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WGR Presents:

Mobile Entertainment analyst

In-depth coverage of the wireless entertainment business

Current Content Strategies in Japan

by Michael Thuresson

Japan's world-leading wireless data market has outgrown the original carrier-controlled content model and is slowly progressing toward the open Internet model. While Japanese carriers have happily watched more data packets zip across their networks as a result, the official developer community that relies on user subscription revenue has been faced with the emergence of free sites outside the carrier menus. In the case of NTT DoCoMo, well over 50,000 free unofficial sites have invaded the territory of official content providers. The content strategies of all three Japanese carriers have undoubtedly been influenced by the rapid growth of free content, offering Western market watchers a possible glimpse into their wireless future.

As of June 19, 2002, more than 42% of DoCoMo's 33 million-plus i-mode subscribers were using Java-enabled i-appli phones, according to a report by Indosuez WI Carr, an Asia-focused equity firm. The i-appli users dominate content usage – averaging 3,500 yen per month in data ARPU, more than three times that of 2G handset users. Unofficial data has been a huge driver of this revenue, so much so that carrier KDDI, Japan's third-largest wireless ISP with 10.5 million Web users, has introduced billing services for unofficial content on its EZWeb data service. "KDDI's impact may not be as great as if DoCoMo did the same thing, but it should motivate people to localize their services for KDDI's platform," says Giles Richter, CEO of Tokyo wireless consultancy Mobile Media Japan. "We can expect the other operators to eventually fall in line." Roughly one-third (3.56 million) of J-Phone's J-Sky Web service users are on Java phones, and the company has implemented unofficial application aggregation in response to growing usage. With all three carriers currently pulling away from their original content strategies, it's worth examining how they reached this critical juncture.

The original "walled garden" content strategy was applied to create a simple, user-friendly experience that allowed users to grow accustomed to more complex phones and data functions. While users could always access i-appli sites outside of carriers' menus, the lack of billing support for unofficial

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Hollywood Sees Money in Mobile

by Michael Stroud

Say "ancillary revenue" and watch a Hollywood executive smile. That's the term for finding multiple revenue streams for an entertainment property outside its primary market – a classic example is a box office smash that generates cash from TV, videos and DVDs, consumer product licenses, computer games, and console titles.

Now, add wireless to that mix. The major studios and music labels are all busily trying to generate revenue by re-purposing their top movie, television and music properties for ring tones, voicemail greetings, icons, games and other wireless applications that carriers use to drive consumer traffic on their networks.

So far, efforts have been largely focused in Asia and Europe. But with major American carriers rolling out advanced wireless services, faster networks and new Java and BREW-enabled phones this year, Hollywood executives are quickly ramping up in the U.S.

Betting that the wireless entertainment market will take off, Disney, Sony and Universal have all established in-house distribution teams that deal directly with carriers to deploy studio content. Viacom and Fox are largely pursuing licensing deals.

"I don't think anyone believes it will change the bottom line of the studio" said Rio Caraeff, vice president

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Creative Destruction in Telecom

"The Telecoms Bust is some 10 times bigger that the better-known dotcom crash...it may qualify as the largest bubble in history." So begins the *Economist's* version of the telecom industry's meltdown. Having lost more than $2 trillion in market value over the past year, and having run up more than $1 trillion in debt paying for spectrum, networks, and M&A, telecom firms everywhere are in a difficult state.

This is the "destruction" phase of capitalism. Companies (and CEOs) born from irrational exuberance are disappearing (Global Crossing, 360 Networks, WorldCom, and soon maybe Genuity, Qwest, Lucent). Criminal investigations are underway. More than 500,000 U.S. telecom workers have been laid off since 2001. It's gotten so bad that analysts are even downgrading stocks.

In the short term, though, the failure of weak companies won't save the industry – it could actually cause more failures. Network capacity doesn't go away. WorldCom's networks will be bought out of bankruptcy and operated by a firm that has a much smaller debt burden than WorldCom did. The new firm's advantage could give it significant pricing power, and force industry margins down further.

In the longer term, after balance sheets and executive suites are cleaned up, demand for bandwidth must come back in line with supply. As Henry Elkington of Boston Consulting Group said, "The (telecom) challenge is to move from a single-product utility to selling 100 different applications."

Mobile entertainment, from MMS to mobile MMOGs, will certainly be among those 100.

Nokia, Samsung, Sprint PCS, Ericsson Earnings Roll In

In July Nokia and Samsung both announced growth and earnings, in line with or exceeding expectations. Nokia posted pretax profit of $1.3B this quarter, up from $1.18B one year ago. Samsung announced record second-quarter net profits and increased its forecast for full-year handset sales to 41 million units from 37 million.

The problems came with both companies' forecasts. In forecasting next quarter's results, Nokia dropped the floor on its guidance estimates. Its 2002 total earnings went from $0.83 per share to "$0.80 to $.84" cents per share. The company has also revised downwards its estimates of total industry handset sales to 400 million from 420 million. Nokia shares bounced lower following the announcement, opening the next morning at $12.90.

Even though Samsung's quarterly profit was double this quarter 2001, and it claimed to be "quite confident that we will continue to deliver good results due to company specific factors, such as superior technology, cost advantage and product diversity" it wasn't enough. Its shares closed down 4.3%, which, according to the Financial Times, "reflects investors' mild disappointment at the slowing growth and concern that profits could fall in the third quarter."

Sprint PCS, announced a 32% revenue increase but posted a $0.17 per share loss instead of an expected $0.07 per share loss. Its costs to acquire each new customer rose to $350 from $300 one year ago. However, Sprint had been falling rapidly before the announcement, so the news that it had made its (lowered) subscriber growth target and had increased revenue per customer metrics gave the stock a lift. It closed on July 18th at $5.50.

On July 16th, THQ announced earnings in line with expectations and raised guidance for the year by 2 cents, but it could not crack the investor code. After shares rose on DATE, they dropped to 15-month lows the following day, with analysts blaming some concern about receivables collections and valuations of videogame stocks in general.

Wedbush Morgan Securities analyst Michael Pachter said, "I think that the investment community is starting to look at this whole group as consumer product companies and not as tech companies. When they get to $20, which is 15 times earnings, they're ridiculously cheap." THQ closed on July 18th at $21.85.

Ericsson, although saying that it's able to raise an additional round of financing, was getting pummeled in early trading. Shares on July 19th were down 21% from the previous evening's close. Although the company lowered its estimates of global handset sales from 400 million units to 390 million units and said that the SonyEricsson joint venture would lose money this year, the real problem seemed to be its financing.

In a research note, Nomura analyst Richard Windsor said, "Ericsson is a long way from being an investment that should be held by institutions as its markets, finances and management are in disarray." ■

Technology Explained

The Last Two Feet – Getting the Game on the Phone

by Cashman Andrus

Okay, the world outside of Japan is finally seeing what happens when J2ME hits the mass market. The games are looking good, the carriers and portals are ready to charge, and the phones are coming to the shelves. But how do Joe and Jane Gamer get the fun onto their phones? What are the options and the implications for delivering games to the mobile gamer? And which delivery technology has the best chance of becoming the standard?

