – have embedded the chipset in a total of 50 handset models, and one top manufacturer is scheduled to soon release a handset incorporating the chip.

### Japanese example

Another possible benefit for operators is an increase in ARPU, which Yun says is shown by a study recently published in Japan that found that mobile users with TV-enabled handsets generate on average 5-6% more revenue than regular users, stemming from interactivity with TV programs. Users are just one or two key strokes away from messaging or calling a show, he says.

TV viewing also provides a good opportunity for targeted advertising on phones, he adds. Telegent's chipset can feed back information in real time about what channel a viewer is tuned in to, enabling operators to push relevant ads to the screen just below the TV image, once the chipset's microprocessor has the ability to display them, Yun said. “We will work with operators to add this as an extra capability,” he said.

Operators can also use conditional-access systems to charge users for receiving the TV signals on their phones and

block them if they don't pay. But Yun says take-up of most subscription TV services has been poor. In any case, such a model would be difficult to impose if users could also purchase free-to-air-enabled phones from independent retailers.

For handset makers, the business case for embedding Telegent's chipset in their products is much more clear-cut, Yun says. Incorporating a free-to-air-TV capability into a handset makes it much more marketable, increasing sales, he says. It also enables OEMs to increase the price they charge per unit, by about US\$30-40, he adds.

The value proposition for broadcasters is also straightforward, he says. The business model of most free-to-air broadcasters is based on advertising revenue and audience size, so enabling their broadcasts to be picked up by a whole new set of devices vastly increases the number of people that can be targeted with commercials. The chipset technology also provides a far more reliable way of monitoring viewer numbers than ordinary TV sets.

The Telegent chipset enables users to receive analog and digital free-to-air broadcasts and DVB-H. And Yun says it is unique in that it does so using a single microprocessor. Rival systems require three or four separate chipsets, making them too expensive to embed in phones.

Telegent is shipping about 1 million of the chipsets a month to OEMs. Two unnamed operators are in the process of procuring handsets enabled with the chipsets, and three others are in negotiations with Telegent. Four are based in Asia, and one is in South America. All are interested in offering a free-to-air mobile TV service.

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“People are going to get really frustrated with this on the consumer side,” he said. “It’s a closed system. You can’t rent music. You can’t rent movies. You can’t rent TV shows.”

That scenario changed somewhat on Jan. 15, when Apple announced that iTunes would begin offering movies for rent from all major studios for viewing on a computer, an iPod, an iPhone or an Apple TV.

One area where Apple appears especially prescient is in providing content via sideloading to the iPhone, rather than focusing on over-the-air delivery. The need for alternatives to OTA increases with video services. “We need to get away from the over-the-air delivery because you just can’t manage

that, not to mention the financials of that, without flat-rate,” said David Thompson, who is globally responsible for the acquisition strategy for mobile video at handset maker Sony Ericsson.

He noted that the top 10 payments for European 3G licenses topped US\$75 billion. “There’s a ton of money they [carriers] have to make back,” Thompson said. “If they were to meet their business case by selling video and streaming video over their networks, they don’t have the capacity to deliver it. So there has to be an alternative, and that has to be a web-based sort of alternative.”

However, Thompson bristled at the suggestion that vendors should cir-

cumnavigate operators by offering content directly to consumers, much as rival Nokia appears to be planning. “It’s vital for us to keep the carrier in the loop” in order to take advantage of billing arrangements and customer relationships, he said.

Daniel Tibbetts, executive vice president and studio chief of mobile-TV-content provider GoTV Networks, said the U.S. mobile market is on the verge of an entertainment breakthrough, thanks in part to new products, such as the iPhone.

He noted that there are 250 million handsets in the U.S., 61 million of which are video-capable, and that there are 11 million mobile video users.

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Data

Methods by which users played games on mobile



| Method                        | Total           |             | 3G subscribers  |             |                | Non-3G or unknown subscribers |             |                |
|-------------------------------|-----------------|-------------|-----------------|-------------|----------------|-------------------------------|-------------|----------------|
|                               | Projected subs* | % of subs** | Projected subs* | % of subs** | Benchmark (%)† | Projected subs*               | % of subs** | Benchmark (%)† |
| <b>France</b>                 |                 |             |                 |             |                |                               |             |                |
| Played downloaded games       | 1,868,826       | 4.2         | 546,836         | 8.9         | 114            | 1,321,990                     | 3.4         | -18            |
| Used browser to play games    | 209,585         | 0.5         | 55,583          | 0.9         | 94             | 154,002                       | 0.4         | -15            |
| Played native/preloaded games | 5,175,222       | 11.5        | 817,147         | 13.3        | 16             | 4,358,075                     | 11.2        | -2             |
| Played game by any method     | 6,283,490       | 14.0        | 1,164,070       | 19.0        | 36             | 5,119,420                     | 13.2        | -6             |
| <b>Germany</b>                |                 |             |                 |             |                |                               |             |                |
| Played downloaded games       | 3,616,728.00    | 7.6         | 1,226,778       | 14.5        | 91             | 2,389,951                     | 6.1         | -20            |
| Used browser to play games    | 237,435.00      | 0.5         | 83,164          | 1.0         | 97             | 154,271                       | 0.4         | -21            |
| Played native/preloaded games | 8,972,228.00    | 18.9        | 2,097,756       | 24.8        | 31             | 6,874,472                     | 17.6        | -7             |
| Played game by any method     | 11,114,084.00   | 23.4        | 2,823,772       | 33.4        | 43             | 8,290,312                     | 21.2        | -9             |
| <b>Italy</b>                  |                 |             |                 |             |                |                               |             |                |
| Played downloaded games       | 3,925,467.00    | 8.60        | 2,547,663       | 17.2        | 100            | 1,377,804                     | 4.5         | -48            |
| Used browser to play games    | 251,035.00      | 0.60        | 115,564         | 0.8         | 42             | 135,471                       | 0.4         | -20            |
| Played native/preloaded games | 9,116,650.00    | 20.00       | 3,118,416       | 21.1        | 5              | 5,998,234                     | 19.5        | -3             |
| Played game by any method     | 11,465,099.00   | 25.20       | 4,766,212       | 32.2        | 28             | 6,698,886                     | 21.8        | -13            |
| <b>Spain</b>                  |                 |             |                 |             |                |                               |             |                |
| Played downloaded games       | 4,069,694       | 12.5        | 1,989,658       | 22.2        | 77             | 2,080,037                     | 8.8         | -29            |
| Used browser to play games    | 185,619         | 0.6         | 81,310          | 0.9         | 59             | 104,308                       | 0.4         | -22            |
| Played native/preloaded games | 6,615,913       | 20.4        | 2,299,438       | 25.7        | 26             | 4,316,475                     | 18.3        | -10            |
| Played game by any method     | 9,126,525       | 28.1        | 3,538,191       | 39.5        | 41             | 5,588,333                     | 23.7        | -15            |
| <b>UK</b>                     |                 |             |                 |             |                |                               |             |                |
| Played downloaded games       | 5,120,019       | 11.3        | 2,058,752       | 21.1        | 88             | 3,061,267                     | 8.6         | -24            |
| Used browser to play games    | 335,981         | 0.7         | 98,936          | 1.0         | 38             | 237,045                       | 0.7         | -10            |
| Played native/preloaded games | 10,530,417      | 23.1        | 2,733,295       | 28.1        | 21             | 7,797,122                     | 21.8        | -6             |
| Played game by any method     | 13,194,341      | 29.0        | 3,915,193       | 40.2        | 39             | 9,279,148                     | 25.9        | -11            |
| <b>U.S.</b>                   |                 |             |                 |             |                |                               |             |                |
| Played downloaded games       | 19,602,747      | 9.1         | 6,287,639       | 14.0        | 54             | 13,315,108                    | 7.8         | -14            |
| Used browser to play games    | 2,218,448       | 1.0         | 635,245         | 1.4         | 37             | 1,583,203                     | 0.9         | -10            |
| Played native/preloaded games | 31,236,476      | 14.5        | 6,053,484       | 13.5        | -7             | 25,182,993                    | 14.8        | 2              |
| Played game by any method     | 44,888,378      | 20.9        | 10,902,091      | 24.3        | 16             | 33,986,287                    | 20.0        | -4             |

Notes: Monthly average for the three months ending Sep-07. Results in italics fall below minimum sample size and are included for directional purposes only. \*Projections, based on sample results. \*\*The percentage of all mobile users likely to use the service, based on sample results and M-Metrics calculations. †The likelihood that a particular segment of subscribers will use a service, compared with the whole market. Bases: 12,785 (France), 15,989 (Germany), 13,226 (Italy), 12,688 (Spain), 16,075 (UK), 33,813 (U.S.) mobile phone users  
 Source: M-Metrics September 2007 Benchmark Survey. The data is drawn from an extensive survey that collects mobile-content-consumption, device-model and carrier-subscription information from each month's sample of subscribers. The data is statistically balanced and projected to the number of subscriptions in each country

# Emerging-market operators lead way in the use of managed services

As much as 10% of revenues from fixed-Internet advertising could migrate to the mobile Internet in the next three years, provided carriers outsource their mobile content operations to those with the right skills, according to A.R. Vishwanath, CEO of outsourcing firm IMI Mobile.

