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WGR Presents:

Mobile Entertainment analyst

In-depth coverage of the wireless entertainment business

Connected Games in a Distracted World

What happens if mobile and multiplayer don't mix?

By Ben Calica

There is a crash coming; Not a business failure, but a headlong collision between hope and reality. The image the wireless industry has for the new kinds of multiplayer applications that will define wireless gaming is about to smash into the way people really play games on their mobile phones.

The carriers and handset manufacturers seem to have developed a collective vision of a new type of gaming that will combine the successful trends they understand already. This new type of gaming, the reasoning goes, will help them displace other handheld entertainment devices, such as Nintendo's Game Boy Advance. Nokia, in particular, believes that this new type of gaming will drive the success of its N-Gage gaming phones. While the picture of what these types of games will be is not very well formed, it contains certain common elements.

First is pervasive connectivity. Wireless devices are, by their nature, always potentially connected. While all acknowledge that network latency will make impossible the kind of real-time interaction that is the mainstay of the shoot-'em-up crowd, there is a feeling that the connected nature of the phones is part of what makes them different from Game Boys. Granted, Game Boy-type devices have been successfully connected ever since the Atari Lynx days, providing hours of locally-cabled fun. Game Boy itself had a great deal of its last wave of success thanks to players swapping Pokemon characters. But none of these devices connect wirelessly, and none connect to a common server on a regular basis.

Second is social behavior. The success of text messaging points to the social nature of those using mobile phones. The industry argument is that customers have proven themselves to be very attracted to

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Where Are the Wireless Palm Games?

A series of missteps has prevented connected PDA games from taking off.

By Jimmy Guterman

Except for a handful of Newton MessagePad diehards, it was hard not to get excited about the 1996 release of the original Palm Pilot. The breakthrough device was simple, elegant, modest in its aims, and its handwriting-recognition system actually worked. It was a huge success: The quarter the company went public, it took in $272 million. Soon, the Palm operating system started being licensed to outside vendors and tens of thousands of developers were building applications for a growing number of hardware models.

Starting in 1999, with the release of the Palm VII, these units could connect to the Net as well. Phone access arrived with combo models from Kyocera and Samsung and Handspring's VisorPhone module. Around this time, the number of officially signed-up PalmOS developers topped 120,000.

Palm OS had a clear early lead in moving mobile gaming into the mainstream. From the beginning, Palm's own devices shipped with several fun little games, and its HotSync technology made it easy to download more. But while many simple games quickly became available, mostly from small and hobby developers, giving Palm an early lead against nascent moves by phone carriers, very few "serious" games like those found on consoles or PCs made it to the platform. And the wireless gaming market for the PalmOS, games in which remote players face off via their devices, has not developed either. Except for a handful of low-profile exceptions like ChessEverywhere and Championship Hearts that have become shareware favorites if not huge financial successes, games that take advantage of the wireless access available on many units are rare.

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Mobile Entertainment Forum

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Books We Like

by Jimmy Guterman

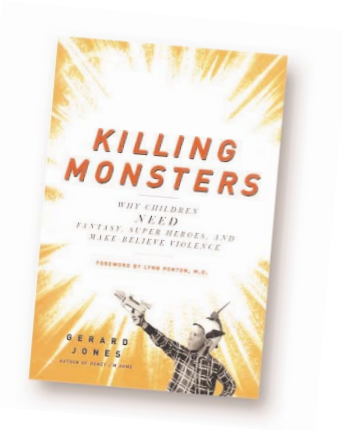
Killing monsters, a new book says, is crucial to personal growth.

We're all adults here, right? So we can admit here we love shoot-'em-up games. For some of us adults, there's very little that provides escape more than a fast, furious first-person shooter game. Because we're adults, we know better. Of course we know Quake isn't real. Just because we terminated 17 opponents in the past half hour on our screens doesn't mean we'll continue such homicidal behavior when we turn off the machine. Kids, conventional wisdom says, aren't that savvy.

> The idea that adults can handle violent games and children cannot evaporates on closer inspection.

Like most conventional wisdom taken out for an airing, the idea that adults can handle violent games and children cannot evaporates on closer inspection. Millions of American teenagers have played Doom, but there's no epidemic of teenage violence. And, of the 16 "rampage" shootings at schools by adolescents in recent years, only one – Columbine – was perpetrated by heavy gamers. In *Killing Monsters: Why Children Need Fantasy, Super Heroes, and Make-Believe Violence* (Basic, 261 pages), Gerald Jones slashes through conventional wisdom with the abandon of a Zork master dispatching a grue.