There are basically three ways to get Java apps onto your handset:

1. Hook up the phone to a PC

2. Download over-the-air using WAP

3. Download over-the-air using a proprietary system

Hook Up the Phone to a PC

The first option, familiar to anyone who's loaded software onto a PDA, is to hook up the phone to a personal computer. (That doesn't necessarily mean a Windows PC, although Mac and Linux support is so rare among phone manufacturers, it might as well.) This is a two-step operation.

First, users download the Java application, using their favorite browser, to the PC. Potentially, they could get the application from a CD-ROM or a floppy, but the Web allows the app be constantly updated and tracked, so disk installation is rare for commercial J2ME applications. CD-ROMs make sense if the game is hundreds of megabytes, but it should be quite some time before the mobile space has to contend with that.

Second, users hook up their phone to the PC using whatever connection is available. A serial or USB cable is probably the most reliable, but Infrared and Bluetooth obviate the need for the additional connector cable. The phone manufacturer needs to provide software to handle the connection and initiate the download to the phone.

This need not be a difficult process for a user. Palm proved years ago that synchronization and even software installation could be a nearly foolproof process. Having just installed software on WGR's new 9290 (thanks, Nokia!) it's clear to me that Palm's lessons have not spread throughout the mobile phone world. It took more than 25 minutes and much hoop-jumping to install a 5-meg application. Cable installation also requires that a user has a PC available and knows how to use it. It's not very conducive to the on-the-go impulse buy that many publishers are hoping for.

Most important, it's inherently difficult to prevent the piracy of applications distributed through the PC. If I can copy the game from my PC to my phone, what's to stop me from copying it from my PC to all my friends' phones, too? While it may be possible to use a manufacturer key to monitor installations, and the networked aspect of phones certainly makes behind-the-scenes queries to authentication servers imaginable, neither method is foolproof. Warez-makers are notoriously clever at defeating copy-protection schemes.

Download Over-the-Air Using WAP

The obvious solution to the complexities of phone-to-PC syncing is to download over-the-air (OTA), with a wireless data connection between the phone and a server in the network. That way, there's no need for a cable or PC software, and apps can be bought and downloaded anywhere.

The process is very much like downloading software on your PC, but it all takes place within the phone. After the app is paid for, the user receives an SMS with a WAP URL (or, potentially, navigates to the proper WAP page by hand) and clicks to download the app into the handset's memory. The handset firmware handles storage of the new app and makes it available from the correct phone menu, but it provides no way to copy the app to another phone or anywhere else.

Essentially, the handset manufacturers have added a feature that works like your desktop browser's "Save Target As" command. The phone recognizes Java midlets (using the MIME type reported in the WAP headers) and knows to handle them specially: it saves them to flash memory and adds their names to list of applications the user can run. There is no built-in copy protection on the WAP URL, but it's not too hard for whoever is selling the download to add security. For example, they can make the download URL

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Stat!

Top 5 Nokia 9290 Downloads

Title	Description	# Downloads	Price
John Cody's SATALERT	Alerts you when a satellite is overhead	5647	$5.00
Solitaire Deluxe	Deluxe Solitaire	4446	free
V-Rally Racing	Car racing on the 9290	4238	$29.99
XTNDConnect Server	FREE Trial Version The only business oriented app here	3874	free
EpocBaby for Epoc	Dancing Baby is back!	3543	free

Source: Handango

Keeping Score

Le Jeu, C'est Les Autres

by Dan Scherlis

The successful wireless games – the ones that make money – will likely be those that focus on the strengths of the new medium. Mobile phones have one tremendous advantage for gameplay: they are connected devices. If we want to focus on the connectivity, to create online *mobile* games, we should look to today's online PC games for lessons. Those "massively multiplayer games," or "online worlds," offer insights that can translate directly to mobile games.

Like mobile games, massively multiplayer games are a new medium. They do not even have an accepted name: Massively Multiplayer Online Games (MMP or MMOG), Online Worlds, Persistent Worlds, or the exquisitely clumsy Massively Multiplayer Online Role-Playing Game (MMORGP, or something). Like mobile games, which are a product of both telecommunications and PC/video-games, MMOGs are a convergence medium, blending PC games with an Internet fad known as MUD. The MUD is the favored parent, and it is worth examining.

MUDs are essentially text-chat systems, with no graphics, but with added object-oriented databases and rules. I can type "Hello, Matt, I owe you a drink" in any chat room. But in a MUD, I might type "Tell Matt Hello. Give drink to Matt," and Matt would see the message "Dan tells you 'Hello' …Dan gives you a drink." That's a MUD. If Matt drinks his gift, he would become powerful, or tiny, or drunk, depending on the MUD. The first MUDs were in the Dungeons & Dragons role-playing tradition, with swords, spells and quests. Thus, the name "Multi-User Dungeon" (MUD) is now applied regardless of the actual setting.

These MUDs were incredibly addictive and ruined many a promising college career in the 1990s. Some of these recovering Mudders looked at the PC game industry and built graphical interfaces to their online worlds. Turbine Entertainment was founded to create "3D-MUDs" (now called "massively multiplayer games"). Hired by these Mudders as CEO of Turbine, I produced *Asheron's Call* for Microsoft, and became fascinated by the phenomenon.

As a businessman, I remain fascinated by the revenue model. MMOGs are sold in retail packages, if only because game-magazine editors and gamers alike associate those boxes with "A-quality" product. After a trial month, the game's servers are only available to players who subscribe, at $10 to $14 monthly.

The leading retail MMOG is Sony's *EverQuest*, with 430,000 subscribers. Although most games have a retail shelf life of 90 days, the five-year-old *EverQuest* continues to grow. Every year, Sony's revenue from the game exceeds the take from a typical million-unit blockbuster. And most players are committed, subscribing for well over a year. Electronic Art's *Ultima Online* team worked to reduce play from an average of 20 hours weekly to a still-huge 13 hours, to save server expense and to balance the game toward players who "have a life". A typical retail game, by comparison, provides 30 or 40 hours of lifetime play. *EverQuest* is well known to its addicted fans as "EverCrack."

Every year, Sony's revenue from the game exceeds the take from a typical million-unit blockbuster.

The play patterns – and revenue rates – for MMOGs are unlike those of any other game, because the player's experience is so different. These games are community-based. The player's character grows and evolves, and thus the player's investment in the game world grows. The "character" might be a sorcerer, an X-Wing pilot, or even a racecar, but every successful MMOG has the "Role-Playing Game" attribute of graphically representing the player's in-game presence.

At Turbine, I joked that our true business was Applied Social Anthropology. But it is no joke; MMOG designers create social systems from guilds and adventuring parties to corporations or pirate bands – and the best designers give players the tools and incentives to create their own social systems. These systems are "sticky." Friends have told me, "I like your game better than *Ultima Online*, but I still play *Ultima* because my guild won't move."