Vishwanath says that by applying the managed-services model – as is the norm for network infrastructure – to mobile content, carriers can unlock new revenue streams.

IMI Mobile has a strong footprint in emerging markets, and Vishwanath has observed such markets closely, and he says that tier 1 players can benefit from imitating the strategies of operators in such countries.

In the Middle East telecoms market, IMI Mobile has partnered with cash-rich, pan-regional operators Etisalat, Q-Tel, STC and Zain.

Vast wealth reserves generated by petro-dollars have enabled these Gulf-based operators to invest in 3G-network infrastructure as they continue their growth strategies across the Middle East and North Africa.

Vishwanath predicts that in the coming years, mobile data services will account for as much as 40% of overall operator revenue in MENA, compared with 15% in 3Q07.

Undoubtedly, the bulk of the increase will be generated by SMS traffic, but he notes that ring-back tones and voice- and WAP-based entertainment services will also drive the trend.

Vishwanath says the growth in non-SMS data usage will be driven primarily by the widespread availability of 3G networks in the region.

Network operators in MENA, no-

tably in Egypt and Saudi Arabia, have been able to deploy 3G networks without having to worry about preserving previous infrastructure investments.

As a result, many new players have offered 3G services upon entering the market, with incumbent operators often also looking to get in on the act, leading to increased subscriber awareness and take-up of non-SMS data services.

## New business models

Vishwanath also notes, however, that openness to new business models among mobile content providers, namely outsourcing, will play a significant role in accelerating data usage in the MENA market.

There is also a clear demand for mobile content services outside of the high-ARPU, oil-rich markets of the Middle East. The trend is also aided by the inorganic growth strategies of regional operators eager to expand their international presence.

Vishwanath highlights the success that IMI Mobile's Malaysian partner, STC-controlled Maxis, has had with its UniFun service. The user-generated-content service, which enables users to gain access to uploaded videos on their handsets over the carrier's 3G network, has attracted 50,000 subscribers, according to Vishwanath.

He acknowledges, however, that the differences in the dynamics of emerging and mature markets are partly attributable to socioeconomic and cultural factors. He points to his company's native India, a market of 200 million subscribers and reportedly growing by several million a month, where mobile penetration easily outstrips PC density.

Vishwanath says that high mobile

penetration among young people, combined with limited access to PCs at home, means that handsets will soon become the No. 1 device on which subscribers access online content.

Vishwanath also says that by outsourcing mobile content services to VAS companies, mobile content players can more effectively "personalize" advertising, thus making their proposition to advertisers more appealing.

Since most content on an operator network is provided by third parties, outsourcing companies are in a better position to centrally record subscriber usage, enabling them to construct a user profile, according to Vishwanath.

IMI Mobile's promoting of the managed-services model has not been entirely lost in Europe. The company recently signed a partnership agreement with Germany's Jamba.

The Berlin-based content aggregator has agreed to outsource mobile services – including around-the-clock technical support – to IMI, enabling Jamba to focus on what it does best: marketing and customer care. "The complexities of back-end technologies and content management is better left to companies like ourselves, enabling our partners to capitalize on their strengths," Vishwanath says.

A key benefit of outsourcing, he says, is that it reduces the amount time it takes to launch a product, because operators don't have to go out and license content themselves.

"There is now a growing market for niche players that are able to bridge the challenges posed by syndicating the technology and content involved in mobile content services," Vishwanath says.

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Advertising

# TV phone-in scandals might have made users wary of mobile ads

The TV-voting scandals that rocked the UK last year might have eroded mobile users' enthusiasm for mobile marketing campaigns.

A recent survey conducted by the Mobile Marketing Association (MMA) shows that only one-quarter of UK subscribers are willing to accept advertising on their phones. In contrast, 62% of Italian and 57% of Spanish users expressed an interest in opting in to campaigns.

The survey was conducted at a time when the controversy over rigged viewer-participation competitions on TV was big news in the UK. Numerous cases were uncovered of TV pro-

grams that encouraged viewers to call or text shows at premium rates after the winners had been decided.

Speaking at a recent press event in London, Richard Siggers, head of mobile advertising at Vodafone Group and the MMA's EMEA chairman, said that the comparatively negative response in the UK highlighted the importance of industry standards in mobile marketing.

"Codes of conduct are important," he said. "Every time this [kind of story] comes up in the news, it has an adverse effect. ... Transparency, visibility and independent validation are all needed to increase consumer accept-

ance of mobile advertising."

The UK findings come as a blow to mobile advertising in Europe, since the scale of the UK market and the financial muscle of its subscribers should make it one of the most lucrative in which to advertise on mobile.

According to the MMA survey, users in Italy and Spain are almost twice as likely as those in France, Germany and the UK to opt in to mobile marketing campaigns.

Subscribers in Germany are almost as reluctant as their UK counterparts to receive ads, with only 28% of German respondents saying they would be likely to opt in.