Jones doesn't stop at saying that violent games aren't bad. He goes much farther than that, maintaining that, as the book's subtitle spells out, children need to play violent



games in which they feel powerful. In many ways, Jones' model is Bruno Bettelheim, who showed in *The Uses of Enchantment* that the bloody stories behind classic fairy tales help children become good adults. Throughout *Killing Monsters*, Jones spells out ways that pretending to be super heroes helps children develop confidence and makes them feel powerful, especially when they don't feel powerful in their real lives.

From Beowulf to Pokemon

Jones, who's worked as a writer of super-hero comics, uses examples going back to Beowulf, the first major story in the English language and still one of the bloodiest. But most of the book, though, is devoted to the pop culture we confront and immerse ourselves in every day: Pokemon, Castle Wolfenstein, Eminem. Systematically, Jones presents interview after interview with current and former children in which they show us how in-game behavior that might seem violent or antisocial in fact helped them become better-adjusted people. One girl loves fight scenes in comic books because "That's where you can see the feelings they have for each other." Another credits horror films for saving her from her darkest feelings: "When things felt absolutely black, I discovered this stuff, and it showed me I wasn't alone with these feelings."

The cumulative effect of all these anecdotes is powerful, but Jones' provocative theory seems fueled almost entirely by such stories. He speaks to many therapists and researchers to get their opinions (nearly all of which agree with his), but he doesn't cite much statistical data. It may be that the field of videogame study isn't old enough to have a set of strong longitudinal studies to back up assertions, or maybe Jones is more interested in the accumulation of individual stories than something more academic.

> Pretending to be super heroes helps children develop confidence and makes them feel powerful.

Either way, the book would have been well served by more outside voices – and more dissenting ones. Don't worry; although Jones' point here is that virtual violent play is good Jones isn't suggesting that actual violence is quite so liberating or that you should replace your toddler's Teletubbies videos with the Freddy Krueger oeuvre. He doesn't overstate his case, except when he seems to suggest that games can replace therapy. (Well, maybe, if you meet the right shrink in The Sims Online.) But at a time when many game developers might be nagged into thinking they're creating something that's somehow immoral, it's refreshing to find a sober thinker who appreciates and recommends the joys of transgressive entertainment – even for kids. But I don't think I'll be introducing my preschooler to Grand Theft Auto any time soon. ■

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Dude, Where's My Game?!

Anecdotes from Openwave's Mobile Real World panel

Mobile consumers love games and companies are rushing to keep up. Handset manufacturers are launching game-centric devices such as Sagem's myG-5 and Nokia's N-Gage. Operators are investing heavily to bring advanced games to market with services such as O2's Games Arcade, Vodafone Live, and Verizon's Get It Now. Industry analysts are forecasting significant growth in mobile gaming over the next five years. In the U.S. alone, International Data Corp. expects the number of active mobile gamers to grow by 75% from 2002 to 2004.

As these services come to market, it pays to ask: Who are our customers? What will drive them to play games on their phones given the widespread availability of more entrenched devices?

To find out, you have to talk to teenagers, the early adopters. This demographic, the "Nintendo generation," has grown up with computer games and video consoles. Mobile phone penetration exceeds 80% among 15 to 19 year olds in leading EU and Asian markets, according to the Wireless World Forum. What better preconditions for mobile gaming could there be?

In order to gauge teenagers' interest in mobile games, Openwave assembled a focus group of 13 teens aged 16 to 18, gave them game-capable phones, and asked what they thought. Feedback from Openwave's Mobile Real World teen panel suggested teens use phones based on five key needs:

1. Connecting with friends
2. Building social status
3. Getting instant entertainment
4. Staying up to date
5. Filling (or killing) time.

The survey found that texting – hugely successful among teens – meets the need to interact with friends, assert status, provide distraction, and counter boredom. Gaming, while satisfying the immediate need for entertainment, is perceived as an excellent way of "killing time" and provides opportunities for social interaction. Boredom appears to be one of the primary drivers behind a significant proportion of teen mobile data use. Services that quickly fill discrete amounts of time with minimal effort are likely to be successful.

Games do that. Most of the teens on the Mobile Real World panel play games on their phones at least once a week, and more than half of them play daily. Under what conditions? Let's ask:

"It's handy for games. They're right there in your pocket."