These games, like "adult entertainment," appeal to human instincts. We are the result of evolutionary selection for social interaction and cooperation. (A recent report in *Neuron* confirms a hard-wired neu-

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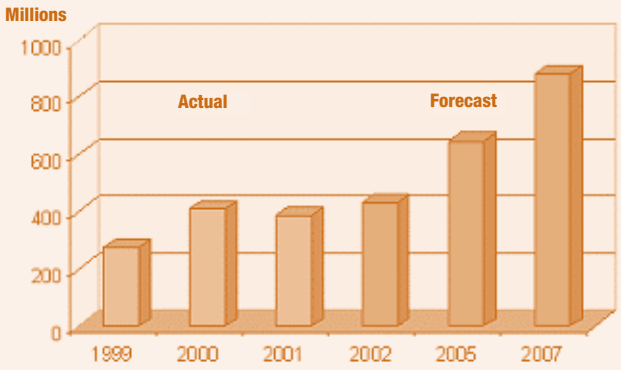
Worldwide Handset Sales, 1999-2007



source: ARC Group

rological reinforcement for this cooperation.) As social primates, we care about our relative social rank. We create stories about relationship. While gamers play to win most games, in MMOGs they pursue the status associated with ever-advancing character-levels for their fictional selves. High-level characters in these games are sold on eBay for hundreds or even thousands of dollars. Some MMOG players make a decent living selling virtual characters, game objects, and even clothing. (White robes from *Asheron's Call* – with no gameplay value – were popular because players needed them for in-game virtual weddings.)

Clearly, the typical massively multiplayer PC-game experience cannot be translated onto mobile devices. Three-dimensional graphics are not yet feasible, mobile-phone processors and memory do not support complex game clients, and the networks are slow and unreliable by Internet standards. But these are not the essential attributes of MMOGs, which mobile games can indeed begin to incorporate. The essential attributes include character persistence and social interaction. These attributes, and their importance, are clear in two mobile games from UK developer nGame.

Alien Fish Exchange ("AFX") is a single-player WAP game. Of the two qualities we're discussing, *AFX* has player-persistence. Day by day your breeding-tank of fish grows and changes. The only social aspect is a web-based top-score board. While persistence does help hold player interest, it doesn't distinguish *AFX*. Persistence is an attribute of any retail PC game. For truly addictive play, a character must persist in a social context, one that is integrated into the game.

nGame's newer WAP game *DataClash* is built on two-player combat. Your character advances by attacking a series of other players, using cyberpunk-style attacks and defenses. The only social interaction in *DataClash* is your selecting (or typing) your target's nickname, perhaps from the top-scores list. That is, with every victory you are rewarded with the knowledge that your ladder-rank has improved at the expense of a specific person. This small amount of social context makes a tremendous difference in how long gamers play *DataClash*. *DataClash* and *AFX* have similar replay rates after one game, but DataClash players are five times more likely to play more than 15 sessions.

For compelling social interaction – to be aware of the other person – you want rich expression. Mobile games are increasingly including in-game chat or messaging. At some point there will be graphical character representations ("avatars") on your phone. And there will be more chance encounters between players within the game, something that only happens in MMOGs.

We are seeing tremendous progress from mobile games right now. We can look to better devices, and better game design, for more richly expressive social interaction. But we don't have to wait – we can capture much of the appeal of MMOGs without cramming *EverQuest* or *Asheron* into a mobile phone. Games like *DataClash* point out the beginnings of the path. If players can advance their virtual selves in a persistent social world, while having fun, then we begin to justify the dramatic differences in player commitment – and in revenue model – that define MMOGs. ■

Stat!

Brew, J2ME, OMAP Reference Chart

	BREW	J2ME	OMAP
Company advocate	Qualcomm	Sun Microsystems	Texas Instruments
Description	Development environment for devices based on Qualcomm's CDMA chips	Development environment based on Java	Development environment for devices based on TI's OMAP processor chips
Business model	Qualcomm receives share of revenue from operators	Sun licenses J2ME but hopes to make its money selling servers	To sell TI OMAP processors
Memory requirements	150 k bytes	< 512 k bytes	Built-in
Open standard	No	Platform-independent (theoretically)	No
Security	Yes – Verisign	Can be added	Uses combination of hardware and software
Manufacturer support	Any manufacturer using Qualcomm's chips	Licensees include Casio, LG, Nokia, Motorola, Symbian, Palm, and IBM	Nokia, Fujitsu, NEC, and Matsushita
Operator support	China Unicom, Freetel (Korea) KDDI (Japan), Verizon	Sprint PCS, Telefonica, plus most non-CDMA operators	None yet
Developer support	12,000	Potentially all Java developers	About 75
Status	Launched in S. Korea, Japan and USA	Available in Asia & EU	Generally considered a next-generation solution for streaming audio and video

Source: Datacomm Research Company (http://www.datacommresearch.com/)
From "Winning Business Strategies for Mobile Games" report, Q3, 2002.

Last Two Continued from page 3

expire on first use, or after a short period of time. Most important, because the midlets are never removed from the phone, there is no danger that they'll show up on Internet warez sites.

This process is very simple for the user, as long as everything is set up properly on the handset and in the carrier for over-the-air downloads. Unfortunately for those companies trying to sell Java apps at present, not all handsets or carriers are quite there yet. For the carriers' part, this is partially self-defense – many operators are blocking OTA downloads while they formulate their own strategies for how to market and sell downloads. So, portals that want to get a head start are making end-runs around the carriers as best they can. For example, Midlet.com offers extensive instructions for changing phone settings, and it has even set up its own dialup numbers so that the data traffic avoids the carrier's servers completely.

Download Over-the-Air Using a Proprietary System

Carriers are finding that the solution to the control issues with WAP downloads is to build proprietary alternatives. The process for the user is much the same – click on a link to download an app – however, the link is not a WAP URL but rather a menu item in a (download) application running on the phone. The "Download Store" application resides in the phone's firmware and handles authentication and encryption, as well as the user interface and storage tasks. Because the whole purchase and download process is handled by one application, it can be easier for customers to use. And because this "Download Store" can be added to the menu structure of the phone, it's certainly easier for the user to find.

What's especially good from the carrier's point of view is that this "Download Store" can be completely proprietary and hardwired to its own portal, providing no way to download from third parties and potentially even enforcing more elaborate payment schemes than pay-per-download. By forcing their handset vendors to remove WAP download capabilities, the carriers can create a very controlled environment where their customers can only download from them, preventing all the upstart portals and publishers from going direct.

Qualcomm's BREW is a good example of a successful proprietary OTA system. When the user clicks the "BREW Shop" icon on her phone, she is taken to a menu of apps available for download. Each app is categorized ("Demo," "Digital Arcade," "Productivity Tools") and can offer several different payment options ("Free/trial," "$5.00/Monthly Subscription," "$3.10/10 Uses"). Buying an app is as simple as clicking the preferred option and waiting a few seconds while it downloads. Once that's done, the user can immediately run the app or find it later by choosing "BREW Apps" from the phone's menu and navigating through a screen-full of app icons. Once the user has used up the paid-for time on the app, "BREW Apps" will herd her back to the Shop where she can buy more usage.