Data

## Photo and video content generated by users

m:metrics

| Activity                                | Total           |             | 3G subscribers  |             |                | Non-3G or unknown subscribers |             |                |
|---|-----------------|-------------|-----------------|-------------|----------------|-------------------------------|-------------|----------------|
|   | Projected subs* | % of subs** | Projected subs* | % of subs** | Benchmark (%)† | Projected subs*               | % of subs** | Benchmark (%)† |
| <b>France</b>                           |                 |             |                 |             |                |                               |             |                |
| Took photos                             | 21,773,820      | 47.9        | 1,410,066       | 21.9        | -54            | 5,621,880                     | 14.4        | -70            |
| Captured video                          | 8,207,124       | 18.0        | 569,182         | 8.8         | -51            | 1,942,396                     | 5.0         | -72            |
| Used network services for photos/videos | 11,036,954      | 24.3        | 2,653,718       | 41.2        | 70             | 8,383,236                     | 21.5        | -12            |
| Watched video sent by family or friends | 1,935,753       | 4.3         | 775,177         | 12.0        | 183            | 1,160,577                     | 3.0         | -30            |
| <b>Germany</b>                          |                 |             |                 |             |                |                               |             |                |
| Took photos                             | 22,829,506      | 47.1        | 2,163,421       | 23.8        | -49            | 4,980,112                     | 12.6        | -73            |
| Captured video                          | 7,893,387       | 16.3        | 846,119         | 9.3         | -43            | 1,627,486                     | 4.1         | -75            |
| Used network services for photos/videos | 10,515,641      | 21.7        | 3,347,707       | 36.9        | 70             | 7,167,934                     | 18.2        | -16            |
| Watched video sent by family or friends | 976,563         | 2.1         | 842,161         | 10.0        | 384            | 134,402                       | 0.3         | -83            |
| <b>Italy</b>                            |                 |             |                 |             |                |                               |             |                |
| Took photos                             | 25,515,959      | 54.9        | 3,965,826       | 25.0        | -54            | 4,381,460                     | 14.3        | -74            |
| Captured video                          | 11,600,602      | 24.9        | 2,073,126       | 13.1        | -48            | 1,782,693                     | 5.8         | -77            |
| Used network services for photos/videos | 14,545,537      | 31.3        | 7,486,223       | 47.2        | 51             | 7,059,314                     | 23.0        | -26            |
| Watched video sent by family or friends | 2,465,930       | 5.3         | 2,127,119       | 13.4        | 153            | 338,811                       | 1.1         | -79            |
| <b>Spain</b>                            |                 |             |                 |             |                |                               |             |                |
| Took photos                             | 19,419,380      | 58.0        | 2,746,167       | 27.1        | -53            | 3,510,817                     | 15.0        | -74            |
| Captured video                          | 9,060,054       | 27.0        | 1,502,937       | 14.8        | -45            | 1,378,915                     | 5.9         | -78            |
| Used network services for photos/videos | 10,633,318      | 31.7        | 4,908,202       | 48.5        | 53             | 5,725,115                     | 24.5        | -23            |
| Watched video sent by family or friends | 2,443,346       | 7.3         | 2,116,355       | 20.9        | 187            | 326,992                       | 1.4         | -81            |
| <b>UK</b>                               |                 |             |                 |             |                |                               |             |                |
| Took photos                             | 25,195,986      | 54.2        | 2,739,452       | 25.9        | -52            | 5,178,340                     | 14.4        | -73            |
| Captured video                          | 11,431,814      | 24.6        | 1,442,459       | 13.6        | -45            | 2,227,925                     | 6.2         | -75            |
| Used network services for photos/videos | 13,830,430      | 29.7        | 4,923,104       | 46.5        | 56             | 8,907,326                     | 24.8        | -17            |
| Watched video sent by family or friends | 2,134,000       | 4.6         | 1,615,330       | 15.3        | 233            | 518,670                       | 1.4         | -69            |
| <b>U.S.</b>                             |                 |             |                 |             |                |                               |             |                |
| Took photos                             | 77,461,263      | 35.4        | 10,374,903      | 20.8        | -41            | 14,945,178                    | 8.8         | -75            |
| Captured video                          | 24,800,050      | 11.3        | 4,200,994       | 8.4         | -26            | 4,011,319                     | 2.4         | -79            |
| Used network services for photos/videos | 44,814,615      | 20.5        | 19,942,559      | 40.0        | 96             | 24,872,057                    | 14.7        | -28            |
| Watched video sent by family or friends | 7,865,028       | 3.6         | 5,231,253       | 10.5        | 192            | 2,633,775                     | 1.6         | -57            |

Notes: Monthly average for the three months ending Nov-07. \*Projections based on sample results. \*\*The percentage of all mobile users likely to use the service based on sample results and M-Metrics calculations. †The likelihood that a particular segment of subscribers will use a service compared with the whole market. Bases: France (12,867), Germany (15,700), Italy (13,107), Spain (12,877), UK (15,588), U.S. (33,237)

Source: M-Metrics November 2007 Benchmark Survey. The data is drawn from an extensive survey that collects mobile-content-consumption, device-model and carrier-subscription information from each month's sample of subscribers. The data is statistically balanced and projected to the number of subscriptions in each country

| Mobile game releases, selected publishers, 2Q07 |                                      |             |                          |                  |             |
|---|--------------------------------------|-------------|--------------------------|------------------|-------------|
| Publisher                                       | Name of game                         | Launch date | Territory                | Genre            | Development |
| <b>EA Games</b>                                 |                                      |             |                          |                  |             |
|   | The Simpsons: Minutes to Meltdown    | 10-Jul      | Europe                   | Action/adventure | External    |
|   | Burnout                              | 10-Aug      | Europe                   | Racing           | External    |
|   | Medal of Honor: Airborne             | 24-Aug      | Europe                   | Action/adventure | External    |
|   | Skate                                | 3-Sep       | Europe                   | Sports           | Internal    |
|   | EA Sports FIFA 08                    | 27-Sep      | Europe                   | Sports           | External    |
|   | Need for Speed: ProStreet            | 26-Oct      | Europe                   | Racing           | External    |
|   | Block'd                              | 9-Nov       | Europe                   | Puzzle           | External    |
|   | SimCity Societies                    | 9-Nov       | Europe                   | Strategy         | Internal    |
|   | Lego Escape                          | 1-Dec       | Europe                   | Puzzle           | External    |
|   | Harry Potter: Mastering Magic        | 7-Dec       | Europe                   | Puzzle           | Internal    |
|   | The Sims DJ                          | 14-Dec      | Europe                   | Strategy         | External    |
|   | Dakar Rally 2008                     | 14-Dec      | Europe                   | Racing           | External    |
| <b>Eidos Mobile</b>                             |                                      |             |                          |                  |             |
|   | Kane & Lynch: Dead Men               | Sep         | Europe/U.S.              | Action/adventure | External    |
|   | Sola Rola                            | Oct         | Europe/U.S.              | Adventure        | External    |
|   | Lara Croft Tomb Raider: Anniversary  | Dec         | Europe/U.S.              | Action/adventure | External    |
|   | Championship Manager 2008            | Dec         | Europe                   | Sports/strategy  | External    |
| <b>Gameloft</b>                                 |                                      |             |                          |                  |             |
|   | Guitar Legend: Get On Stage!         | Jul         | Europe/U.S.              | Simulation       | Internal    |
|   | Real Rugby                           | Aug         | Europe                   | Sports           | Internal    |
|   | CSI: Miami                           | Sep         | Global                   | TV show          | Internal    |
|   | Heroes: The Official Mobile Game     | Oct         | North America            | TV show          | Internal    |
|   | Kobe Bryant Pro Basketball 2008      | Oct         | North America            | Sports           | Internal    |
|   | Million Dollar Poker                 | Oct         | Global                   | Card             | External    |
|   | American Gangster: The Mobile Game   | Nov         | North America            | Action           | Internal    |
|   | Beowulf                              | Nov         | U.S.                     | Action           | Internal    |
|   | Tokyo City Nights                    | Nov         | Japan                    | Action           | Internal    |
| <b>Glu Mobile</b>                               |                                      |             |                          |                  |             |
|   | Transformers                         | Jun         | Global                   | Action           | Internal    |
|   | World Series of Poker: Pro Challenge | Jul         | Global                   | Card             | Internal    |
|   | Diner Dash 2                         | Aug         | Global                   | Puzzle           | External    |
|   | Whitehouse Rumble                    | Sep         | North America            | Action           | Internal    |
|   | Pasapalabra                          | Dec         | UK                       | Quiz             | External    |
|   | Pro Evolution Soccer 2008            | Dec         | Europe                   | Sports           | External    |
|   | Sega Rally                           | Dec         | Europe                   | Racing           | External    |
|   | Call of Duty 4: Modern Warfare       | Dec         | Europe                   | Action           | External    |
|   | Little Britain                       | Sep         | UK/Australia/New Zealand | Action           | Internal    |
|   | Asteroids                            | Sep         | North America            | Action           | External    |
|   | Mystery Case Files: Agent X          | Oct         | North America            | Puzzle           | External    |
| <b>Hands-On Mobile</b>                          |                                      |             |                          |                  |             |
|   | Asteroid Zone                        | Jul         | EMEA                     | Arcade           | External    |
|   | Lego Brick Breaker                   | Jul         | Global                   | Arcade           | External    |
|   | Village People YMCA                  | Aug         | EMEA                     | Action           | External    |
|   | World Poker Tour: Texas Hold 'Em 2   | Aug         | Global                   | Card             | External    |
|   | Pro Bowling 2                        | Sep         | Global                   | Sports           | External    |
|   | Japanese Puzzles                     | Oct         | Global                   | Puzzle           | External    |
|   | Julia Channel Exposed                | Oct         | EMEA                     | Puzzle           | External    |
|   | Julia Channel Strip Poker            | Nov         | EMEA                     | Card             | External    |
|   | The Witcher                          | Nov         | EMEA                     | Action           | External    |