"I usually play when I'm bored. If I'm waiting in line somewhere, I'll pull out my phone to play."

"My friends keep trying to take my phone to play games in class."

Service providers seeking to differentiate with their game offerings must understand the needs and interests of teens. And the Mobile Real World teens make it clear that they are looking for very specific features in phone-based games:

There must be a purpose to every game, however simple.

"The card games on my phone tell me how to move the cards, but not the point."

"With games like Battleship, you know what you need to do."

Games cannot take longer to learn than they do to play.

"I like the bowling game, because it's obvious. I only have to use one button."

"If it takes longer than two minutes to learn a game, I give up."

A sense of achievement or progress is essential.

"If it's the same thing over and over, I'm not going to be interested."

"It's not fun if you can't go back and beat your score."

Users need a reason to come back.

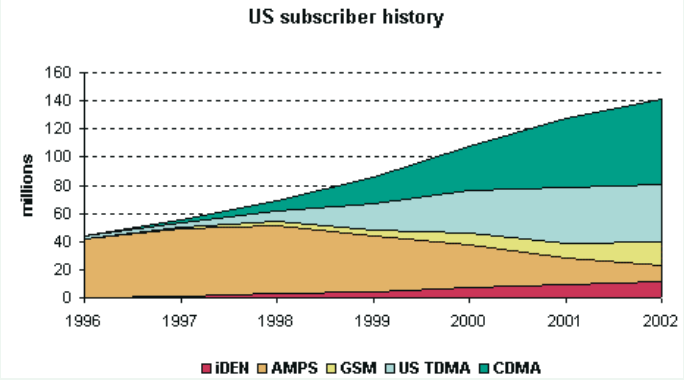
"The levels need to change to keep me interested. It can't always look the same."

"You can never beat the game. It just keeps urging you to go back."

As one of the teens on the panel put it, "the game could star a bunny, so long as it's good and fun." The trick for operators is to deliver on both these crucial criteria.■

Stat!

US market passes 50% penetration with CDMA continuing to dominate



Source: EMC World Cellular Database

Technology Explained

Making the Multiplayer Leap

by Cashman Andrus

The future of mobile games is all about multiplayer. Singleplayer games are fine on mobiles, but these are *phones*, connected devices: They're made for people to talk – and play – together. But getting that to happen is a complicated task, with many best practices but no magic bullet.

On the wired side, PC gamers have been enjoying multiplayer gaming since the mid '90s while on consoles, the move to multiplayer is just now underway. In mobile, we've had multiplayer games almost from the beginning — indeed, most of the successful WAP and SMS games have had a multiplayer component. With 2002's rise of downloadable games (written for J2ME, BREW, and other platforms), that has been temporarily left behind. Now, in early 2003, we're seeing the first real steps toward bringing multiplayer back to the handset, this time with the fast response time, flashy graphics, and local storage that downloadable code provides.

There are two basic configurations for connecting game machines, whether wired or wireless: peer-to-peer and client/server. Peer-to-peer means the devices connect to each other directly, without any kind of "third party" system to mediate the connection. That can cause reliability and performance problems for games with more than just a couple of players, even if the technical limitations of mobile networks don't rule it out altogether, so nearly all wireless games use the client/server model for games over a carrier's network. (For Bluetooth games, either option is possible, but most current games tend toward the peer-to-peer model.) In client/server, there is a dedicated server connected to the wireless network (usually via the Internet), which is the single point of game contact for each of the many client devices. At its most basic, this server takes input from each client for validation, synchronization and processing, then sends back appropriate results to each, allowing the game to go on.

Server Checklist

In practical terms, there's a lot more to the server's job than that, however. On the player side, one of the most important features of a multiplayer server is the "lobby," the virtual place players enter when they first connect to the server. Here, players can find others to play against, either by looking for buddies or just asking for a random match-up. Without a good lobby, it would be impossible to actually start a game, making the rest of the server's capabilities rather pointless. Lobbies typically also handle per-player record keeping, noting user preferences, high-scores, and sometimes even the feedback and private messages from other users.