> ... Palm's lessons have not spread throughout the mobile phone world.

While BREW has only been adopted by CDMA carriers so far, by all accounts these rollouts have been very successful. Korea's KTF and Japan's KDDI have both reported their BREW uptake exceeding projections and Verizon in the U.S. has recently sped up its commercial rollout after a blockbuster trial. Qualcomm is now courting GSM carriers and touting BREW's ability to distribute Java applications.

> Within the GSM world, as long as most carriers stick with OTA via WAP, publishers and portals have an opening to sell downloads directly to consumers.

Plans and Predictions

Implementing this proprietary OTA system is precisely the goal of Qualcomm's BREW, as well as Motorola's "Download Apps" for iDEN. Sprint PCS in the U.S. is building its own proprietary system, which is made easier by its close relationship with its handset providers. Other carriers are surely contemplating adopting one of these systems or building their own.

Currently, most mid-range GSM Java phones support WAP downloading only (e.g., Siemens M50 and Nokia 3410), while the more expensive models also support phone-to-PC connections (e.g., Siemens SL45i and Nokia 6310i). It remains to be seen whether this will continue, but don't be surprised if phone-to-PC downloading disappears completely from consumer phones as manufacturers become more sensitive to the concerns of copyright holders (and experience more pressure from carriers). Developers will still be able to get handsets with cable download capability, possibly using special software and cryptographic authentication.

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Games We Like

This month, I'm moving out of the realm of freely available demos and into the brave world of new releases. A couple of the games we've been playing at WGR are so good, and are attracting so much buzz, that I thought a brief introduction would be appreciated by all. Plus, I want to rave about the Game Boy Advance.

Warcraft III by Blizzard for PCs

The third installment of the real-time strategy (RTS) franchise, Warcraft III was one of the most anticipated releases of this summer. As of July 22, according to EDI sell-through data, retail reports and internal company estimates, it is also the fastest-selling PC game ever. One million units have been sold and more than 4.4 million units have been shipped to retail outlets.

> Look for the pit-in-your-stomach feeling when enemy troops are streaming against your outer defenses and you know that your town is going to burn.

What's the deal? In all of the Warcraft games, you control the actions of a particular race, instructing them to construct buildings, train troops, explore the environment and do battle. As you build up your forces, you know that somewhere out there on the map there are other players doing the same, with the goal of taking you out. Each player is looking for the combination of units and timing that will give him or her the advantage in the inevitable battle.

Warcraft III adds the concept of Heroes to its standard game. Heroes are units that can level up, learn new skills, wield magical weapons and confer bonuses on the troops around them. By including Heroes in Warcraft III, Blizzard has multiplied the tactics that are possible in every battle. They also increase the emotional attachment that a player can develop toward his on-screen creatures. Because each Hero has a personality, a distinctive appearance and unique powers, and because, as the Hero does battle, his skills increase, gamers get more and more attached to their Heroes as the game progresses. Although Warcraft III games generally don't last longer than one or two hours, there are already sites popping up on the Web extolling the virtues of one Hero over the rest.

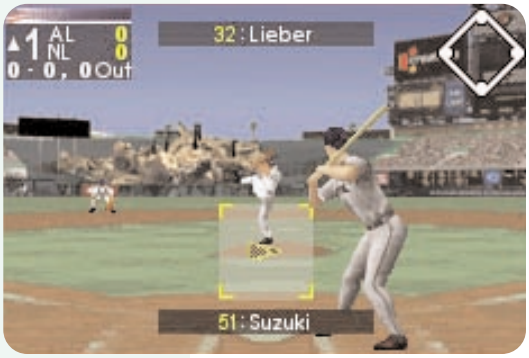
How to start: First, go buy the game. The cinematic quality (on a decent computer) is almost worth the price of admission alone. If you've never played a RTS game before, start with the single-player campaigns, but don't spend more than an hour there. Then go to Custom Game and play the computer in a head-to-head match.

What to look for: The personalities of each of the characters; the beauty of the game environment; the vast number of options and the very specific "technology tree" that will enable more complex buildings and characters. Mostly, look for the pit-in-your-stomach feeling when enemy troops are streaming against your outer defenses and you know that your town is going to burn.

What to ignore: Ignore the fact that it's probably easier for you to be elected President of the European Union than for you to be the best WIII player in the world.

All-Star Baseball 2003 by Acclaim for Game Boy Advance

First off, I just need to say that if you are seriously into the mobile entertainment industry and haven't yet bought yourself a Game Boy Advance, you need to do so immediately. I mean right now. Go to Amazon.com and order one. Get Mario Kart Super Circuit and Castlevania: Mountains of the Moon. And, if you like baseball, get All-Star Baseball 2003.



Acclaim's All-Star Baseball 2003 admirably treads the line separating super-deep fanatics-only stats, players, teams and stadiums with easy-access, personality-driven gaming. The graphics resources have been dedicated to the right place (facing the pitcher). The fielding options are many, varied and flexible. This title is a great example of jamming a lot into a little package.

How to start: Batting Practice is the place to start. Hitting in this game is just how it should be – hard. What's the point of pretending to face Pedro if he's easy to hit? All-Star 2003 gets the balance right.

What to look for: The ease with which both newbies and experts can start playing. Know what you want to do? Pick your team and start guiding it through an entire 162-game season. Never played electronic baseball before? With a couple clicks, you can start.

What to ignore: The graphics during the fielding process. But you'll be too worried about throwing to the correct base anyway. ■

Hollywood Continued from page 1

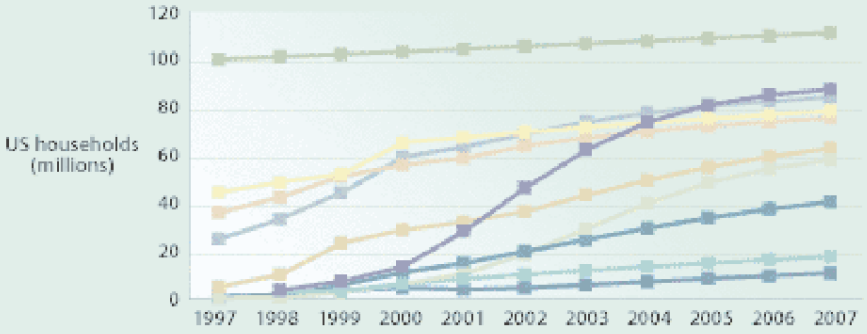
for Sony Pictures Digital Entertainment's Wireless Services group. "But in the long term, there's a chance to make some money."