| Mobile game releases, selected publisher (cont.) |   |             |                           |                 |             |
|--|---|-------------|---------------------------|-----------------|-------------|
| Publisher  | Name of game                            | Launch date | Territory                 | Genre           | Development |
| <b>Hands-On Mobile (cont.)</b>                   |   |             |                           |                 |             |
|  | Beezzz                                  | Dec         | EMEA                      | Puzzle          | External    |
|  | Heroes Lore: Wind of Soltia             | Dec         | Global                    | Strategy        | External    |
| <b>HandyGames</b>                                |   |             |                           |                 |             |
|  | My Model Train                          | May         | Global                    | Puzzle          | Internal    |
|  | Sturmtrupp Mars: Operation Roasted Bugs | Jul         | Global                    | Strategy        | Internal    |
|  | Army Of Heroes                          | Aug         | Global                    | Action          | Internal    |
|  | Anarchy 2087                            | Sep         | Global                    | Strategy        | Internal    |
|  | My Model Train 2                        | Nov         | Global                    | Strategy        | Internal    |
| <b>I-play</b>                                    |   |             |                           |                 |             |
|  | World Pool Championship 2007            | Jun         | Global                    | Sports          | External    |
|  | Metal Slug Mobile 3                     | Jun         | Global                    | Action          | External    |
|  | The Fast and The Furious: Fugitive 3D   | Jun         | North America             | Action          | Internal    |
|  | ER Rush                                 | Aug         | North America             | Puzzle          | Internal    |
|  | FMX III Hardcore                        | Oct         | Global                    | Racing          | External    |
|  | FIA World Rally Championship            | Oct         | Global                    | Racing          | Internal    |
|  | Slingo Quest                            | Oct         | Global                    | Puzzle          | External    |
|  | Negreanu Poker Pro                      | Nov         | Global                    | Card            | Internal    |
|  | Mercenaries 2: World in Flames          | Nov         | Global                    | Action          | External    |
|  | The Weakest Link                        | Nov         | Global                    | TV Show         | Internal    |
| <b>Namco Europe</b>                              |   |             |                           |                 |             |
|  | Super Pac-Man                           | Jul         | EMEA                      | Arcade          | Internal    |
|  | Aqua Rush                               | Jul         | EMEA                      | Puzzle          | Internal    |
|  | Paparazzi Superstar                     | Aug         | EMEA                      | Casual          | External    |
|  | The X Factor                            | Aug         | UK                        | TV show         | External    |
|  | Dragon & Jade                           | Sep         | EMEA                      | Adventure       | External    |
|  | Mazinger Z                              | Sep         | Spain/Italy/France/Greece | Action          | External    |
|  | Zoo Keeper                              | Nov         | EMEA                      | Puzzle          | External    |
|  | Idols                                   | Nov         | Australia/Sweden/Norway   | TV show         | External    |
|  | Brain Coach with Dr. Kawashima          | Dec         | EMEA                      | Puzzle          | External    |
| <b>THQ</b>                                       |   |             |                           |                 |             |
|  | Hunting Unlimited                       | 3Q/4Q       | Global                    | Action          | External    |
|  | MotoGP 07                               | 3Q          | Global                    | Racing          | External    |
|  | Ratatouille                             | 3Q/4Q       | Global                    | Action          | External    |
|  | Stuntman: Ignition                      | 3Q          | Global                    | Action          | Internal    |
|  | Juiced 2: HIN                           | 4Q          | Global                    | Racing          | Internal    |
|  | WWE; Smackdown vs. Raw                  | 4Q          | Global                    | Action          | External    |
|  | Snood Blaster                           | 4Q          | Global                    | Puzzle          | Internal    |
|  | Star Wars: Empire Strikes Back          | 4Q          | Global                    | Action          | External    |
| <b>Vivendi</b>                                   |   |             |                           |                 |             |
|  | The Bourne Ultimatum                    | Aug         | EMEA                      | Action          | External    |
|  | Delta Force                             | Aug         | EMEA                      | Action          | External    |
|  | Brain Shock                             | Sep         | EMEA                      | Puzzle          | External    |
|  | Crash of the Titans                     | Oct         | EMEA                      | Action          | External    |
|  | The Legend of Spyro                     | Oct         | EMEA                      | Platform        | External    |
|  | Urban Attack                            | Nov         | EMEA                      | Action/shooter  | External    |
|  | Slide N' Loop                           | Nov         | EMEA                      | Puzzle          | External    |
|  | SWAT: Elite Troops                      | Dec         | EMEA                      | Action/strategy | External    |

Sources: Publishers

TV

## 3 Italy makes rare success of DVB-H by following unusual business model

When 3 Italy started offering mobile TV, over 3G, it charged €1 (US\$1.50) for five minutes of viewing, with what was essentially a poor user experience. But there were still plenty of people willing to pay that price, Marco Narduzzi, director of the carrier's business-to-business spinoff, 3 Power, told delegates at December's Mobile TV Asia conference in Singapore.

The Hutchison Whampoa-owned carrier figured that if people were willing to pay so much to endure the inadequacies of TV streamed over a mobile network, there must be a case for rolling out a DVB-H mobile broadcast network that could offer a much better experience, Narduzzi said.

Unlike other carriers in Europe offering a DVB-H mobile TV service – including Italian operators TIM and Vodafone – 3 Italy went whole hog, both deploying its own network and producing some of the content itself. Two of the 12 channels it broadcasts over its DVB-H network are produced in-house.

The dominant business model in the only three European countries to deploy broadcast-mobile-TV services – Italy, Finland and the UK, which uses DAB-IP – is for a third party to take the risk of deploying the infrastructure and wholesale the service to cellcos.

“We have implemented a very peculiar model, where we cover the whole value chain, and we have become a broadcaster,” Narduzzi said. “There were two reasons for this: One is quality control, and the other is that we can offer the best service to the customer.”

3's gamble seems to have paid off. Its broadcast TV service is the only one to have taken off in Europe. TIM and Vodafone, which rent network capaci-

ty from Italian DVB-H wholesaler Mediaset and share some of the channels they broadcast, have managed to sign up only a few DVB-H users.

In Finland, the DVB-H service launched by wholesaler Digita had a false start in late 2006 and has struggled to get broadcasters, handset vendors and operators on board. And in the UK, wholesaler BT Movio pulled the plug on its DAB broadcast-mobile-TV service after it failed to take off with MVNO Virgin Mobile, its only retailer.

### Healthy numbers

In contrast, 3 Italy had close to 1 million DVB-H subscriptions at end-2Q07, out of a total subscription base of 7.42 million. Users pay €19 a month to subscribe to the service – or €3 a day, €9 a week or €29 for three months (see fig.) – which is less than it charged for its streaming service.

3 Power is selling DVB-H as a ready-made package to cellcos eager to replicate the Italian carrier's success.

The transformation from cellco to broadcaster wasn't easy, Narduzzi said, since 3 needed to adapt to a new environment. “As we changed our skin from mobile operator to broadcaster, we made a lot of mistakes in the begin-

ning,” he said. “Working with broadcasters was difficult. Having meetings in the morning was impossible, as broadcasters stay up late and tend to come into the office after midday.”

Todd Miller, Sony Pictures Television International's executive vice president and managing director for Asia, who also spoke at the conference, said that the biggest challenge his firm has faced in mobile TV is dealing with operators. Cellcos tend to focus on engineering and technical factors, without appreciating the complexities inherent in developing content for such a service, he said.

“That is now changing, as operators hire people who know the content and broadcast business,” he added. The breakthrough happens when operators begin to see content as something that needs serious investment, rather than something that can be added at the end of a service's development, he said.

3 Italy has taken an interesting approach to TV production for its La3Live and La3Sport made-for-mobile channels. It has cut personnel costs by automating much of the filming process and using some of its call-center staffers as TV presenters. “We select the nice-looking ones, the ones that can talk in public,” Narduzzi said.

