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WGR Presents:

Mobile Entertainment analyst

In-depth coverage of the wireless entertainment business

N-Gage Impressions

By Avery Score

In the past few months, I've heard enough N-Gage speculation to last me a lifetime. Hordes of people have discussed this little device with varying degrees of enthusiasm. There seems to be general concern among the movers and shakers of the wireless world as to the saleability of the device. When asked during Matthew Bellows's E3 panel, Understanding the Carrier Mindset, whether AT&T would include the N-Gage on its network, Scott Edison said, "Honestly, until we can see more of a compelling business case there, it's going to be a tough sell internally." Indeed, the N-Gage seems to be a tough sell across the industry, generating skepticism at every turn. "The Nokia N-Gage is a niche item from a company that is not yet committed to the game market," asserted David Cole, a games analyst at DFC Intelligence. "I don't see it making an impact in the mass-market, non-techno gadget crowd." Cole's concern about the device was echoed throughout the E3 convention. When I left LA, I was, frankly, depressed about the N-Gage's apparently dismal prospects.

At that point, though, I had only bantered with industry types about the N-Gage; and, come launch-time, we're not the ones that matter. It's the consumers who will decide whether Nokia's new flagship device succeeds or fails. So, I decided to take to the streets to get candid impressions of the handset from Harvard Square youth.

Although my interviews varied, I asked each person a few stock questions about their past mobile or home console gaming experience, whether the N-Gage altered their views of mobile gaming and how they felt about its $299 price tag. As it turned out, the jaded, tragically hip teens of Harvard Square

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Sun and Java Revise Their Mobile Games Strategies

By Elizabeth Biddlecombe

Self-congratulation filled the air at the recent Java One conference in San Francisco as Sun Microsystems, originator of the real-time execution environment, trumpeted Java's continued contagion across the world's mobile devices.

The figures to date support the prediction that Java will become the dominant execution environment on mobile devices. "The strength of this technology lies in its ubiquity and popularity within the huge developer community. It is the most popular programming language in the world, (yet) no vendor controls it," said Victor Brilon, Java application manager at Nokia, citing a recent EDC study.

The Zelos Group predicts that J2ME will be on more than 450 million handsets in 2007, or 74% of the projected 613.7 million shipped that year, compared to 19% of the 450.8 million expected to ship this year.

Whether this dominance brings Sun any dividends is doubtful. The company doesn't break out exactly how its revenues are derived. Executives say that J2ME (Java 2 Micro Edition) now accounts for the largest proportion of revenues of all the Java variants, but observers doubt that we're talking substantial money. One analyst, Tony Sacconaghi at Sanford C. Bernstein, estimates that total licensing revenues from the Java editions have hit less than the $100 million mark.

Not that Sun portrays its strategy as revolving around revenues from Java licenses. It is first and foremost a systems company and banks on use of the Java platform to drive sales of Sun server hardware and software. For instance, Vodafone announced at the Java One show that it will use Sun middleware products such as the Sun One Application server and Directory server for its global back-office systems. Yet Jonathan Schwartz, executive vice president, software group, Sun Microsystems, said at the show, "We're a $13 billion company now, and the way we get to $20 billion is getting another million people using Java on their handsets."

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Wireless Gaming Review Policy

We at WGR strive to maintain the highest review standards while maintaining our journalistic integrity. We have drafted the following rating policy to standardize our review process and to provide clearer, more accessible insight into which factors affect the overall score we assign to a game.

Games will be rated on five categories: Graphics, Sound, Gameplay, Innovation and Overall Score. The overall score is not an average of the four component categories. We will expand our scoring system to include a tenths digit for more granularity in the scores. The minimum possible score is 0.1. The maximum is 10.0.

To determine the rating in each category for each game, its merits are compared to those of similar games on the same platform. We compare all J2ME driving games with each other. We compare all BREW puzzle games with each other. We compare persistent, massively multiplayer, fly-fishing RPGS to other games of the same genre on the same platform. Although it may seem silly to say outright, we hereby state that these game ratings are subjective numerical measures of our opinions. Although there is a fuzzy logic–driven neural network algorithm from which each score emerges, we haven't fully derived it yet.

For each component category, we look for specific characteristics and qualities, as well as an overall impression of lucidity and accomplishment. The qualities we consider for each of the component categories include the following:

Graphics

•Fluidity (The frame rate and smoothness of the animation)

•Aesthetic appeal (quality of the colors and textures)

•Technical innovation (technical prowess as compared to industry standards at the time the game is reviewed)

Sound

•Appropriateness of music and effects (does the audio complement the overall game, contributing to its ambience?)