Once the players are matched up and the game is underway, the server's job is to keep the game flowing smoothly, rapidly, and correctly for all players. To succeed, the server needs to manage the flow of information between the clients, making sure that data is sent appropriately and without error, but also as fast as possible. Latency is a big problem for gaming in all current mobile networks, with 800-to-2,000-millisecond round trips a typical occurrence. Any time added by the server is on top of that, so it is essential that the server be speedy. In a turn-based game, the server will keep the players in sync, and make sure each in informed of the other's moves. In a real-time game (or, as real-time as is possible with up to two seconds of latency), the server keeps moves flowing in both directions, and does its best to resolve conflicts.

There are two basic configurations for connecting game machines: peer-to-peer and client/server.

Besides helping out the players, the multiplayer server assists management by providing statistics, tracking, and billing information. The ability to record data about each game session and, later, mine it for

Stat!

Triple-Tap Words

Buried in the final page of its PCS Vision Style Guide, Sprint lists 100 of the most difficult triple-tap words on phone keypads. Here are 10 of our favorites:

1. zyzzyva
2. snoozy
3. assessor
4. colossus
5. scoliosis
6. sizzle
7. frizzily
8. ossifies
9. confessor
10. zymolysis

To be fair, here are 10 of the 100 easiest triple-tap words.

1. gaga
2. pajama
3. tempt
4. pagan
5. adamant
6. wag
7. gadget
8. dad
9. apt
10. megawatt

Source: Sprint PCS Vision DialGuide, February 2003

clues to player behavior is a key feature for game administrators hoping to hone their hits and fix their flops. The capability to charge players is even more important, though at this point multiplayer business models are still experimental; subscriptions, limited-time use, per-play, and per-action fees are all being tested. And of course, the server needs to fit into whatever other equipment and systems the carrier or game provider is using, while providing the a high level of reliability – the gold standard here is "five nines," or 99.999% uptime, which allows just over five minutes of downtime per year.

Build or Buy

The first surge of multiplayer downloadable games is just starting to appear now, and many developers are choosing to build their own servers. For those developers who got their start in WAP or SMS and have a server on the shelf already, this is an easy road to follow. But even for those starting from scratch, a basic multiplayer server is an easy thing to get off the ground: it can be developed in any language (Java servlets, Perl, C++, etc.) on any platform (Unix, Linux, Windows), and the basic functionality is straightforward to design, implement and test. The complexity ramps up quickly, however, and it is a real challenge to maintain good performance across a wide range of network characteristics.

The first surge of multiplayer downloadable games is just starting to appear now.

For these reasons, several companies have begun licensing their multiplayer server technologies to third-party game developers. These engines are built to handle a wide range of different game designs, and come with demonstrably good performance and solid documentation. To run a particular game, the server separates out the game logic into either the individual game clients, or a special super client, which maintains the rules of the game and communicates with the player clients through the server. (This is a good idea even when building a server from scratch, as it makes testing and redesign easier.) Terraplay and Demivision (the latter bought by JAMDAT last October) have both shown high-quality multiplayer servers, and it won't be surprising if more companies try to make a play for this emerging market.

Considering the size of the opportunity in downloadable games and the clear advantages of multiplayer games to players, this could be a very large market indeed. 2003 should be an exciting year for multiplayer. In the next couple of months, multiplayer games like JAMDAT's Fudomyo, Tira's Mobile Chess, and a two-player version of Sorrent's Fox Sports On-Field Live will all be available. Soon after, Nokia's N-Gage will offer real-time frag-fests in Red Faction, as well as multiplayer modes of Taito's Puzzle Bobble VS and Nokia's own Kart Racing, all over Bluetooth. Within a year, we expect to see mobile MMORPGs. The ability to play anywhere, anytime, with anyone will bring a whole new idea of what makes a great mobile game – just make sure your server can take the heat.■

Handset Highlights

NEC 515

Modes: GSM/GPRS 850/900/1800/1900
Target Market: mid-range
Screen: 162 x 216 pixels, 16-bit color, 2.2-inch TFT
Apps: DoCoMo Java (DoJa 1.5)
Available: second half of 2003, U.S. and Europe

DoCoMo's Java platform makes its first foray outside Japan, and a dedicated Java coprocessor means its performance screams. If it catches on, expect a wide array of content from Japanese developers as they internationalize the quality apps they developed for the home audience. The sleek clamshell also has a beautiful, hi-res screen and quad-band GSM for operation across the U.S. as well as the rest of the world.