#### Facts about 3 Italy's mobile TV offering

- ARPU of DVB-H subscriptions is 60% higher than that of average subs, with two-thirds of the difference coming from additional voice/data spending and one-third from DVB-H charges
- An hour of programming costs less than €100 to produce
- 7-10% of DVB-H users use interactive features, compared with about 2% for normal digital TV
- Costs €4 a day, €9 a week, €19 a month or €29 for three months for basic service. The same prices apply for each of adult channels Playboy and Penthouse
- 15% of subs watch on a daily or weekly basis, 40% watch at least once a month, and 90% watch at least once ever
- Average usage was 40 minutes a day before soccer season began but rose to about 60 minutes after it started
- 34% view the service at work, 34% watch while strolling, and 24% watch while travelling
- 60-70% of streamed TV content on 3's portal is adult, much of it hard-core
- In 2009, 3 plans to add DVB-T and broadcast terrestrial channels, which would be the first such service on mobile. The DVB-T and DVB-H offerings will be similar but will have some key differences

Note: €1=US\$1.50

Source: Informa Telecoms & Media

These impromptu stars appear on La3Live casually talking to and interacting with viewers, discussing what's going to appear on the other channels, telling jokes and exchanging text and picture messages with viewers, Narduzzi said. "These people are becoming popular in Italy," he added. "It's all about word of mouth and being close to the customer."

And viewers can make live video calls to La3Live to give their opinions or be interviewed. The level of viewer interactivity on DVB-H is about 7-10%, much higher than the 2% seen with normal digital TV, Narduzzi said.

3 has designed its production studio so that it needs to be manned by only one producer or technician. "One person can run the whole thing ... move cameras with a joystick, that kind of thing," Narduzzi said.

Overall, production costs are less than €100 per hour of programming.

Mobile TV content is usually seen as complementary to the content that people watch on satellite TV at home, acting as a way to watch the same content on the move, Narduzzi said. But adding made-for-mobile content to the mix has encouraged users to spend more time watching the DVB-H service at home than they would otherwise, he added.

Most usage still takes place outside the home. Thirty-four percent use the service at work, 34% use it while walking around, and 24% use it while traveling.

Much of 3 Italy's success with broadcast mobile TV could be due to the fact that it was more willing than TIM and Vodafone to subsidize DVB-H handsets (*MM*, 12 Jan, 2007). Because the phones are made only by a few manufacturers, in small volumes, they are expensive – about €600 each. TIM's strategy was to attract fewer, higher-spending users, and it was not willing to subsidize DVB-H-enabled handsets more heavily than regular 3G phones. The same was true of Vodafone. 3's strategy was, from the start, to see the service taken up as widely as possible.

3's DVB-H users generate considerably greater ARPU than its standard cellular subscribers, bringing in 60% more revenue, Narduzzi says. Two-thirds of the additional ARPU comes from general voice and data, since its DVB-H users tend to be early adopters, who spend more on all services. One-third is attributable directly to the mobile TV service.

But faced with low take-up, TIM and Vodafone have begun to lower handset prices, so subsidies are no longer such a big differentiating factor for 3. As of May, TIM had reportedly sold only about 10,000 DVB-H handsets (*MM*, 18 May, 2007).

### 3 Italy has cut TV production costs by automating much of the filming process and using some of its call-center staffers as TV presenters

Narduzzi said that customer satisfaction was higher for DVB-H at launch than it was for UMTS at launch. "When we first launched 3G, it wasn't working well, but when we launched DVB-H, the level of readiness was much higher," he said.

But users have a lower tolerance of quality problems in a DVB-H service than in a 3G service, he added. "When the [TV] streaming service goes down for five minutes, no one cares," he said. "It's a different story with DVB-H."

When 3 marketed the launch of its broadcast service, it barely advertised it on TV, because the main message it wanted to convey was the difference in image quality between 3G and DVB-H – something difficult to portray in a TV commercial. Instead, it spent what

would have been its TV-advertising budget handing out €10 vouchers to anyone visiting its stores who was interested in trying out the service. "Actually trying the service was a far better advert," Narduzzi said.

3 also used a lot of SMS- and MMS-based marketing, especially associated with soccer and other sports events. It timed the launch of the DVB-H service to coincide with the soccer World Cup in June 2006, whose coverage it had obtained the rights to broadcast to phones.

The carrier is making a success of selling advertising space on the DVB-H service, but persuading brands to sponsor programs was tricky to start with, Narduzzi said.

When 3 began broadcasting a show based on international motorcycling championship MotoGP, it approached bike manufacturers Yamaha and Honda to see if they would like to sponsor it, but neither was interested. The carrier then skewed the program's content to give prominence to Yamaha's and Honda's bikes, and both manufacturers changed their minds when they saw their brand recognition boosted by the editorial coverage.

"Both pay €1 million per month to advertise now," Narduzzi said.

The operator has created a "user-measurement tool" to show who is watching what, and when they are doing so. It is using the information as bait to attract advertisers and is selling it to its existing advertisers to keep tabs on the effectiveness of their campaigns.

Few of 3 Italy's DVB-H subscribers opt out from being tracked in this way, so the measurement tool captures the viewing habits of more than 90% of the user base. "Because of this tool, money is now being made from advertisers," Narduzzi said.

The tool also supplies demographic information, when available, and is set to eventually incorporate users' location.

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France, Germany, UK

## UK data-ARPU levels soar, amid poor performance from I-mode

UK operators experienced a collective year-on-year hike of 21.61% in data ARPU in 2Q07, placing them well ahead of their counterparts in France, Germany and Italy, in terms of both actual ARPU and growth in ARPU.

UK cellcos' data ARPU amounted to US\$11.02 in 2Q07, compared with US\$9.06 in 2Q06. Just over 20% of that revenue was derived from data services other than text messaging, according to figures from *MM* publisher Informa Telecoms & Media.

Overall, the UK's mobile penetration was 116.29% at end-June (see fig. 1), with prepaid subscriptions accounting for 62.78% of all subs, representing an annual drop of 5.98 percentage points.

UK-based WCDMA-subscription figures reached 10.21 million, accounting for about 14.44% of all mobile subscriptions in 2Q07 – and representing a jump of 71.62% year-on-year.

Beyond 3G-only player 3, O2 continues to lead in 3G penetration, with about 1.8 million WCDMA subscriptions, accounting for 9.36% of its total subs base in 2Q07. The company's data ARPU increased 16.8% year-on-year in 2Q07, to US\$14.60, with data revenues generated by non-SMS services accounting for 14.2% of the total.

Notably, the number of O2 users signed up to the I-mode mobile Internet service dipped from 426,000 at end-1Q07 to 400,000 at end-2Q07, though the figure grew 32.01% in the 12 months to 2Q07. Similarly, the number of subscribers using the O2 Active portal dipped from 6.6 million in 1Q07 to 6.55 million in 2Q07.

The performance of I-mode offerings in the surveyed countries was weak, with Informa figures showing that the I-mode subscription base of German operator E-Plus shrank a massive 28.5%, to 715,000, in the 12 months to end-2Q07.