•Artistic merit (musical and sound effects quality and variety)

Gameplay

•Fun (whether or not the game, overall, is fun to play)

•Complexity (Is the gameplay robust enough to hold one's interest? Is it more or less complex than is appropriate for the title?)

•Multiplayer (does the game take advantage of network connectivity? How well?)

•Difficulty level (Is the difficulty level appropriate? When the game poses a challenge, is it intentional or due to inadequate play-testing and tweaking on the part of the developer?

•Relevance (Does the gameplay bear any relation to the action(s) supposedly taking place onscreen, or are you just using an inane "meter system?")

Innovation

•Novelty (does the game feel fresh?)

•Independence (is the game free from genre standards or clichés?

Although we hope that this system will prove useful for game makers and game buyers, we will continue to adjust and improve the inputs and the methodology of our scores. If you do not believe that we have adequately done so, please let us know. If you have questions or comments about our review policy, please email Avery Score, our Games Editor, at avery@wirelessgamingreview.com.■

Stat!

i-appli subscriber growth by month

(in thousands)

Sept. 2001	7,159
Jan. 2002	11,280
March 2002	13,530
Sept 2003	15,020
Jan. 2003	16,080
March 2003	17,450

i-appli subscriber growth by week

(in thousands)

June 1, 2003	17,460
June 8, 2003	17,530
June 15, 2003	17,640
June 22, 2003	17,770

source: NTT DoCoMo

A Short History of Wireless Games

by Matthew Bellows

Like another familiar creation story, this one starts with a snake. In 1997, Nokia released new phones that allocated a tiny slice of memory to a game called Snake. Like early videogames on other platforms (Pong, Space Invaders), Snake was a simple but addictive diversion. The difference was that, because it ran on a phone, Snake was quickly in the hands of hundreds of thousands of people. London cabbies quickly became the Snake tribe to reckon with, because they all carried mobiles and they had bursts of free time throughout the day to practice. In short order, Nokia added other games like Space Impact and Bantumi to its phones, expanding the content available to customers, if only a little bit.

Meanwhile, in Japan

NTT DoCoMo, the No. 1 Japanese mobile phone operator, was innovating at a different level. In February 1999, the company launched i-mode, a mobile phone service that enabled subscribers to receive and later send, small amounts of data via the DoCoMo wireless network.

i-mode introduced a number of crucial innovations to the nascent wireless games industry. First, DoCoMo issued detailed and specific technical specifications for handsets that could run on its network. By dictating, with very little wiggle room, hardware characteristics to its handset suppliers, DoCoMo created a standard for displaying content that worked well across a wide range of devices.

> Within 18 months of the i-mode launch, 591 companies were providing information services, and 18,700 independent sites were vying for official status...

Second, DoCoMo adapted and simplified a widespread existing standard language for developing content for its handsets. By distributing this adaptation of HTML (called cHTML) to content providers, and then by enforcing content standards for "official" i-mode sites, the company built the foundations for a positive customer experience with mobile data.

Third, and arguably most important, DoCoMo created a revenue model for these official content providers. Consumers with content subscriptions paid between 100 and 300 yen ($0.80 to $2.50 today) per month for access to horoscopes, sports scores and simple games. The subscription fee appeared on each consumer's monthly bill. The key innovation was DoCoMo's policy of remitting 91% of the subscription fee to the content developer. DoCoMo kept 9% of the subscription fee, plus the network data charges associated with transmitting the content.

Because of DoCoMo's "billing on behalf of" policy, it became possible for content providers to profitably supply content to a growing audience of i-mode users. After launching the service with only 67 content providers, DoCoMo quickly gathered new partners. Within 18 months of the i-mode launch, 591 companies were providing information services, and 18,700 independent sites were vying for official status and entry into the subsequent revenue stream.

> Consumers, for the most part, couldn't be bothered with WAP content services.

The Birth and Death of WAP

In late 1997, a consortium called the WAP Forum released Wireless Access Protocol (WAP) 1.0. WAP was developed as an attempt to provide mobile content to western consumers on the technically inferior phones prevalent in those markets. Riding the Internet investment frenzy, dozens of companies were founded in the West around the prospect of bringing the Internet to wireless via WAP. With venture capitalists awash in Internet dollars and entrepreneurs inspired by IPO prospects, little attention was paid to the distinct lack of established content revenue models resembling those in Japan.