Kyocera KURV / Curitel Onyx

Modes: CDMA 1900 (KURV) / GSM 850/1900 (Onyx)
Target Market: mid-range (teenagers)
Screen: large color screen, tri-color LED behind each key
Apps: Wildseed Smart Skins
Available: late 2003 (KURV) / early 2004 (Onyx)

Wildseed has been talking about its Smart Skin concept for selling phones to teens since summer 2001, but it looks like those phones may actually reach market soon. Wildseed has signed up two handset manufacturers to produce devices for the U.S. market, and both pledge to ship within a year. The phone uses removable, taco-shaped Smart Skins with embedded smart cards to reskin the phone's UI and software, letting teens of all ages keep their mobiles up with the latest fads.

Danger Hiptop Color

Modes: GSM/GPRS 900/1800/1900
Target Market: mid-range
Screen: 240 x 160 pixels, 65k colors
Apps: proprietary Java
Available: summer 2003

Danger has been showing the follow-up to their Hiptop, a clever data-centric phone with a small but dedicated following. The new color version should be available about the same time as Danger's downloadable application service launches, and will also work in Europe.

Samsung SGH-D700

Modes: GSM/GPRS 900/1800/1900
Target Market: high-end
Screen: 176 x 220 pixels, 65k colors
Apps: MIDP Java, Symbian native
Available: late 2003

Nokia has announced another phone for its Series 60 platform, this time from licensee Samsung. The D700 is smaller and lighter than Nokia's own current models, and sports an integrated camera and rotating display.

Palm Games

Continued from page 1

Handango and others distribute such popular games as Bejeweled, Dope Wars, and Zap 2000/2016 for PalmOS, but none of those games have developed much since their original incarnations and none of them have any wireless components. Palm had a head start but failed to capitalize on it. Why?

Palm's Poor Positioning

Part of the reason is positioning. After the crest of the Internet/telecom bubble in 2000, makers of PalmOS-based PDAs began focusing their marketing and advertising efforts on enterprise customers, as even lower-priced PDAs were not enticing mainstream consumers. And as makers of PalmOS systems increasingly focused on the enterprise, developers began to see the platform as too business oriented to support games.

> Palm had a head start but failed to capitalize on it. Why?

Even more important, neither Palm the company nor its licensees figured out a way for anyone to make serious money funding, developing, or distributing PalmOS games. One of the reasons there's such a growing number of games for current-generation mobile phones is that the economics for game development make sense for the people creating the game. However, in the interest of building "community," Palm encouraged an environment in which unregistered shareware was the usual model for game distribution. Aside from the honor code and the occasional promise of some trivial unlocked features, there was no motivation for anyone to pay for these games. So most didn't. PalmOS game developers either found sponsors (by writing authorized games based on existing media properties) or moved on. By the time the first reliable Palm/phone combos appeared, the more inventive developers were long gone. The size of the market is an issue as well: For every Palm OS device sold in the U.S., according to estimates from International Data Corp., there are more than 200 mobile phones. Where would you put your development efforts?

Because PalmOS started as an operating system for disconnected PDAs, not as an operating system for communicators, the relationships between the hardware makers and the carriers don't run deep. It's telling that it took the better part of a year after the release of the Handspring Treo 270 PDA/phone combo for the unit's major North American carrier, T-Mobile, to start selling the devices through its retail channels. The disconnect runs through the entire PalmOS "community."

Although PalmOS systems are praised for their ease of use, usability issues may be hindering gaming on them, too. Most phones have only one input method: buttons on the keypad or around the sides of the unit. It's simple. You don't have to think about where your fingers are or what they're holding. The latest PDAs, however, have at least four: buttons, keyboard, finger touch screen (for gross actions), and stylus touch screen (for more precise ones). That's not necessarily a bad thing for some applications, but if you have to use multiple forms of input to accomplish something, as you often do on PalmOS systems, it's hard to force a fast-paced game on such unit. And although such complexity might actually entice developers, the small and not-growing-as-fast-as-mobile-phones PalmOS market doesn't seem a lucrative opportunity for such extra work. At least when WAP games were all the rage, there was a sense among funders that a business model for games on phones would develop, and it has. For the PalmOS, gaming is still all about shareware and enthusiasts.

