

[Issue 10.08](#) - Aug 2002

The Bandwidth Capital of the World

In Seoul, the broadband age is in full swing - online games have become a national sport, and cybercafes are the new singles bars.

By J. C. Herz

AT FIRST GLANCE, Seoul seems like just another sprawling metropolis: Its buildings, hastily constructed with dubious financing in the months leading up to South Korea's 1997 economic crisis, are the sort of blocky, concrete-and-glass high-rises that give many modern cities the air of prefab homogeneity. Wide boulevards are choked with the oppressive traffic common in East Asia or, for that matter, Silicon Valley. Megamalls and underground shopping centers filled with Body Shops and Burger Kings cater to teens and young professionals. There's none of the high tech visual overload you see in Tokyo, or the clean-scrubbed, old-meets-new urbanism of Scandinavia — nothing to indicate that Seoul is the most wired city on the planet.

Burrow a bit, though, down the alleys, up flights of stairs, or into the corners of malls, and you find something that sets Seoul apart and fosters its passion for broadband: online game rooms, or PC *baangs*, as they are called here. There are 26,000 of them, tucked into every spare sliver of real estate. Filled with late-model PCs packed tightly into rows, these rabbit warrens of high-bandwidth connectivity are where young adults gather to play games, video-chat, hang out, and hook up.



Photo by Peter Lau

A *Starcraft* competition is broadcast live from one of three Korean cable stations dedicated to gaming.

When it comes to rolling out bandwidth, South Korea's population density is an advantage. Seventy percent of its citizens live in the seven largest cities, in residential towers nestled close to DSL switching stations. The capital city of Seoul itself accounts for a quarter of the population. To put this in perspective, consider that South Korea's national communications backbone consists of 13,670 miles of optical fiber. Last year, Verizon laid down 20,500 miles of optical fiber in West Virginia alone. This fact doesn't make the Korean information infrastructure any less impressive. But the country does have an easier job on its hands than say, Indonesia, or the Philippines, or Mexico.

As luck would have it, urban apartment dwellers have a lot of broadband capacity right under their noses, courtesy of Kepco, the public power utility, which developed a network of fiber-optic cables for its own use

years ago. In 1996, South Korea allowed Kepco to lease the unused 90 percent of its capacity, giving upstart providers a cheap, instant last-mile solution. Sharp competition with Korea Telecom, which the government forced to open its network in the early '90s, has driven broadband prices down to the world's lowest levels. All-you-can-eat service is available for as little as \$25 a month.



Photo by Peter Lau
Under assault on *Lineage*, an online battle zone serving 3 million-plus players.

The government has even set up a certification program to rate buildings based on the quality of their data lines. Developers who install fatter pipes take the opportunity to bump up their prices - not an insignificant policy in a country where 50 percent of the population lives in large apartment complexes. Fast connections are even getting bundled into the rent, as construction companies repackage minuscule high-rise people-boxes as cyber-apartments. (A typical four-bedroom is 1,150 square feet and costs \$2,000 a month, not counting utilities, cyber or otherwise). Built by conglomerates like Daelim Industrial and Samsung in partnership with broadband carriers and content providers, the sales pitch is oddly reminiscent of 1950s American suburbia - except that instead of lawns and trees, developers promise an endless expanse of bandwidth allowing residents to buy flowers, chat with neighbors, and search for the perfect kimchi recipe on the local Ethernet. It's all very Epcot.

DESPITE THIS UTOPIAN vision of e-domesticity, the real allure of high-rise broadband is escape from the constraints of real estate. Escape into the wide horizons of a computer game, or into the welcoming company of other micro-apartment dwellers — preferably at the same time. Not only is South Korea a more wired country than the US, it is also a more gregarious one. Even if most Koreans had an American-style mega home-theater cocoon, they would still go out. These people do not bowl alone, particularly if they're single (most don't move out of their parents' place until they get married). They want to be with their friends.

And right now, the place to be with your friends is a PC baang in downtown Seoul upholstered in *Romper Room* hues. A hundred monitors glow with the candy colors of computer games. There are also a handful of "love seat" stations, outfitted with two computers and a double-wide bench. Theoretically, this is so guys can play videogames while their girlfriends video-chat with pals.

If you really watch the love seats, though, it becomes apparent that they're not so much a porch swing as an Internet-mediated bar stool. Every so often a girl will saunter by one of the stations, eye the occupant, and then sit down — or not. As it turns out, singles are video-chatting in game rooms all over town. If they hit it off, the guy says something like, "I'm sitting at love seat number 47 at this particular PC baang, if you'd care to join me." If the girl is sufficiently intrigued, she hops on the subway or walks — nothing is more than 20 minutes away in central Seoul. She cruises by, checks him out, and if she likes the look of him in person she sits down, hoping the lighting and shading algorithms she used to enhance her features in the video chat don't make her seem unglamorous in person.