This was the crucial difference between Japan and the West. For the most part, US and European wireless operators took the approach that content providers should pay, not be paid, for providing content to their wireless audience. For some content providers, this was an untenable situation, and they conserved their resources until a genuine business ecosystem could evolve. Many other companies, however, pressed on, hoping that grabbing early market share would make them market leaders.

Consumers, for the most part, couldn't be bothered with WAP content services. Receiving information via WAP networks was painfully slow. When content did appear, it was difficult to read on the standard low-resolution, green-and-black screens available. And because US and EU operators could not differentiate between voice minutes and data-connection minutes, WAP

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Sun and Java

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"If they've made money, they've missed more than they've made," according to Ken Dulaney, a vice president at Gartner Group. "Given that they invented such a significant platform, they've let more grains of sand fall through their hands than you find on most beaches these days," he said.

> If they've made money, they've missed more than they've made...

Dulaney bases his assessment on a range of issues, including lack of leadership in the enterprise and Sun's decision not to capitalize on consumer transactions. Is everybody else making money from the technology but Sun? Vodafone Live! considers Java-based games its second largest revenue earner after ring tones. Tim Harrison, business development and content manager, Vodafone global content services, hopes to entice developers to the Live! service by talking up the six-figure checks his company has been sending to developers. An average download of $2.50 nets the developer $1.20.

That is not to say that Qualcomm — originator of the BREW client software and business model – is clearing much from BREW yet, even though it takes a cut of each download (generally around 10%). Qualcomm, like Sun, speaks about the value of growing the mobile data market in general. The San Diego-based CDMA developer also chooses not to break out its revenues. "BREW is doing much more for Qualcomm than being a significant revenue stream," says Bill Davidson, vice president of carrier relations for QUALCOMM Internet services. "Though, obviously, we believe it will be significant in the future."

Qualcomm has won praise for the end-to-end system it has placed around BREW — testing applications, allowing developers to interface with operators, taking care of provisioning and billing. "Qualcomm has showed how to do this right," said Thomas Reardon, Openwave vice president and general manager of clients. "They've lit a fire under the rest of us."

In contrast, Rich Luhr, director of technology strategy at the Shosteck Group, said that Sun has lagged: "They've lost two or three years waiting for the community to create an end-to-end solution. It didn't happen." *(See Chart 1 below)*

Now the heat from Qualcomm's fire is starting to reach Sun: announcements at the show heralded its new moves to put more of the ancillary business structures around the Java client software and back-end J2EE systems. A certification program with Nokia, Motorola, Sony Ericsson and Siemens that will reduce the burden on developers trying to get their applications to market was announced, as was the new Sun Content Catalog, which allows developers to display their wares to Sun's operator customers. Sun has also established new developer resources online for mobility.

> Qualcomm has showed how to do this right...

Jonathan Schwartz hinted that there was more to come: "You will see us announcing product plans regarding digital rights, provisioning and digital management," he said. The company's acquisition of billing software company Pixo, as announced at the end of June, sug-

Chart 1

Usage Figures for J2ME compared to Qualcomm's BREW

	J2ME	BREW
% of people who have and actively use technology on their handsets	N/A	50%
No. of handsets deployed	Estimated to be 100m by end June 2003	More than 8.5m in US market
No. of carriers	53	8 with another 2 operations announced (including 9 Bellsouth International operations)
No. of handset manufacturers	150 models from 22 manufacturers	More than 70 models from 14 manufacturers
No. of app downloads	Not available	33 million application downloads

Figures from Sun Microsystems and Qualcomm as of June 21, 2003

gests another back-office function it wants to fulfill.

But others, such as publisher Tira Wireless, have already stepped into the breach to capitalize on some of Java's operational issues. The company has activated a Mobile Assure certification program, and it announced at Java One its Jump service and platform, which allows automated porting of a Java application for multiple handsets.

It is the Java Community Process (JCP)... that sets Java standards.

We're not going to see Sun trying to solve the puzzle by itself. "We can't go it alone," said Juan Dewar, senior director of the consumer, mobility and strategic solutions group. "The fact that companies like Tira Wireless, JAMDAT Mobile or Cellmania pop up is the beauty of the market in action. We are tracking it. If we feel that it is in Sun's best interest to do more, then we will do more."