Future generations of PalmOS phone/PDA combos are likely to become more phone-centric, just as the latest generation of Microsoft's phone/PDA combos feel more like phones and less like organizers. So there's hope for games on PDAs, even if that hope seems to be shifting from the PalmOS to those systems running Microsoft's handheld

> The relationships between the hardware makers and the carriers don't run deep.

software. Sony, for example, has developed a version of EverQuest for the PocketPC but has yet to announce any interest in doing the same for PalmOS systems – and Sony makes PalmOS systems! Indeed, legendary game designer John Romero says it was the introduction of Microsoft's Pocket PC that made him believe phone games were the future. (Windows games can be ported to Pocket PC with less trouble, relatively.) And the hardware/carrier arrangements are getting more sensible, too: Sprint is working hard with an avalanche of high-profile print advertisements to make its Handspring model, the Treo 300, a mainstream success. We need to see many more such deals before a critical mass of mobile game developers feel safe spending time on the PalmOS. Until then, PalmOS games are likely to remain a mere niche market. ■

Connected Games

Continued from page 1

things that connect each other and that we should build games that provide these types of social interactions. Again, this is a fundamental difference from the primarily solitary nature of personal portable game systems such as Game Boy.

Waiting, Hoping

This is about as formed as the ideas become. No one is talking about what these kinds of games look like. Vendors want them now, though, throwing the gauntlet to the game developers with an attitude that demands, "You're the smart game guys. You figure this out!"

What's today's reality? The one-to-10-minute moment. Games are played in line at the store, under the table in class or at a meeting, while waiting for the kids to come out at the end of school. They are games that need to be designed to be picked up and paused, over and over. Multiplayer games are moments of social connection. In a few minutes, there is barely enough time to see if opponents are there, much less play the actual game.

Stat!

Top Five Wireless Phones on mySimon

1. Motorola V60
2. Ericsson T68
3. Nokia 8390
4. Motorola T720
5. Motorola V70

Source: mySimon.com, April 7, 2003

And then there is the drop-out issue. An old lesson from one of the first dedicated online multiplayer game services, The Imagination Network, is that even though turn-based games such as chess or poker could hide all latency issues through the belief that all delay was because of the time taken by one's opponent, the most frustrating thing was when a game would get started and the other player would drop out and abruptly end the game. This problem is multiplied tremendously when dealing with a device that is used for the moment-by-moment demands of daily life. Games like Mobile Pioneer's ChessEverywhere, which can have an opponent on your phone in 30 seconds, are still at the mercy of the divided-attention reality of most people's daily time. Even in massively multiplayer games where there are always other players on the ready, there is time involved in finding someone else to do something with, time that just isn't there in the wireless gaming moment.

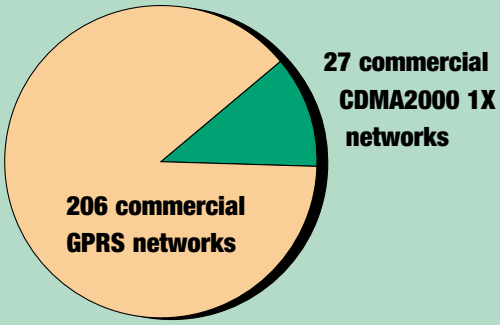
> Just wanting something badly enough does not make it so.

The exception to this problem seems to be extremely asynchronous games that ape the play-by-mail approach to chess. SMS has served as a reasonable conduit for this. There are some other interesting approaches, such as the Scandinavian company "It's Alive" that has taken the old assassin concept and is having people run around the city trying to find opponents to challenge in robot battle. And Sorrent's approach to creating persistent digital personas so that a server holds your growing abilities, abilities that pass with the player from game to game, is promising, too.

Stat!

Numbers of commercially deployed GPRS and CDMA2000 1x networks

(December 2002)