Previously a licensor, the studio has moved aggressively into the wireless publishing space since the formation of its Wireless Services division in March 2002. New games featuring its evergreen properties "Wheel of Fortune" and "Jeopardy" should be hitting Verizon's BREW network "any day now," according to Caraeff. Look for Java versions of "Men in Black 2" and "Stuart Little 2" by the end of the year.

Sony Pictures Global Theatrical Promotion Group recently completed promotional campaigns with Cingular for "Spider-Man" and Sprint for "Men in Black."

Stat!

Forecast: US Household Technology Adoption, 1997 To 2007



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total US households	100.0	101.0	102.1	103.2	104.3	105.5	106.6	107.7	108.8	109.9	111.0
DVD player	N/A	3.6	7.3	13.4	28.3	46.4	62.3	73.9	81.0	85.1	87.5
Internet	25.0	33.3	44.3	59.2	63.5	68.8	73.9	77.6	80.4	82.5	84.1
PC	44.5	48.7	52.1	65.3	67.4	69.6	71.6	73.5	75.2	76.9	78.5
Mobile phone	36.0	42.4	51.1	55.9	58.7	63.9	67.2	69.9	72.1	73.9	75.5
Online shopping	5.0	10.1	23.3	28.8	32.1	36.5	43.3	49.6	55.0	59.4	62.9
Broadband	0.3	0.6	2.6	6.1	10.5	18.8	29.3	40.0	48.6	54.4	58.0
Online bank transacting	N/A	1.2	5.7	11.0	14.9	19.8	24.7	29.5	33.8	37.5	40.5
PDA	N/A	2.7	3.4	6.2	8.3	10.2	11.8	13.4	14.9	16.3	17.6
Online financial trading	0.9	1.6	3.3	4.6	3.9	4.5	5.8	7.1	8.4	9.6	10.7

Base: US households

Source: Forrester

And the company plans to shortly roll out "MMS templates" in Europe and the U.S. on phones such as the Sony Ericsson T68i, which will allow users to customize messages with a graphic of, say, Tommy Lee Jones.

"Without content, there's no reason to adopt these devices," Caraeff said.

Vivendi Universal is taking the self-distribution concept one step further via its Moviso unit. It recently acquired the rights to one million celebrity images, such as James Dean and Elvis Presley, from the Motion Picture and Television Archive and will announce in September a catalog of color cell phone screensavers for three carriers, reported vice president of publishing Mark Levy. Moviso also works with handset makers. In another deal to be announced shortly, Moviso will preload songs from major music acts into phones aimed at the youth market.

> Say "ancillary revenue" and watch a Hollywood executive smile.

And the unit is naturally distributing content for Vivendi Universal, such as ringtones and graphics from Sheryl Crow's new album "Come on, Come on," which were available through a promotional campaign that ended in mid-July.

Disney has perhaps the most wireless content experience among the studios, and the tightest grip on its products. The Burbank, California-based company has 15 individual services running on DoCoMo's iMode service in Japan, and even offers its own wireless fan magazine there.

In the U.S., the studio already has relationships with all major carriers to distribute ringtones based on six well-known Disney music themes, including "When You Wish Upon a Star," as well as screensavers of Mickey and Pooh; and news and information from ESPN and ABC. Disney is also planning to release ring tones, graphics and games based on its current animated movie "Lilo & Stitch" by the end of 2002.

In the game space, it launched three games on the Sprint PCS network late last year: "Monsters Inc.," "Atlantis" and "ESPN's 2-Minute Drill." Disney may contract work for games to outside developers, but it still signs the carrier deals itself.

Disney spends more to develop wireless products in-house. But, Shapiro notes, it can also claim a higher percentage of carrier revenue and position itself to be a big player if mobile entertainment takes off.

"It's a nascent market," observed Larry Shapiro, executive vice president of business development and operations for Walt Disney Internet Group. "We realize it isn't a sustainable business yet. But we've done a lot of

leg work for a very low price that we hope will pay off in the coming months."

For all of the studio publishing activity, licensing Hollywood properties for the wireless space isn't dead, not by a long shot. Zingy CEO Fabrice Grinda claims to have built a customer base of 1.5 million mostly youthful cell phone users, partly by licensing music ring tones and celebrity voice mail messages from the likes of Eminem and Nelly. He counts labels like Atlantic, Warner Bros., Elektra and TVT Records among his customers.

"The labels are faced with declining revenues and are looking for alternate sources," Grinda said.

Pam Newton, vice president of licensing and marketing at Viacom Consumer Products, said she's more than happy to let others develop wireless applications for her properties: "It's best to leave this (wireless) work to experts who are in this every day."

So far, Viacom's Paramount Pictures has licensed 15 movie and television properties for ring tones, graphics and games in the U.S. market, including the June launch of "Top Gun" and "Rat Race" games on AT&T's mMode service. nGame has been the licensee of choice for most of Viacom's wireless properties.

> "Without content, there's no reason to adopt these devices..."

All of deals are structured with an advance guarantee and a royalty rate, Newton said.

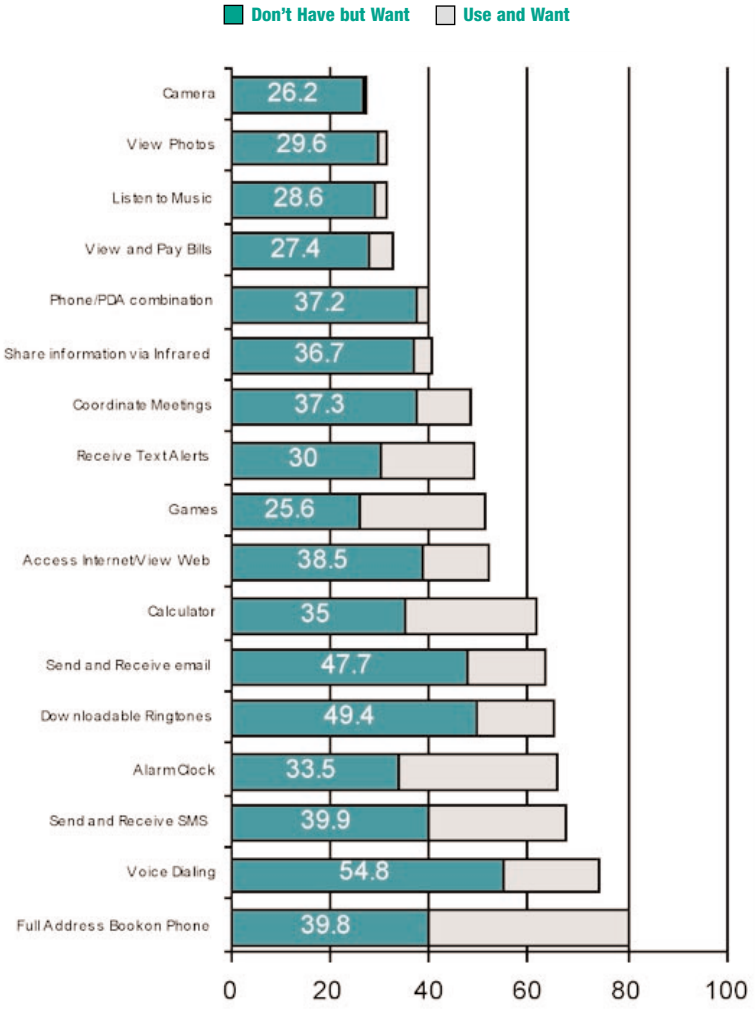
Licensing a hot Hollywood property may be a quick route to mobile entertainment stardom. But it can also be a huge drain on a young game developer or content aggregator's bottom line. Just ask the founders of Riot Entertainment. After making worldwide headlines in 2001 for licensing "Lord of the Rings," "Bridget Jones' Diary" and "Spider-Man," the Finnish company declared bankruptcy in March, despite a fast-growing turnover and customer-base.