Fig. 1: UK mobile market profile, 2007

| Operator                                     |  | 2Q06       | 1Q07       | 2Q07       | Annual change (%) |
|--|--|------------|------------|------------|-------------------|
| 3  | WCDMA subscriptions                        | 3,650,000  | 3,850,000  | 3,875,000  | 6.16              |
|  | WCDMA subscriptions as % of total          | 100        | 100        | 100        | 0.00              |
| O2   | Total subscriptions                        | 17,914,300 | 19,150,900 | 19,235,000 | 7.37              |
|  | WCDMA subscriptions                        | 419,000    | 1,510,000  | 1,800,000  | 329.59            |
|  | WCDMA subscriptions as % of total          | 2.34       | 7.88       | 9.36       | 300.10            |
|  | I-mode users                               | 303,000    | 426,000    | 400,000    | 32.01             |
|  | I-mode users as % of total                 | 1.62       | 2.22       | 2.04       | 26.35             |
|  | O2 Active users                            | 6,400,000  | 6,600,000  | 6,555,000  | 2.42              |
|  | O2 active users as % of total              | 35.73      | 34.46      | 34.08      | -4.61             |
| Orange                                       | Data ARPU (US\$)                           | 12.50      | 14.30      | 14.60      | 16.80             |
|  | Non-SMS revenue as % of total data revenue | 13.30      | 13.40      | 14.20      | 6.77              |
|  | Total subscriptions                        | 14,951,000 | 15,096,000 | 15,165,000 | 1.43              |
|  | WCDMA subscriptions                        | 500,000    | 1,139,000  | 1,368,000  | 173.60            |
|  | WCDMA subscriptions as % of total          | 3.34       | 7.55       | 9.02       | 169.74            |
|  | Orange World Users                         | 2,600,000  | 2,000,000  | 2,050,000  | -21.15            |
|  | Orange World users as % of total           | 17.39      | 13.25      | 13.52      | -22.27            |
| T-Mobile                                     | Data ARPU (US\$)                           | 8.10       | 8.60       | 9.00       | 11.11             |
|  | Total subscriptions                        | 16,730,000 | 16,734,000 | 16,786,000 | 0.33              |
|  | WCDMA subscriptions                        | 150,000    | 440,000    | 540,000    | 260.00            |
|  | WCDMA subscriptions as % of total          | 0.90       | 2.63       | 3.22       | 258.80            |
| Vodafone                                     | Data ARPU (US\$)                           | 6.30       | 7.90       | 8.40       | 33.33             |
|  | Total subscriptions                        | 13,871,000 | 15,409,000 | 15,617,600 | 12.59             |
|  | WCDMA subscriptions                        | 1,228,000  | 1,938,000  | 2,623,000  | 113.60            |
|  | WCDMA subscriptions as % of total          | 8.85       | 12.58      | 16.80      | 89.71             |
|  | Vodafone Live subscriptions                | 4,376,000  | 3,611,000  | 4,350,000  | -0.59             |
| Country totals                               | Vodafone Live subscriptions as % of total  | 31.55      | 23.43      | 27.85      | -11.71            |
|  | Data ARPU (US\$)                           | 9.00       | 10.80      | 11.40      | 26.67             |
|  | Non-SMS revenue as % of total data revenue | 26.3       | 29.2       | 29.3       | 11.41             |
|  | Subscriptions                              | 67,116,300 | 70,239,900 | 70,678,600 | 5.31              |
| WCDMA subscriptions                          | 5,947,000                                  | 8,877,000  | 10,206,000 | 71.62      |                   |
| WCDMA subscriptions as % of total            | 8.86                                       | 12.64      | 14.44      | 62.97      |                   |
| Portal users*                                | 13,829,000                                 | 13,077,000 | 13,895,000 | 0.48       |                   |
| Data ARPU (US\$)                             | 9.06                                       | 10.58      | 11.02      | 21.61      |                   |
| Non-SMS data revenue as % of total revenue** | 18.97                                      | 20.44      | 20.97      | 10.51      |                   |
| Prepaid subscriptions                        | 46,146,200                                 | 45,881,240 | 44,372,500 | -3.84      |                   |
| Prepaid subscriptions as % of total          | 68.76                                      | 65.32      | 62.78      | -8.69      |                   |
| Penetration (%)                              | 110.43                                     | 115.57     | 116.29     | 5.31       |                   |

\*Excluding T-Mobile and 3. \*\*Vodafone and O2 only

Source: Informa Telecoms & Media

Fig. 2: Germany mobile market profile, 2007

| Operator |                                    | 2Q06       | 1Q07       | 2Q07       | Annual change (%) |
|----------|------------------------------------|------------|------------|------------|-------------------|
| E-Plus   | Total subscriptions                | 10,903,840 | 12,091,560 | 12,615,450 | 15.70             |
|          | WCDMA subscriptions                | 245,000    | 470,000    | 580,000    | 136.73            |
|          | WCDMA subscriptions as % of total  | 2.25       | 3.89       | 4.60       | 104.62            |
|          | I-mode subscriptions               | 1,000,000  | 810,000 *  | 715,000 *  | -28.50            |
|          | I-mode subscriptions as % of total | 9.17       | 6.70       | 5.67       | -38.20            |
|          | Data ARPU (US\$)                   | 4.00       | 4.30       | 4.40       | 10.00             |
| O2       | Total subscriptions                | 10,335,000 | 11,184,000 | 11,557,800 | 11.83             |
|          | WCDMA subscriptions                | 225,000    | 936,000    | 1,064,000  | 372.89            |
|          | WCDMA subscriptions as % of total  | 2.18       | 8.37       | 9.21       | 322.86            |
|          | GPRS users                         | 2,215,000  | 2,400,000  | 2,500,000  | 12.87             |
|          | GPRS users as % of total           | 21.43      | 21.46      | 21.63      | 0.93              |
|          | O2 Active users                    | 1,300,000  | 1,490,000  | 1,550,000  | 19.23             |
|          | O2 Active users as % of total      | 12.58      | 13.32      | 13.41      | 6.62              |

Fig. 2: Germany mobile market profile (cont.)

| Operator              |  | 2Q06       | 1Q07       | 2Q07       | Annual change (%) |
|-----------------------|--|------------|------------|------------|-------------------|
| O2 (cont.)            | Data ARPU (US\$)                             | 6.80       | 6.80       | 6.90       | 1.47              |
|                       | Non-SMS data as % of total data revenues     | 21.50      | 24.90      | 25.00      | 16.28             |
| T-Mobile              | Total subscriptions                          | 29,937,000 | 32,571,000 | 33,851,000 | 13.07             |
|                       | WCDMA subscriptions                          | 941,000    | 1,909,000  | 2,149,000  | 128.37            |
|                       | WCDMA subscriptions as % of total            | 3.14       | 5.86       | 6.35       | 101.97            |
|                       | Data ARPU (US\$)                             | 4.70       | 4.80       | 4.90       | 4.26              |
| Vodafone              | Total subscriptions                          | 26,676,260 | 27,612,930 | 28,361,350 | 6.32              |
|                       | WCDMA subscriptions                          | 2,337,000  | 3,720,000  | 4,196,000  | 79.55             |
|                       | WCDMA subscriptions as % of total            | 8.76       | 13.47      | 14.79      | 68.88             |
|                       | Vodafone Live users                          | 6,194,000  | 6,383,000  | 6,420,000  | 3.65              |
|                       | Vodafone Live users as % of total            | 23.22      | 23.12      | 22.64      | -2.51             |
|                       | Data ARPU (US\$)                             | n/a        | 6.30       | 6.40       | n/a               |
|                       | Non-SMS data as % of total data revenues     | 31.6       | 39.8       | 42         | 32.91             |
| <b>Country totals</b> |  |            |            |            |                   |
|                       | Subscriptions                                | 77,852,100 | 83,459,490 | 86,385,600 | 10.96             |
|                       | WCDMA subscriptions                          | 3,748,000  | 7,035,000  | 7,989,000  | 113.15            |
|                       | WCDMA subscriptions as % of total            | 4.81       | 8.43       | 9.25       | 92.10             |
|                       | Data users                                   | 15,479,000 | 17,078,000 | 17,385,000 | 12.31             |
|                       | Data ARPU (US\$)                             | n/a        | 5.49       | 5.59       | n/a               |
|                       | Non-SMS data revenue as % of total revenue** | 28.78      | 35.50      | 37.08      | 28.83             |
|                       | Prepaid subscriptions                        | 38,562,680 | 42,949,990 | 44,616,450 | 15.70             |
|                       | Prepaid subscriptions as % of total          | 49.53      | 51.46      | 51.65      | 4.27              |
|                       | Penetration (%)                              | 94.48      | 101.28     | 104.84     | 10.96             |

\*Analyst estimate. \*\*Excluding E-Plus and T-Mobile  
Source: Informa Telecoms & Media