Source: EMC/ Northstream

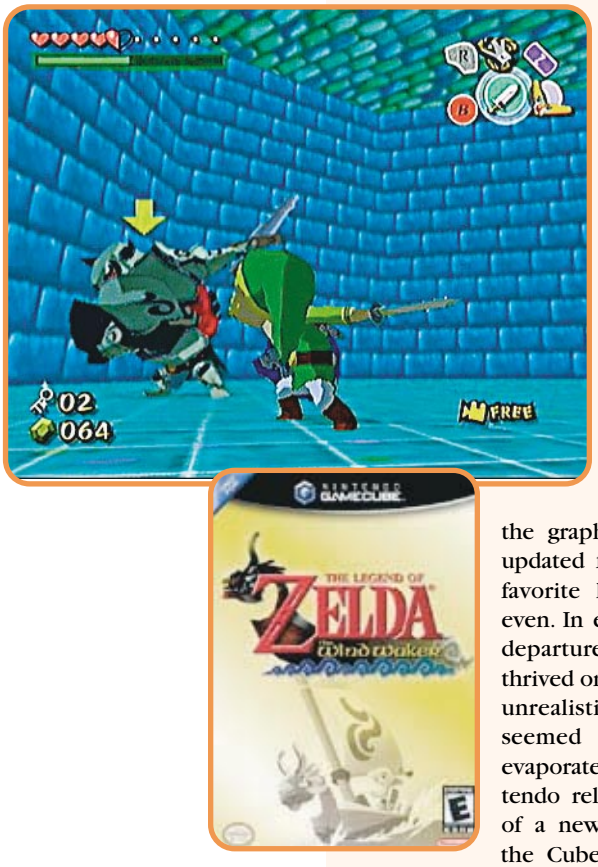
Where this goes is a very intriguing problem. I don't disagree with the desire to make the more social games, and I love any pressures that make people think about games in different ways. But there are problems that have nothing to do with technology that must be understood. Just wanting something badly enough does not make it so. And hearing a platform manufacturer say, "OK, this can work great, we just need a new style of gameplay," is certainly something that makes experienced game industry pros cringe. Let's make sure we understand how customers are using games before we design a new generation of games that does not meet consumer needs. Crashes are irresistible to watch – so long as you're not the one in the vehicle. ■

Games We Like

By Avery Score

The Legend of Zelda: The Wind Waker

In 1986, a gaming world dominated by Italian plumbers found a new, unlikely hero. Clad in green and wielding a "sword of destiny," this elven exemplar was determined to save the princess Zelda, protect the Triforce, and banish the evil Ganon from the magical land of Hyrule. That's right, I'm talking about Link, and in the years since his first appearance in The Legend of Zelda for the NES, the game that all but invented the action RPG genre, he has been just as important to the Nintendo franchise as its main man, Mario. Zelda games have graced every Nintendo system (except for the VirtualBoy, but who remembers that?), redefining the genre and setting a new benchmark for quality with each iteration of the game.



So, when Nintendo, at Spaceworld 2000, showed the world a glimpse of a new, hyper-realistic Zelda game for its next generation platform, the GameCube, hopes ran high. We saw a movie of Link fighting Ganandorf in which the graphics seemed to have been updated for an older audience. Our favorite little elf was taller, lanky even. In every way, this was a visual departure from a series that had thrived on bright colors and fantastic, unrealistic characters, yet fans seemed pleased. That satisfaction evaporated two years later when Nintendo released the first screenshots of a new, cartoon-shaded Zelda for the Cube. We fans complained and joked about Link's new look, which seemed to more closely resemble a Power Puff Girl than the game hero we knew and loved. The Zelda series had always been unique in its cross-generational appeal, but we now felt that it was going too far in the "kiddy" direction.

We couldn't have been more mistaken.

Now, having played Zelda: The Wind Waker, it's clear that its most dreaded feature is actually its best. The cel-shaded visuals in Waker are beautifully implemented and are an ideal update. The characters' faces are supremely expressive. If Link bumps into a wall, you can see pain on his face. If Link crawls underneath a house to steal rupees, the game's currency, his eyes will adopt a sneaky squint. The landscapes are beautifully realized as well. The Wind Waker is set on an archipelago of strangely shaped, colorful islands, each one holding its own secrets and challenges. While there is great variation from island to island, the overall look is bright and tropical, perfect for the cartoon visuals of Waker. Ten minutes into the game, I abandoned any concerns about the game's appearance and decided that cel-shading was the new paradigm in 3D. Miyamoto was right: Whereas most games approximate reality, Zelda: The Wind Waker creates its own, and is therefore not restricted by what you can accomplish in a realistically rendered world. Now, looking at screenshots of Link's character model in Soul Calibur II for the GameCube, I can't stop laughing at the "realistic" look that seemed so appropriate three years ago.

> The cel-shaded visuals are beautifully implemented and are an ideal update.