So what's the takeaway? If you're a developer or a content aggregator with a hot idea for the U.S. market, you won't find a better time than now to approach a Hollywood studio with your idea. But know the company you're dealing with. You'll be wasting your time if you try to sell a studio bent on developing its own distribution pipeline on your tight connections with carriers. And, of course, if you're a carrier that wants Hollywood content, you can be sure your call will be taken. ■

Stat!

Usage of and Interest in Wireless Services

Among Subscribers Likely to Upgrade Their Handset in Coming Year



Source: Telephia/Harris Interactive National Handset Report

Last Two *Continued from page 6*

Within the GSM world, as long as most carriers stick with OTA via WAP, publishers and portals have an opening to sell downloads directly to consumers. That could turn out to be a huge business, as long as they can work out effective and efficient ways to charge consumers. In places like the U.S., Japan and Korea, where some carriers have already committed to going the proprietary route, the third-party opportunities will be more limited. Still, considering the growing lineup of companies that are already beginning to sell third-party OTA downloads – Handango, Gameloft, elkware and Midlet.com among them – you can be sure that someone will try. ■

The View from Europe

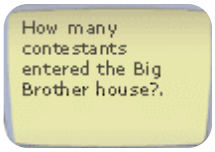
Are the Carriers Doing Too Much?

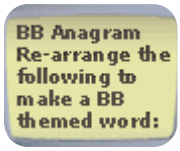
by Jamie Conyngham

In light of four new wireless games forecasts for the European and global markets, it would be useful to examine the role of the European operator in the wireless games value chain.

European operators are often seen as driving the wireless gaming market, and indeed, the operators are expecting to claim a large chunk of wireless gaming revenues. The operators are the companies with the biggest marketing spend, and they own the mobile users at this stage of the market because they have the billing relationship. The operator can act as publisher, producer, developer, licensor and distributor, or any combination of these roles. This can best be seen in actual current European operator product marketing campaigns. These campaigns indicate what we can expect the operators to do in the next six months in relation to J2ME, SMS and embedded games.

First, let's take a quick look at the four new wireless gaming reports attracting the European media's attention this month: Screen Digest's "Wireless, Interactive TV, Online Gaming," reports wireless gaming in Europe to reach 1.4B euros by 2006 (published in July 2002); Analysis Forecast Limited's





"Wireless Tones, Icons, Games to reach 23B euros in Europe by 2007" (published July 9, 2002); Datacomm's "Mobile games are the wireless Internet's killer application" (published July 17, 2002); and Ovum's "Wireless games to reach 4.4B euros globally by 2006"(Communicasia 2002, published June 17, 2002). These reports suggest significant growth from now until 2007. The wireless gaming market is not worth much in Europe at the moment, so the growth will be strong and continual. For example, Screen Digest reports that the European mobile games sector is worth £45M in 2002; over the next four years it sees this figure growing to £1.4B or 2.2B euros.

It is clear that to achieve the type of growth outlined in the reports above, operators will play a significant role, and not merely the provision of the network and the billing mechanisms. While I am excited by the new forecasts, I prefer to look at what actually is happening in the marketplace to deduce how things will pan out. Here are some examples of current operator activity and the multiple roles that operators are taking on.

Example 1: T-mobile – MMS campaign

It is hard to miss the first UK MMS campaign. All over London there are posters of a baby with the tag line "life's better with pictures." There is a large television and print media campaign, too.

A charge of £20 per month (in addition to your price plan) connects you to the service and allots 10MB to send and receive picture messages with your phone. This fee also includes unlimited access to your Picture Messaging Centre on the Web, including the image gallery. Now, the reason this campaign is important to gaming is that it shows how far an operator will go to promote a new technology. We can expect the same kind of advertising blitzkrieg for J2ME games in Europe. In this particular example, T-Mobile is driving network services such as MMS. In my opinion, this is what operators should be doing. They are educating the public about what can be done on the operator's network. The operator in this instance is playing the role of evangelist of new technology.

Example 2: O2 – Big Brother SMS Quiz SMS Voting

O2 has been busy promoting Big Brother SMS eviction through its Premium SMS (PSMS) voting, quiz game, ring tones and icons. It has generated 6.6M PSMS messages according to a BBC report on July 18. On some Big Brother eviction nights, O2 gets one million SMS messages. Their advertising suggests that the operator will significantly drive SMS products, including SMS quiz games. O2 has a huge Television campaign on UK's Channel 4, as well as constant presence in all UK print media. The three games are an anagram game, a quiz and a virtual housemate. The games work across the four UK networks; for example, a user types in a text message "ANAGRAM," then sends it to "86188."

With this deal, O2 has 1) acquired the exclusive rights to a television program from Endemol; 2) published the wireless games in conjunction with Channel 4; 3) either hosted the game applications with a third party or through its own servers; and 4) provided the network and PSMS short codes for the games billing mechanism, thereby collecting the revenue and owning the billing relationship with the end user. Again, like in the T-mobile example above, the operator is driving new technolo-

gy, cross-operator PSMS, but the difference here is that the operator is acting as licensee and publisher, muscling out competition with superior marketing spend.

Example 3: Orange – SMS Games

Orange and Motorola have been marketing their "Who Wants to be a Millionaire" (WWTBAM) deal: Motorola is acting as the publisher and distributor; Codetoys is the developer; Celador is the IP owner.

But this deal is interesting because it demonstrates also that Orange is acting as the licensor, publisher and distributor. Orange is publishing the game (by acquiring the rights) and it is advertising the product. However, it is probably a third party, Codetoys, that hosts and fulfills the game. Orange bills the user, so Orange is the wireless retailer.

The Orange/EA/Digital Bridges deal meant that EA FIFA titles are available to Orange Group customers throughout Europe with the UK, France, Belgium, Denmark, the Netherlands and Switzerland launching elements of the FIFA games this summer. Again, these are SMS games, like WWTBAM, as opposed to J2ME games. In this example, EA is the licensee, who then sub-licenses to Orange. Orange acts as publisher and distributor by launching the SMS/WAP games to its 36M Orange Group users.