Fig. 3: France mobile market profile, 2Q07

| Operator              |   | 2Q06       | 1Q07       | 2Q07       | Annual change (%) |
|-----------------------|---|------------|------------|------------|-------------------|
| Bouygues              | Total subscriptions                             | 8,305,000  | 8,729,000  | 8,807,000  | 6.04              |
|                       | I-mode users                                    | 1,600,000  | 1,740,000  | 1,720,000  | 7.50              |
|                       | I-mode users as % of total users                | 19.27      | 19.93      | 19.53      | 1.37              |
|                       | Data ARPU (US\$)                                | 8.80       | 9.00       | 9.30       | 5.68              |
| Orange                | Total subscriptions                             | 22,821,000 | 24,227,000 | 24,503,000 | 7.37              |
|                       | WCDMA subscriptions                             | 875,000    | 1,580,000  | 1,846,000  | 110.97            |
|                       | WCDMA subscriptions as % of total               | 3.83       | 6.52       | 7.53       | 96.49             |
|                       | Orange World users                              | 2,000,000  | 2,600,000  | 2,650,000  | 32.50             |
|                       | Orange World users as % of total                | 8.76       | 10.73      | 10.82      | 23.40             |
|                       | Data ARPU (US\$)                                | 6.40       | 7.00       | 7.30       | 14.06             |
|                       | Non-SMS data revenue as % of total data revenue | n/a        | 50.10      | 50.00      | n/a               |
| SFR                   | Total subscriptions                             | 17,683,000 | 18,666,000 | 18,811,000 | 6.38              |
|                       | WCDMA subscriptions                             | 1,574,000  | 3,133,000  | 3,450,000  | 119.19            |
|                       | WCDMA subscriptions as % of total               | 8.90       | 16.78      | 18.34      | 106.04            |
|                       | Vodafone Live users                             | 5,520,000  | 6,423,000  | 6,370,000  | 15.40             |
|                       | Vodafone Live users as % of total               | 31.22      | 34.41      | 33.86      | 8.48              |
|                       | Data ARPU (US\$)                                | 6.50       | 6.80       | 6.60       | 1.54              |
|                       | Non-SMS data revenue as % of total data revenue | n/a        | 36         | 36         | n/a               |
| <b>Country totals</b> |   |            |            |            |                   |
|                       | Subscriptions                                   | 48,809,000 | 51,622,000 | 52,121,000 | 6.79              |
|                       | WCDMA subscriptions                             | 2,449,000  | 4,713,000  | 5,296,000  | 116.25            |
|                       | WCDMA subscriptions as % of total               | 5.02       | 9.13       | 10.16      | 102.51            |
|                       | Portal users                                    | 9,120,000  | 10,763,000 | 10,740,000 | 17.76             |
|                       | Data ARPU (US\$)                                | 6.84       | 7.27       | 7.39       | 7.90              |
|                       | Non-SMS data revenue as % of total revenue*     | n/a        | 43.96      | 43.92      | n/a               |
|                       | Prepaid subscriptions                           | 17,755,000 | 18,750,000 | 18,802,000 | 5.90              |
|                       | Prepaid subscriptions as % of total             | 36.38      | 36.32      | 36.07      | -0.83             |
|                       | Penetration (%)                                 | 76.61      | 81.02      | 81.80      | 6.79              |

\*Excluding Bouygues  
Source: Informa Telecoms & Media

Yet, at the same time, E-Plus increased its overall data ARPU 10%, and the average WCDMA subscription count in Germany increased 113.15% (see fig. 2).

I-mode's poor performance lends credence to widespread reports that both O2 UK and E-Plus have given up on the service.

Even France's Bouygues Telecoms saw its I-mode subscription base dip from 1.74 million at end-1Q07 to 1.72 million at end-2Q07, even though the company's overall data ARPU rose US\$0.30 in the same period.

France experienced the largest increase in 3G penetration throughout the surveyed markets in the 12 months to end-2Q07, increasing its WCDMA-sub total 116.16% to 5.3 million (see fig. 3).

In 2Q07, prepaid subscriptions accounted for 36.07% of all mobile subs in France, where data ARPU grew 7.9% to US\$7.39 in the 12 months to end-June.

France has the highest percentage of non-SMS data revenues, which remained more or less static at just under 44% between 2Q06 and 2Q07.

The Informa figures also note that as the French prepaid-subscription figures rose annually 5.9%, to 18.8 million, in 2Q07, their percentage of the overall subscription base dipped 0.31 percentage points to 36.07% in 2Q07.

The statistics also demonstrate other high-profile casualties in the European mobile content market, with France Telecom's Orange UK recording a 21.15% drop in the number of subscribers accessing its Orange World portal in the 12 months to end-June, to 2.05 million.

The I-mode portal's reputation was tarnished last year as European I-mode operators increasingly questioned the value it adds to their brand.

KPN, which owns E-Plus and had long championed I-mode, was one of the carriers to express a change of heart regarding the offering.

Portal hosting

# Purchase of Terraplay serves End2End's goal of making retailing smarter

Portal-hosting firm End2End's acquisition of connected-gaming specialist Terraplay in November was part of an effort to offer a better retailing experience on the decks of its operator customers, the firm says.

"We needed a smarter way of retailing products," Jorgen Nordin, vice president of product management and marketing at End2End, told *MM*. "One of the things we have to prove to operators [as an outsourcer] is that we can drive more sales than they would otherwise get by themselves."

Although Terraplay's main business is running mobile gaming networks, it was the platform it developed for that purpose that most interested End2End. In addition to multiplayer gaming, the platform enables billing and community activities.

"We have software that wraps around people's experience of viewing and purchasing games, offering users several options on how to pay for content ... as well as user reviews and recommendations," said Sven Halling, CEO of Terraplay.

Operators that outsource their WAP portals have also been unburdening themselves of the responsibility of acquiring and managing their content, Nordin says. So it made sense for End2End to join forces with an outfit that aggregates content from different providers, even one that deals only with games.

End2End says that it will team up with any content provider that can help it meet the needs of its operator customers but that it sees games as a particularly useful content category. It is mainly just game storefronts that End2End is hosting on behalf of oper-

ators, with customers including Vodafone in the UK and New Zealand. In the case of the latter, it is managing both platform and content.

"Games are much more easy to offer as a global service than, say, music, which is much more fragmented according to local culture and tastes and is also complicated by a lot of rights issues," Halling says.

The payment options offered by Terraplay's platform enable operators to choose from among different pricing plans – including rental, payment after a trial period, upfront payment and subscription – rather than billing channels, such as mobile, credit card or PayPal, Halling says. The latter set of options is slated to come later, though, he adds.

## No blanket charging

He says different types of games are suited to different types of payment. "Tetris, for example, would suit a subscription model," he says. "It is a game with high replay value and very addictive. People keep playing it for ever and ever." A more complex game, such as poker, might suit a free-trial model, he adds, to enable users to get hooked on it before being asked to pay.

Meanwhile, an adventure game, in which players have, say, 10 levels to conquer, would be more suited to upfront payment, since the game loses appeal once the user has completed all the levels. "[In that scenario] you want to charge people as much as possible and as early as possible," Halling says.

Both Halling and Nordin say they disapprove of advertising funding for games. "[With an ad-funded model] you kill the business," Nordin said. Operators that have tried putting free

ad-funded games on their portals have seen a drop in revenue, they say.

"The experiences we have had insight to have shown cannibalization on the paid games when free games were launched," Halling says. He adds that ad funding is fine for "sponsoring back-catalog stuff" but not as an alternative to paying for new games.

"We have the real estate to accommodate advertising – i.e. the wrapper we put at the beginning and at the end of a game," he says. "I don't think it's a good idea to place ads on the front wrapper, because that would drag people away from playing the game." He adds that it is fine to put ads on the end wrapper, but as an extra revenue stream rather than a substitute for payment.

Both Halling and Nordin say the £5 (US\$10) it costs to download a game on average is beyond the means of many mobile users. But by introducing flexibility in how people pay for content, the price burden can be lessened. "You'll get your £5, but you'll get there in different ways," Nordin says, referring to content providers.

Perhaps a greater barrier than price for games is discoverability, Halling says. "Most users interested in downloading games don't read the gaming-reviews press, so they don't know what's good or bad," he says. "They go on the operator portal and are confronted with a choice of 450 games, with no way of telling what's worth downloading or not."

Adding an online community to the retail interface – enabling users to read what other users have to say about the games on offer – is one way around the problem, he says.