Zelda: The Wind Waker's plot is very similar to those of its predecessors, yet takes place in an entirely new world. The Hero of Time who twice saved Hyrule in the N64 Zeldas is now only a legend. The friendly island dwellers of the new Link's world still bear the mark of the Triforce on their doors, although they have little idea why. On Link's new home turf, the aptly-named Outset Island, all young boys, after reaching a certain age, must don the stylish green threads of the legendary hero. So, naturally, on Link's 11th birthday, as soon as he get dressed up like one of Santa's little helpers, he is thrown into an epic adventure when his sister, Aryll, is snatched up by a gigantic bird and whisked away to Ganondorf's Forbidden Fortress. Birds have been snatching up blonde girls all over the land, in search of the legendary Princess Zelda, as well as a female pirate called Tetra who Link is able to spare from suffering the same fate as his sister. Link joins the pirates and, armed with a makeshift sword and shield, takes on Ganandorf. Lacking the Master Sword, he is sorely defeated, but is saved by a magical boat called the Red Dragon King who will guide Link on the rest of his quest. The Red Dragon King also gives Link the Wind Waker baton, after which the game is made. The Wind Waker is the new version of the Ocarina and Link

must use it to conduct magical spells. Using his baton, Link can control the direction of the wind, warp from place to place, and even control other characters to aid him. Link must use the Wind Waker continually on his long quest to charge the Master Sword, save Zelda (whose identity you will discover), and once again face Ganondorf in the lost city of Hyrule. The quest is long and satisfying, with many surprises along the way and hundreds of minigames and side quests to distract you.

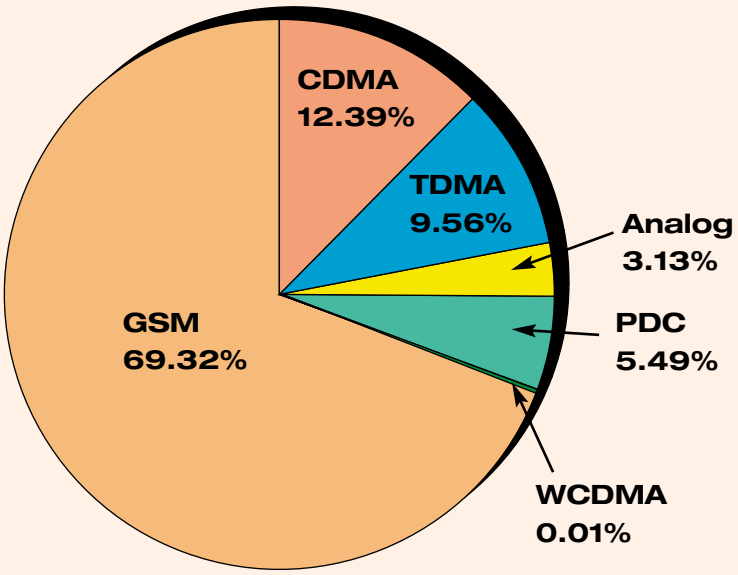
The Wind Waker's new game mechanics will be immediately accessible to those who played the N64 Zeldas as the game uses a similar control scheme. Although Link has some sweet new puzzle-solving, dungeon-busting tools, such as the Deku Leaf, which he uses to fan enemies and glide across chasms, it is the improved combat system that sets the gameplay ahead of previous Zeldas. Link now has many more combos at his disposal, achieved through a combination of the A and B buttons and the control stick. Link also has more weapons at his disposal this time around, a combination of improved versions of his old gear, as with his new boomerang which can target up to five baddies at once, and brand new gear, such as a hammer, which, wielded with some difficulty due to its comically large size, lets Link pound enemies and switches alike into the ground. Despite these many improvements, however, it is one feature which most differentiates The Wind Waker's combat from that of its predecessors: the parry. This move is incomparably cool. Right before your opponent is about to hit you, your sword will start glowing green. If you hit the A button right then, you'll leap above him and smack him on the head before he can hit you. If you hold a direction while doing this, you'll roll that way and jump up behind your opponent, knocking him in the back. This move is especially effective against certain enemies, such as the Armors, who must be hit from behind. In addition to including this sly trick, the boys at Nintendo have tweaked all your standard moves as well so, in general, you will feel much more in control during combat.

Any fears you may have about Miyamoto's new masterpiece are unfounded.

The Legend of Zelda: The Wind Waker is an involving new quest that will score big with fans of the series and newcomers alike. Any fears you may have about Miyamoto's new masterpiece are unfounded. You will be launched into a richly detailed world in which every little nook and cranny has a secret. Your co-workers might be puzzled at first by your continual mumblings about having to collect eight pieces of the Triforce of Courage, but they'll understand once they play the game. ■

Stat!

Distribution of worldwide mobile subscribers per technology
(September 2002)



Source: EMC/ Northstream

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