Recently, Motorola announced that it will publish retail product in Europe, and there are suggestions that Orange will release more SMS games. Clearly, Orange and O2 are driving the SMS games sector, and we can expect them to initially drive J2ME if this trend continues.

Conclusion

From the UK case studies of T-mobile, O2 and Orange, it is evident that operators are willing to play the varied wireless games roles of publisher, distributor, licensor and developer, depending on the deal. The more roles the operator plays in the value chain the greater the percentage of revenue from a particular deal the operator will receive. The unfortunate problem for the operator is that if it plays a big role in the game area, it will be at the expense of small and large publishers, producers and distributors. For example, if the operator is getting a large percentage, it means that someone else is either cut out of the value chain or is getting a smaller percentage, or that there are fewer companies in the value chain for that particular deal. This

is the crux of the argument supporting the NTTDoCoMo model and why it has worked. NTTDoCoMo plays the role of network provider; it doesn't involve itself in other parts of the value chain. It is similar to the big government vs. small government theory. If European operators continue to take the large chunk of the revenue they currently do, then this is a disincentive to developers, producers and publishers of wireless games. The market can not grow as fast if operators are taking too much

Continued on page 13 ►

Handset Highlights

Siemens M50

Modes: GSM/GPRS 900/1800
Price: Free, with contract
Screen: 64 x 101 pixels, black & white (w/ orange or blue backlight)
Apps: MIDP Java
Available: Q3 2002
The M50 brings Java to the masses with a small stylish handset. Should be available for free with contract in many areas, or €200 without.

Samsung SCH-X590

Modes: CDMA 1xRTT 800
Price: w500,000 (US$420)
Screen: 120 x 160 pixel, 4096 Color STN LCD
Apps: MIDP Java
Available: Now (Korea only)
This clamshell from Samsung sports a digital camera as well as a color screen and Java capability. Expect to see lots of models with this form-factor and feature set to make it to Europe and the US starting next year.

Sendo Z100

Modes: GSM/GPRS 900/1800/1900
Price: $800?
Screen: 176 x 220 pixels, 65k colors
Apps: MS Smartphone 2002, Java MIDP
Available: Q4 2002
The Z100 will probably be the first available handset to use Microsoft's Smartphone 2002 operating system. Others are on the way as well, and will have a similar feature set.

Nokia 7210

Modes: GSM/GPRS 900/1800/1900
Price: €400
Screen: 128 x 128 pixels, 4096 colors
Apps: Java MIDP
Available: September 2002
Nokia is bringing out their new Series 40 platform with two models: the 7210 for consumers and the 6610 for business. This should be their mainstream phone in a year or two.

Japan Continued from page 1

sites and the nascent market limited their content contributions.

"Users in Japan are becoming more familiar with using their phones as devices for executing applications, but the notion is still foreign to many," says Richter. "Applis raise the bar for users, who must learn additional operations to run them." DoCoMo knew this, and therefore launched its i-appli handsets with a low-key content strategy. Radiant new screens, jazzier ring tones, and enhanced sound capabilities accompanied the mild introduction of Java gaming at the i-appli launch in January 2001. "The original i-appli handsets were the first DoCoMo models to use Yamaha's 16-voice MA-2 chip, and the sound quality was a strong selling point," says Steve Meyers, a team manager at Layer-8 Technologies, a music media development company that produces ring tones for several official carrier content providers.

The content menu remained much the same as 2G i-mode, with a controlled collection of official Java games. Only a few chosen official content providers received DoCoMo's Java specifications in advance of the service launch, a move that frustrated unofficial developers but made commercial sense. I-appli handsets quickly began replacing 2G i-mode models (June's net replacement clip was 34%, according to the Indosuez WI Carr report), creating a massive shift in the content industry: there was now access to a huge untapped audience for Java-applis. Once i-appli phones became the automatic upgrades from original i-mode and DoCoMo released its Java specs, the carrier focused on growing data traffic, the other carriers followed with similar content strategies, and the course toward the open content model was set.

In response to increased consumer comfort with the new data functions of Java phones, and seeing the chance for increased data revenue, all three Japanese carriers began to open their walled gardens to a wider variety of content. "As the Java standards for the three carriers have become more widely known and more liberal, there have been more and more independent programmers trying their hand at creating an appli and then posting it on aggregator sites like Giga Appli," says Daniel Scuka, managing editor of Wireless Watch Japan, a weekly email and streaming video newsletter.

"We don't allow unofficial Java downloads. However, we have a new service where a couple of companies will vet unofficial, free applets for us, and if they meet certain criteria then they will put them on their servers for people to download," says a J-Phone source.

Mindful of preserving a quality image while reaping the revenues of a more open strategy, DoCoMo has also taken the approach of supporting some of its aggregators of unofficial content while remaining unofficially involved with outside content selection. GigaFlops, a major unofficial content aggregator and operator of the Giga Appli portal, is actually 15% owned by DoCoMo's largest official content provider, Cybird. "These unofficial content aggregators list developers' free games for a fee, while the carriers have their own search engines, which act more like directories of their official games," explains David Collier, a Tokyo-based wireless application developer and co-founder of Gamelet, an online game company.

Collier has noticed growing complexity in the official contents menu of i-appli handsets. "The menu structure has remained basically the same, except for things like more subfolders for each game category, which has the effect of reducing the number of users who play each game," he says.

A key concern for the official developers listed on these menus is the effect the growing unofficial universe is having on the established subscription model. According to Nobuo Kawakami of Dwango, however, the outlook for professional game developers in Japan is good, no matter how much free content is available.

"Gaming is the fastest growing area in mobile contents market in Japan. I don't think free games will cause serious damage to the current mobile game market here. Games

Upcoming Mobile Entertainment Events:

Date	Event	Place	Web Site
27-29 Aug.	GDC Europe	London, UK	http://www.gdc-europe.com/
26-28 Aug.	Sprint Developer conference	Las Vegas, NV	http://devcon.sprintpcs.com/index.cfm
29-31 Aug.	ECTS	London, UK	http://www.ects.com/
18-19 Sept.	IBC's MMS conference 2002	Lisbon, Portugal	http://www.ibctelecoms.com/cr1619
20-22 Sept.	Tokyo Game Show	Makuhari Messe, Japan	http://tgs.cesa.or.jp/english/index.html
2-3 Oct.	First's Mobile Games Conference	London UK	http://www.firstconf.com
3-4 Oct.	IBC Global 3G/UMTS Conference	Paris, France	http://www.umts-mi.com/
16 Oct.	Mobile Entertainment Summit	Las Vegas, NV	http://www.mobiletechforum.com/
17-18 Oct.	CTIA Wireless Internet	Las Vegas, NV	http://www.wirelessit.com/
21-23 Oct.	Mobile Games 2002	Barcelona Spain	http://www.ef-telecoms.co.uk/
30 Oct - 1 Nov.	NIME (Nordic gaming conference)	Stockholm, Sweden	http://www.nime.se/
2003			
9-12 Jan.	CES	Las Vegas, NV	http://www.cesweb.org/
18-21 Feb.	3GSM World Congress	Cannes, France	http://www.3gsmworldcongress.com/
4-8 Mar.	GDC	San Jose, CA	http://www.gdconf.com/
6-8 Mar.	Independent Games Festival	San Jose, CA	http://www.igf.com/
12-19 Mar.	CeBit	Hannover, Germany	http://www.cebit.de/
17-19 Mar.	CTIA	New Orleans, LA	http://www.ctiashow.com/

are inexpensive, so consumers don't have a lot of resistance to trying them out. Many successful mobile games are simple translations from a console game, so people are familiar with the title. In any case, mobile games are going to require more development resources to distinguish one company's from another. And games are still very profitable here. So all the big players, including Dwango, will keep increasing the number of teammembers on each game project."