Each extra puzzle piece equals another opportunity to sell server hardware and software, systems integration or consulting services to an operator implementing a Java provisioning system. It is common knowledge that the company has been bitten hard by the dot-bomb and tumbling telecoms market. It returned to profitability with its most recent financial results (its third quarter, reported in April 2003), listing a $4 million profit versus a $37 million loss in the same quarter last year. Revenues dropped 10% from Q3 2002, from $3.11 billion to $2.79 billion. Seamus McAteer, managing partner at Zelos Group, also predicts that the company will try to reap more from licenses by enhancing the J2ME's performance. He estimates the company makes 10 to 15 cents per handset when a Sun Virtual Machine is used.

It is vital to remember that Sun is no more than the originator and guardian of the Java phenomenon and a participant in the Java industry. It is the Java Community Process (JCP) — nominally democratic, though often critiqued for being skewed toward larger vendors — that sets Java standards.

As McAteer said, "Sun has to be commended for building a standards-setting process that would withstand its own demise." Not that he is implying they are on the brink of extinction.

The JCP also shapes the mobile Java industry. It has initiated moves to manage the API fragmentation that has taken place as handset vendors and operators built on the MIDP 1.0 set of APIs, with an eye toward providing more feature-rich functions and services. The JSR 185 group has put forward the JTWI 1.0 umbrella standard — which combines existing specifications with MIDP 2.0 — to ease developers' costs of porting their applications to the full range of handsets an operator offers.

In a sense, there is a degree of insulation between the rest of the Java industry and Sun's attempts to bring the Midas touch to the mobile market. Even then, we won't see Sun implement a Qualcomm-type control on the value chain. Instead it will attempt to intensify the "halo effect" of its association with Java (witness the new $500 million Java consumer-branding campaign announced at the show) and the opportunities to step in and sell Sun's other services and products.■

Handset Highlights

Nokia 3100

Modes: GSM 900/1800/1900
Target Market: low-end
Screen: 128 x 128 pixels, 4096k colors;
Apps: Java MIDP
Available: Q3 2003
Nokia's "platformization" initiative proceeds, with formerly high-end features moving steadily down market. Series 40 defined the upper reaches of the mid-range market less than a year ago, and now the 3100 will put it in the hands of teenagers everywhere.

Sony Ericsson SO505i

Modes: PDC (Japan 2G)
Target Market: high-end
Screen: 240 x 320 pixels, 262k colors
Apps: iAppli, Flash
Available: summer 2003 from NTT DoCoMo
DoCoMo recently revealed its newest generation of phones, the 505i series. Sony Ericsson (with the emphasis on Sony) has contributed a solid example of what the rest of us can expect to trickle down in a year or two: QVGA screen, 1.3 megapixel camera, removeable memory, Flash support, etc. Drool.

Sharp GX-20

Modes: GSM 900/1800/1900
Target Market: mid-range
Screen: 240 x 320 pixels, 65k colors
Apps: Java MIDP
Available: Q4 2003
Like its predecessor the GX-10, the GX-20 is the product of a close collaboration between Vodafone and Sharp to tweak Japanese technology for the Western mobile user. The result? A cutting-edge GSM phone with a screen very nearly up to 505i standards. This will sport Openwave's new V7 operating system, and customizations for Vodafone's live! service.

Nokia 6600

Modes: GSM 900/1800/1900
Target Market: high-end
Screen: 176 x 208 pixels, 65k colors
Apps: Java MIDP 2.0; Symbian native
Available: second half of 2003
Nokia has revealed their third Series 60 phone. The 6600 is smaller than the 7650, has an easier-to-use keyboard than the 3650, and offer better software than either of them. It is also Nokia's first phone to offer MIDP 2.0 support, but we can hope that will spread quickly.■

Short History

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access was outrageously expensive given the experience it provided. Even with innovative content provided by companies like nGame, JAMDAT, Iomo, Kiloo, HandyGames, AirGames and Trigger Duck, consumers stayed away in droves.

Now, there is a growing and vibrant worldwide content ecosystem for the development of mobile games.

After the collapse of the telecom and Internet capital markets in 2000, and the absence of revenue from operators or consumers, many WAP content companies folded in 2001, and the prospects for an i-mode-like success in the West seemed remote.

Meanwhile, in Japan: Part II

In January 2001, DoCoMo launched i-appli, a service similar to i-mode except it provided for software to be downloaded onto phones and then run locally. Because the applications could run directly on the phone, as opposed to having each step in the consumer/software exchanged via the wireless network, i-appli provided consumers with a deeper, more responsive entertainment experience. DoCoMo's i-appli service launched with a subscription revenue model identical to that developed for i-mode. Videogame publishers like Sega, Taito, Namco, Hudson and others ported trimmed-down versions of their arcade and console titles to i-appli, so for the first time, videogames like Pac-Man, Space Invaders and even SimCity were available on phones.