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## Music

### DRM added to Chinese phones

Handsets containing the copyright-protection software employed by Chinese digital-music retailer Kuro have been released in China by device maker Amoi Electronics. Semiconductor producer Spreadtrum has integrated Kuro's DRM system into the chipsets it's supplying for Amoi's A616 and A636 media-player phones.

### MotoMusic closes in on Asia

Motorola says it is hoping that its purchase of Singapore-based music provider Soundbuzz will boost its presence in Asia Pacific's mobile content market. Executives of the Chicago-based company didn't reveal financial details of the acquisition but did disclose that the deal would close in 1Q08. Motorola says it hopes the purchase will make its MotoMusic store in particular more compelling. It is launching a raft of new multimedia handsets, in a bid to offset losses from its mobile devices division.

## Advertising

### Admoda targets Asia

Mobile advertising agency Admoda is teaming up with Indian content aggregator Hungama to deliver ad campaigns on the mobile web across Central Asia, starting with India, Sri Lanka, Pakistan and Bangladesh. Admoda runs a global mobile advertising network, delivering millions of mobile banners and text ads every day, charging either per 1,000 views or per click.

### Mobile MySpace goes ad-funded

Social-networking site MySpace has extended its free, ad-funded model to mobile with the launch of a cross-network WAP offering. Until now, MySpace offered all mobile extensions of its service on a premium-subscription basis and through specific operators, such as Helio and AT&T. Advertising on the new service will at first take the form of sponsorships and banner ads, but MySpace parent Fox Interactive says it hopes to offer more-targeted advertising, using subscription data from carriers and GPS positioning on phones.

### Nokia offers free videos

In its latest foray into mobile content, Nokia has launched a free, ad-funded video-streaming service, Medeo, for its N Series and E Series phones. The service has been developed by ad-funded-mobile-app specialist Starcut and can be accessed through Nokia's WAP portal, Nokia.mobi. It will offer news and interviews from the showbiz world, film trailers and fashion and music content.

### UVuMobile, GoGo join forces

U.S.-based mobile advertising-systems company UVuMobile Media Platform has teamed up with Asian media-content company GoGo Mobile in a licensing and revenue-sharing agreement. The agreement is set to see UVuMobile's platform deliver audio and video programming to devices throughout Southeast Asia and the Middle East. Under the terms of the agreement, GoGo will pay UVuMobile one-time licensing fees, annual maintenance payments and quarterly royalties.

### 4th Screen clinches deals

UK-based mobile advertising agency 4th Screen Advertising has increased its footprint in the mobile advertising sector by teaming up with Associated Newspaper Group and Teletext. 4th Screen's deal with Associated Newspaper Group, the management company of titles including the *Daily Mail* and *Metro*, gives the agency exclusive rights to advertising space on the newly developed *Metro* WAP site. 4th Screen will also be securing advertising for the upcoming Teletext Holidays mobile site.

## TV

### LGE, Harris to enable broadcasts

LG Electronics and Harris will begin supplying U.S. TV broadcasters with transmission signals for portable electronics, such as cell phones, next year, offering broadcasters the chance to challenge mobile operators' dominance in mobile TV using their own transmissions. Harris has conducted field trials in Chicago and Washington, DC, and expanded trials are set to

be conducted this year, with broad coverage planned for 2009. The broadcasts are set to use part of the digital-TV spectrum, and the necessary equipment can easily be added to existing TV towers, according to LG and Harris.

### Singapore to trial mobile TV

Cellco M1 and media giant MediaCorp plan to conduct a trial of the DVB-H broadcast-mobile-TV standard in Singapore, starting in mid-2008. The firms have issued a tender for proposals for infrastructure and devices to be used as part of the project, including the possibility of a trial service. The project is still subject to regulatory approval and is in keeping with a memorandum of understanding signed by the two companies in October.

## Web

### Yahoo debuts mobile web app

Yahoo has unveiled a mobile Internet platform aimed at challenging Google's Android application. The software enables developers to create mobile widgets that can run in Yahoo's Go mobile service or any mobile browser, to generate revenue from mobile advertising. The move is aimed at clawing back ground lost to Google, which is scheduled to launch its Android application in 2H08, and will place it in direct competition with Microsoft, which is expected to sell 20 million smartphones based on Windows Mobile in the 12 months to end-June.

## Location

### Handsets to dominate GPS

Mobile-phone-based navigation will transform the GPS market by 2015, according to a recent report by the Telematics Research Group. TRG estimates that 30 million dedicated portable navigation devices (PNDs) were sold last year, compared with 20 million navigation-enabled mobile phones. Both segments will grow rapidly over the next few years, but navigation-enabled mobile phones will start out-selling dedicated PNDs in 2009, according to the report.

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Published: December 2007  
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**UK MOBILE CONTENT SURVEY: WHAT CONSUMERS WANT**

In light of the fast-moving developments in the UK mobile sector, Informa Telecoms & Media – in association with Orange UK and fieldwork partner Starcom Mediavest – have produced a new report: *UK Mobile Content Survey: What Consumers Want*. Based on extensive research and consultation with almost 2,000 mobile consumers in the UK, the report includes exclusive results on the size of the mobile content and services market, and in-depth analysis of mobile content behaviour. Survey results cover areas including mobile payments and banking, user-generated content, MMS and mobile TV.



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[www.informatm.com/csurvey](http://www.informatm.com/csurvey)

**Daniel Winterbottom says mobile users might not have all the answers but are still worth listening to**

At the recent Mobile Entertainment Markets Asia event in Singapore, I saw a panel session aimed at finding out how people felt about mobile entertainment.

The panelists ranged in age from about 17 to 26 and came from a variety of fields. They included a software developer, a young man doing national service in the Singaporean armed forces and several students. Although enlightening, the conclusions reached in the discussion must have been disheartening for the mobile operators and content providers at the event.

Although all of the panelists had mobiles, almost all made it clear that they didn't use them for much except voice and messaging. Some used their phones to listen to music, but only that which had been sideloaded from PCs. Some used their phones to take video and pictures but hardly ever sent them to anyone. One or two played games on their phones, but only when their options for other entertainment were limited.

Some might view this as a good thing. "At least some people are using some services on their phones," they might say. But it is hard to whoop with joy when the revenue potential represented by such usage is so low.

Each of the panel members cited devices other than mobiles as their preferred means for enjoying entertainment content. iPods, PSPs and laptops were all more popular than mobile phones for music, games and video/TV. This shouldn't come as a surprise to anyone, since such devices do what they are supposed to do so much better than the majority of handsets – and without the hazy fuzz of mobile-data charging ruining the user's enjoyment.

The often steep cost associated with mobile data was one of the reasons panelists cited for not making greater use of mobile entertainment services. Also mentioned were the slow speed of downloading apps and content, the fact that content doesn't work on all devices and, fundamentally, the fact that there is no content available on mobile that isn't done better, and cheaper, elsewhere.

Advertising is allegedly coming to save the day in relation to barrier No. 1: cost. Operators and content providers will be able to bolster their flagging revenue streams by getting brands, rather than

users, to pay for entertainment, right?

That doesn't look certain, if you take into account what the panel had to say. Although their responses about mobile advertising were not quite as clear-cut as those about using phones as entertainment devices, the general feeling among the panelists about ads was negative.

**IPods, PSPs and laptops do what they are supposed to do so much better than the majority of handsets – and without the hazy fuzz of mobile-data charging**

Most panelists said they wouldn't want advertising on their mobiles, and one even expressed a preference to pay extra to be exempt from it. But given the right trade-off for receiving ads, one panelist said he could see the value. "I'd get three ads for every full music track," he said, to the obvious relief of some conference delegates.

But this lone voice isn't a representative sample of the whole market. Neither are the few pioneering users who have already signed up to flat-rate data plans or those who have parted with a significant amount of money to own an iPhone.

Although such take-up is a solid start for the industry to build on, convincing people who aren't early-adopter technophiles of the value of mobile content and services is going to be a tough proposition, and it won't happen overnight. Education is vital, since until people can learn what their handsets can do outside of voice and text, they are unlikely to try it out.

So what are the answers? What will make users look to their mobile devices before their PSPs and iPods? There is no easy answer, but if the industry listens to users, it is more likely to find one. MM

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