While the subscription-based plan still dominates the menu lineup, some official providers have abandoned subscriptions and embraced wireless as a marketing tool. "On some official sites, games are given away for free, or in exchange for entering a contest or taking a survey," says Daniel Scuka. "This has a definite marketing value-add for the site or game sponsor." Scuka believes that the major gaming companies that focus on the console, arcade, or PC platforms now regard mobile as more of a marketing channel for their core businesses.

The wireless content business in Japan still mostly moves with DoCoMo. Its competitors have moved more quickly to officially open their content offerings to unofficial sites, providing their users with a wider variety of entertainment while increasing their data revenues. This places mounting pressure on DoCoMo to do the same. The company's evolving policy is a critical issue for developers and users alike.

To European and American eyes, the path of Japan's wireless carriers is alarmingly similar to the content strategies AOL and other large ISPs employed in the early 1990s. The unfolding results of this process will continue to be felt by carriers, customers and content providers all over Japan. And if that country's mobile entertainment model continues to be a beta test for the rest of the world, the opening of Japan's walled gardens could provide a glimpse into our future as well. ■

Stat!

Top 10 Game Demo Downloads

	Title/Publisher	Rating	Genre	Platform
1	**Mat Hoffmans Pro BMX 2** *Activision*	E	Sports	PS2, GB, GC, XBox
2	**Enclave Trailer** *Vivendi Universal/Conspiracy*	M	Action	XBox
3	**MLB Slugfest 20-03 Trailer** *Midway Sports*	E	Sports	PS2, GC, XBox
4	**Wipeout Fusion Trailer** *BAM! Entertainment*	T	Action	PS2
5	**Americas Army: Operation - Recon** *U.S. Army*	T	Action	PC
6	**Iron Storm** *DreamCatcher Games*	M	Action	PC, PS2
7	**Savage** *iGames*	RP	RPG	PC
8	**The Thing** *Universal Interactive*	M	Action	PC, PS2, XBox
9	**Hunter: The Reckoning Trailer** Interplay	M	Action	XBox
10	**Realms Of Torment** *Limitless Horizons Ent.*	RP	RPG	PC

Source: gamers.com as of 7/30/2002

Carriers *Continued from page 11*

because this disincentive discourages the developers, producers and publishers from making wireless games. It then becomes easier for these value-chain holders to produce games for non-wireless platforms like console, ITV and GBA.

The reverse side of this is that we require the operators to create and drive the wireless games market in its infant stage. The operators are a key element of the success of this sector. Publishers alone cannot make it work. Even if a publisher works through an ASP for a billing solution, the ASP still relies on the operator for delivery of the game. So no matter what, the operator must be involved in the wireless game sector for Over-the-Air (OTA) downloads. The only alternative to going through an operator is downloading games via the Internet to the PC and syncing cable between the PC and the mobile phone, or installing the games to a mobile phone via a CD, again using a sync cable. From what we have seen so far, it looks like European operators will continue to drive wireless games in Europe. I sense that there is an increased urgency for operators to make wireless gaming work to commence the payback of expensive 3G license investments, especially now that games are being quoted as the killer applications in European analysts' reports. ■

Contributor Bios:

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Dan Scherlis Dan Scherlis (Dan@Scherlis.com) consults to interactive ventures, including Comverse Mobile Entertainment, and is a member of MTGP, investors and advisors for digital media. Dan was CEO of online-game developer Turbine (Microsoft's Asheron's Call), and established publishing operations for Papyrus (IndyCar Racing). He has worked at HBO and AT&T/Interchange Online Network.

Michael Stroud Michael Stroud (michaelstroud@attbi.com) is founder of the Los Angeles-based Mobile Tech Forum and iHollywood Forum, which produce seminars and conferences on mobile technology and entertainment. He is also a correspondent for Wired News (Wired.com), the online counterpart to Wired Magazine. His articles have appeared in the New York Times, Red Herring, Business 2.0 and many other outlets. Previously, he spent a year as Los Angeles bureau chief for Broadcasting & Cable Magazine, six years as Hollywood correspondent for Bloomberg News, and six years as a technology reporter for Investor's Business Daily.

Michael Thuresson Michael Thuresson (michael@japaninc.com) just relocated to the U.S. from Japan after spending two years in Tokyo as a wireless industry journalist and analyst. He now operates out of San Diego, California, and covers mobile media and entertainment in Japan and the U.S. as a freelance journalist and consultant.

Cashman Andrus Cashman, a co-founder of Wireless Gaming Review, has nearly a decade of engineering and management experience in software development, design, implementation and operation. Before WGR, Cashman was Director of Development at Yesmail and an award-winning application developer for the Palm platform. He earned a Bachelor of Science degree in Brain and Cognitive Science, with a concentration in Computer Science and Linguistics, from the Massachusetts Institute of Technology.

Matthew Bellows Matthew has worked in telecom and the Internet since 1995. Before co-founding Wireless Gaming Review, Matthew was Director of Business Development for Engage (NASDAQ:ENGA). At Engage, Matthew managed the team responsible for 4,000 advertising contracts that drove $30 million in annual revenue. He received his MBA with high honors from the Olin School of Management at Babson College. Matthew's first job in the game industry was as a tester at Infocom, where he spent the bloom of his youth playing Leather Goddesses of Phobos.

Anne McLellan Anne (annemclellan@attbi.com) has many years of experience in graphic design and production, with a specialty in publications. In addition to general design, Anne has worked as a consultant in corporate training and development, and in marketing, for education and arts clients. She has a BA in Fine Art from Brandeis University, a Graphic Design Certificate from Mass College of Art and studied design and illustration at the Art Institute of Boston and Rhode Island School of Design.

Amy Monaghan (cinetrixie@yahoo.com) Amy has edited research on infrastructure and applications, as well as telecom and media, for Forrester Research Inc. (NASDAQ: FORR). Her background is in science and technology publishing: she has edited publications of the Massachusetts Medical Society, Rockefeller University Press, and Cell Press. Amy holds a Masters degree in English literature from the University of Chicago and a Bachelor of Arts in English literature from Wellesley College. She is not as boring as her career path might suggest, and she rides a black Schwinn Classic cruiser.