Suddenly, Last Summer

US and EU wireless operators couldn't remain oblivious to Japanese successes for long. Searching for higher-margin products and ways to differentiate themselves in a crowded, competitive field, companies like Sprint, Verizon, and AT&T in the US and Orange and Vodafone in Europe committed to another attempt at mobile entertainment services. Starting in summer 2002, Sprint and Verizon both rolled out mobile games services that drew heavily from the DoCoMo content and revenue model. In fall 2002, AT&T followed with its games and entertainment service, and the marketing race began in earnest. All of these companies paid "the lion's share," as the phrase went, of the game purchase price to the content provider.

Stat!

Worldwide Mobile Terminal Sales to End-Users Estimates Q1 2003

(in thousands of units)

Company	Q1 2003 Sales	Q1 2003 Mkt. Share	Q1 2002 Sales	Q1 2002 Mkt. Share	Growth
Nokia	39,479.2	35.0%	32,649.0	34.2%	20.9%
Motorola	16,561.1	14.7%	16,804.3	17.6%	-1.4%
Samsung	11,878.9	10.5%	8,890.4	9.3%	33.6%
Siemens	8,584.6	7.6%	8,121.4	8.5%	5.7%
SonyEricsson	5,384.8	4.8%	6,000.8	6.3%	-10.3%
Others	30,785.5	27.3%	22,867.2	24.0%	34.6%
Total Mkt.	**112,674.1**	**100.0%**	**95,333.**	**100.0%**	**18.2%**

Note: Table includes iDEN shipments but excludes mobile WLL and ODM to original equipment manufacturer (OEM) shipments.

Source: Gartner Dataquest (June 2003)

This industry has reached its escape velocity.

While most operators chose to deploy mobile games and distribution systems based on Sun's mobile Java programming language, Verizon chose to partner with Qualcomm and adopt its BREW content-distribution system. The benefits of each approach depend very much on who you are speaking with, but neither approach — a Java distribution infrastructure developed specifically for an individual operator or a BREW distribution system that leverages Qualcomm's investment — seem likely to go away anytime soon.

With the operators finally and fully on board with mobile games, marketing efforts kicked in. When holiday season 2002 arrived, US consumers were bombarded by TV, magazine, bus and movie ads trumpeting the availability of mobile games. Wisely, operators were careful not to over-hype the services, fearing a repeat of the WAP letdown. And, as usual, price was a big factor in consumer purchase patterns. Verizon's choice to offer the Motorola T720 phone (a folding, download-capable, color handset) for only $50 with contract garnered a lot of consumer attention.

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Games We Like

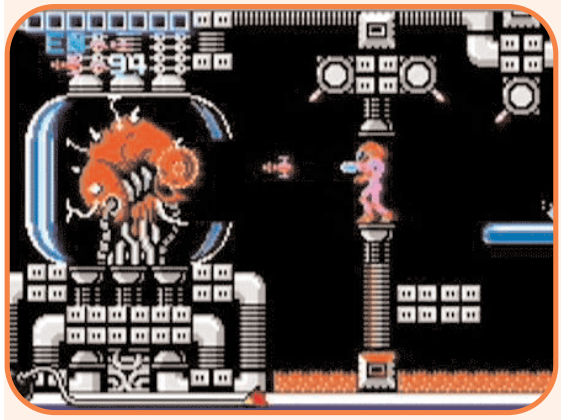
By Avery Score

WarioWare Inc.: Mega Microgame$

Mario's evil brother, Wario, is the black sheep of the family. Not content to jump on Goombas and plunge toilets like his more good-natured brethren, Wario spends his time thinking up ways to expand his evil empire. While in the war room devising get-rich-quick schemes, Wario identifies videogames as a rapidly expanding market and a great cash-in. He hires a selection of game-making miscreants to provide the content for WarioWare Inc, his new software company. Admittedly an unorthodox corporate layout, Wario's company is structured in the form of a town, with each employee controlling a neighborhood. It comes as no surprise that a paradigm-breaker like Wario would want to foster a more open, creative corporate culture by freeing his employees from the confines of the cubicle. Or maybe he's just a weirdo.

Whatever the case, Wario and his minions have created some seriously weird gaming. WarioWare Inc.: Mega Microgame$ is made up of literally hundreds of five-second tidbits of gameplay, each requiring the player to press one or two buttons before time runs out. You are bombarded with these pieces of digital crack at an increasingly rapid pace, in each instance a single verb is your only instruction. Your score for each challenge is based on the number of mini-trials you complete. After every five trials, the speed increases.

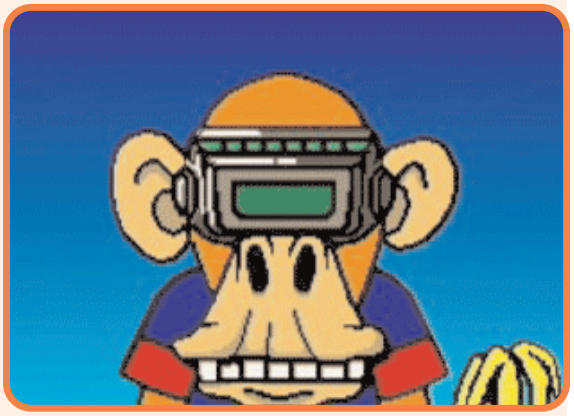
The game is divided by employee into a series of challenges, each with its own employee-specific theme. For example, Dribble's game takes place in a moving car, featuring a cool windshield-wiper animation. Here your four lives are represented as rear-view mirror ornaments. At the end of each challenge, you face a boss battle, which is usually a bit more difficult than the twenty or so tidbits of gameplay that preceded it. Having vanquished the boss, you are able to move on to the next employee and the next area of play, ultimately facing Wario himself. Highlights include 9-Volt's challenge, which provides a few seconds of play from dozens of Nintendo classics.



Nintendo brings back the hits.

"…if Timmy makes me shake his hand once more, he's on his own."

Additionally, WarioWare features a complement of two-player challenges in which both players compete on the same handset, one controlling the action with the "L" button, the other with the "R" button. My personal favorite is Chicken Race, in which you compete to see who can kick a chicken the farthest without sending him over the edge. It's a lot like blackjack, except with more skateboard-toting poultry.



Finally, Nintendo's found a use for the Virtual Boy!

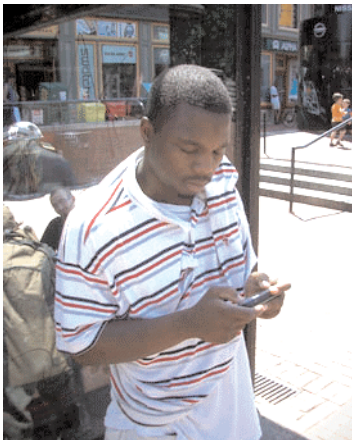
WarioWare Inc.: Mega Microgame$ is quite relevant to the mobile gaming world. The quick glimpses of gameplay it provides may be a new concept for the GBA, but on mobile, casual, grab-and-go gameplay has long been the standard. WarioWare even seems to acknowledge this debt within the game itself. One of Wario's employees, Jimmy, a super-funky disco star, seems to have chosen to develop for mobile, and his games are played on a phone, replete with reception and battery-life meters. After all, the Game Boy Advance SP looks exactly like a cell phone. Just thought I'd point that out.

A departure from the W-man's typical platforming madness, WarioWare: Mega Microgame$ is a novel experience for GBA users. For veterans of the wireless gaming world, it will feel pleasantly familiar.■

N-Gage

Continued from page 1

reacted surprisingly positively to the device. Most impressive, in spite of all of the industry analysts' fuss about the N-Gage's high price, most folks said that they'd feel comfortable dishing out three hundred bucks for such a neat toy. One, David Hawkins, a member of local hardcore band Tetsuo, presumably named after the Akira character, had this to say when asked if he'd be prepared to pay come launch time: "Absolutely. Oh yeah! I'll pay three-hundred bucks for it. It does so much — it's worth it. It's much better than an iPod. And that's the same price."



Stan couldn't manage to get his shirt on straight, but he sure could play Tony Hawk's Pro Skater.

Even those who weren't particularly taken with the device felt that the price was a fair one. Savahn, a fashionably attired girl with a shock of wild, blonde hair, was quick to admit that she's not a gamer. Claiming that the N-Gage is designed to appeal to males, Savahn informed us that she, along with most of the female population, will only pick up the 'Gage if it's "a lot smaller and cuter." Despite her unwillingness to buy an N-Gage in its current form, Savahn thinks $299 is "a really good price," adding that she can "really see this thing blowing up. People are really lazy these days."

Perhaps the greatest hurdle for folks was the N-Gage's control. Colleen, a Harvard Square emo fan, found the N-Gage to be woefully difficult to control. After several minutes of struggling with the keypad, she asked, "You can actually talk on this? That's so freaky."

> It's the consumers who will decide whether Nokia's new flagship device succeeds or fails.

Ross Bloom, a sophmore at Milton Academy, echoed her sentiments. "Pressing in the middle is very awkward," said an exasperated Bloom, in reference to the N-Gage's five-way control pad. If using the control pad button to open Tony Hawk Pro Skater proved difficult, actually trying to play the title was disastrous. Bloom was, by far, the least adept player of the day, abusing Tony's poor polygons, routinely leaving the poor virtual skater in a bloody heap. After a frustrating few minutes with the game, Bloom returned the N-Gage to me, a look of resignation in his eyes. "I like the color-coded plugs," he said wistfully. "They're my favorite part."

We couldn't get her number, but Savahn did give us some insight into how the N-Gage could be marketed to girls.

David Hawkins and Matthew Garber of Tetsuo love Unreal Tournament and hate Avril Lavigne.

Chris and Ben, of Funk N' Junk, were playing an impromptu concert in the Square when they were called upon to experience the splendor of the N-Gage. The two band mates were playing drums at a virtuosic level, layering rhythm upon rhythm, building on each other's loops, bar by bar. Even more striking than their raw musical talent, however, was the fact that the two were playing on drum kits made solely of household items like kitchenware. Given their obvious manual dexterity, I expected Chris and Ben to have no trouble nailing Tony Hawk's "540 Indy Nosebones," but no such luck. The two were as disenchanted with the control as the laconic Bloom was. Ben believed that the solution is in N-Gage peripherals and said that "There should be a plug-in game controller." When asked whether such an attachment would detract from the N-Gage's portability, Ben responded, "Kids have backpacks, so they could decide whether or not they were going to carry it around."

The control wasn't the only aspect of the N-Gage to come under fire.

Anthony, a Blades, Boards and Skates employee, does not believe that Tony Hawk Pro Skater is an adequate reproduction of real-world skating. He claimed that, if you're a skater, the game feels very unrealistic; however, he enjoyed his time with the device and was enthusiastic about the possibilities for mobile gaming and the N-Gage. "I like the fact that (the N-Gage) is more compact than other portable gaming systems."

As it turned out, the jaded, tragically hip teens of Harvard Square reacted surprisingly positively to the device.

The members of Funk N' Junk drummed up some new N-Gage control ideas.

During my brief visit to Harvard Square, some people turned me away. Some flipped me the bird. One even stole my digital camera. Yet the overwhelming majority seemed really positive about the N-Gage's prospects. I'd always been sure that the N-Gage was a great product. What worried me was its sales potential. Now, having talked with "the people," I'm glad to say that I no longer despair about the appeal of the N-Gage. The demand is there. Stan, one of my interviewees, said it best: "That shit is SICK."■

Short History

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The Present State of Wireless Games

Now, there is a growing and vibrant worldwide content ecosystem for the development of mobile games. The game publisher's role has become distinct from that of the developer, with companies like JAMDAT, Gameloft, Airborne and Mforma funding content development from Centerscore, Blue Heat, iomo, Nuvo Studios, Monkeystone and Handy Games. Independent developer/publishers like Blue Lava, Sorrent and Morpheme (a division of super-developer Argonaut) are carving out a niche for themselves around valuable licenses and great game design. PC and console videogame publishers have entered the mobile market, led by Sega Mobile and THQ Wireless. Electronic Arts, Activision, Microsoft Studios and Atari have licensed their content for mobile games. Japanese videogame companies, including Bandai, Namco, Taito, Dwango and many others have expanded into US and EU mobile games markets. And an international market for mobile games is introducing work by Korean developers like Com2uS and GameVIL to new territories.

Current sales from wireless games don't come close to console games or wireless voice revenues, but initial reports from operators and publishers are very positive. In May 2003, Sprint announced that it had sold "close to two million single and multiplayer games" since its August 2002 launch. In late April 2003, Verizon announced that consumers had downloaded 8.5 million mobile entertainment applications, and that 3.2 million handsets (roughly 10% of its overall market) were capable of downloading mobile content. Also in April, JAMDAT announced that it had five games that had sold more than

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Stat!

Who's Got the Power?
Select Mobile Entertainment Companies by Market Cap

(in millions)

Company	Revenue (ttm)*	EBITDA (ttm)*	Cash on hand	Market cap
Microsoft	31,400	15,200	46,200	275,300
Vodafone	50,100	10,900	1,260	134,200
Verizon	67,500	28,500	5,610	108,400
Nokia	34,000	5,840	12,000	78,758
Siemens	90,000	7,110	11,000	43,495
ATT Wireless	16,000	2,780	3,563	22,400
Motorola	26,500	663	6,370	21,837
EA	2,480	464	1,590	10,777
Sprint PCS	12,200	2,850	457	5,885
Activision	864	207	407	1,131
THQ	468	136	216	689

* ttm = trailing 12 months

For ease of reporting, only US-traded companies were included in this survey.

Source: finance.yahoo.com

Stat!

Upcoming Mobile Entertainment Tradeshows

August 2003

- Wireless Developer 2003: 8/4–8/5, Los Angeles, CA, USA
  http://www.wd2003.com/
- iWireless World: 8/4–8/5, Los Angeles, CA, USA
  http://www.iwirelessworld.com/
- CGExpo: 8/9–8/10, Los Angeles, CA, USA
  http://www.cgexpo.com/
- Ultimate Gamers Expo: 8/15–8/16, Los Angeles, CA, USA
  http://www.ugexpo.com/home.html/
- Edinburgh Games Festival, 8/18–8/19, Edinburgh, Scotland
  http://www.elspa.com/serv/edinburgh.asp
- Games Convention: 8/21–8/24, Leipzig, Germany
  http://www.gc-germany.de/
- GDC Europe Mobile Day 8/26, London, UK
  http://www.gdc-europe.com/mobile/
- GDC Europe: 8/27–8/29, London, UK
  http://www.gdc-europe.com/
- ECTS: 8/27–8/29, London, UK
  http://www.ects.com/

September 2003

- International Wireless Symposium: 9/22–9/23
  San Diego, CA
  http://www.iws2003.com/
- Tokyo Game Show: 9/26–9/28, Makuhari Messe, Japan
  http://tgs.cesa.or.jp/english/index.html
- Total Telecom Mobile Games 2003: 9/30–10/1
  London, UK
  http://www.totaltele.com

If you've got other shows in mind or in production, please post them on this discussion thread:

http://www.wgamer.com/forum/showthread.php?&threadid=1267

Short History

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100,000 copies through Verizon's network. In the same month, In-Fusio, a French mobile game publisher, announced that it had registered more than 2 million mobile gamers for its service, an increase of 15% since February 2003.

Even before those kinds of numbers were released, analysts were predicting big growth for wireless games. Strategy Analytics predicted that the mobile game market would grow to $7 billion by 2008. The ARC Group had the number of worldwide mobile game users growing from 196 million in 2002 to 667 million in 2005. Informa Media Group said the mobile games segment of the videogames industry would comprise 11.7% of the overall $30 billion market by 2006. While no new projections have been issued since the slate of industry announcements, most of the industry players have indicated that business is growing faster than expected.

The Future

Now that the pioneering is almost done, what can we look forward to for wireless games? Innovation, improvement and return on investment. New handsets coming out in Q4 2003, most notably Nokia's N-Gage device, will improve the mobile experience of gamers worldwide. Developers are getting more out of the existing hardware and building 3D engines and graphics libraries to run on next-generation phones. And, with the mass market more aware of mobile games as a possible destination for its entertainment dollar, the companies and the people who have built the industry to date hope to see some reward for their hard work.

But as in all other creative media, it's only after the first generation of work that things really get interesting. No matter how brilliant Buster Keaton's "Steamboat Bill Jr." is, that movie doesn't express the depth of Kurosawa's "Ran," or exert the visceral impact of "The Godfather." As the technology and the tools, not to mention the financial reward, for developing wireless games improve, so too will the originality and creativity we can all enjoy. This industry has reached its escape velocity. The best in wireless games is yet to come. ■

Contributors:

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Cashman Andrus left a career of slinging code and herding cats to co-found Wireless Gaming Review. 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 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 (annemclellan@attbi.com) has varied experience in graphic design and production, with a specialty in publications. 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.

Avery Score (Avery@wirelessgamingreview.com) is a self-proclaimed otaku who constantly partakes in such involved, athletic endeavors as playing old-school RPGs. Avery has the looks of Camui Gackt and the mind of Yu Suzuki, and has been likened to several deities. When not providing content of truly extraordinary quality for WGR, Avery is an honor-roll student at Milton Academy. Avery brings youthful exuberance and valuable insight to the gaming world.