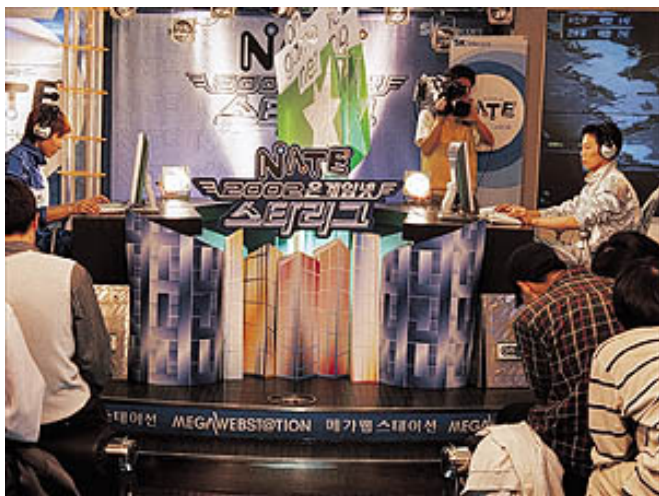


Photo by Peter Lau

Young-Baek Kim, 50, the proprietor of this PC baang, spends his days watching these scenarios play out. A former pharmacist, Kim used to work in a PC baang as a second job. Now he's the boss, and the business has expanded to seven locations staffed by his aunt, uncle, and cousins. Overhead is low, and margins are high — two years ago, South Korea's PC baangs raked in \$6 billion. They are a great small-business opportunity.

But they are also the product of a huge business crisis. In 1997, when the Korean economy imploded, thousands of middle managers were laid off, with no hope of finding new suit-and-tie jobs. They had tightly knit extended families, though, and as a result, access to moderate amounts of capital from relatives (the cornerstone of the nation's small-business

Champions Choi In Kyu and Han Ung Ryul face off at MegaWeb.

culture). A lot of them opened PC baangs - it cost the same as opening a restaurant, and it was less sweaty. Their out-of-work compatriots needed an inexpensive way to spend time. Tech-savvy students wanted to get out of the house. All the PC baang owners needed was something to draw people in groups and keep them paying a buck an hour while laying down extra cash for sodas and instant noodles.

THAT SOMETHING was online computer games. Because Korea was a Japanese colony for 40 years, until the end of World War II, it has had an acrimonious relationship with Japan. The latter's consumer electronics have traditionally been all but verboten thanks to both trade policy and cultural resentment. No PlayStations, no Sega, no Nintendo. As a result, PCs have become the dominant game platform in South Korea — unlike in the rest of the world, where consoles rule. And in 1998, with *Starcraft* the most popular game on the market, PC baang owners started hosting tournaments to boost business.

That snowball has now reached the bottom of the hill. *Starcraft* is not just a game in South Korea, it is a national sport, what football was in America in the 1970s. Five million people — equivalent to 30 million in the US - play. And three cable stations broadcast competitive gaming full-time to a TV audience.



Photo by Peter Lau
Color commentators confer inside the broadcast booth.

Why watch gaming on TV? Partly for the same reason millions of fans tune in for golf — if you play, it's compelling to see the pros do their thing. But largely it's about production values. There is so much insane enthusiasm staged around an event, it takes on a kind of obsessive allure — seeing a subject this arcane, broadcast with such a degree of adrenaline, described in frenzied, masterful detail, is riveting.

As an Enigma-esque theme song introduces the broadcast, a three-camera studio crew stands by in a PC baang in the basement of one of Seoul's largest malls. Two opponents decked out in metallic vinyl armor face each other across flat-screen workstations, steeling themselves for a five-game session of *Kingdom Under Fire*. Dry-ice fog rolls across the floor. As the music builds to a gothic intensity, YES or NO appears on the TV screen, giving at-home viewers a chance to vote online for the contestants:

Maxim, a two-time winner from the Cherry Clan, versus Fusion, a rising star from the Saint Clan. Their faces zoom briefly onto the screen as the commentator, sequestered in an adjacent room, announces the Korean equivalent of "Let's get ready to rumble."

Kingdom Under Fire, like many real-time strategy games, is a mixture of Tolkienesque imagery and resource allocation. Players micromanage supply chains staffed by tiny serfs while casting flashy magical spells to vanquish their opponents. Televised games are played in fast-forward, like speed chess, creating a spectacle of medieval Europe on Benzedrine: villagers frantically mining, keystone-cop masons bricking up buildings in seconds, antlike armies on the march. The excitement builds. The villagers are smelting! Six minutes in, swarms of little soldiers are wreaking micromayhem. Flocks of bats and fire-breathing dragons are on the wing — all accompanied by color commentary and a soundtrack.

The music reaches a crescendo as the challenger finishes off the defending champion in round one. Cut to a commercial: sexy teens on the run, snacking on Atlas candy bars. Then the commentators are back, trading banter and postgame analysis, replaying the highlights and gearing up for round two. More music. More frenzied medieval villagers. One hour and 55 minutes later, the defending champ prevails.

"We had a 41 share last week of people who watch cable TV at that time," says Chong Il Hun, 32, the lead announcer, who has become a celebrity TV personality in the three years he's been covering game tournaments. His station also airs online tutorials — playback footage of pro players along with voice-over commentary ("In this situation, I chose to go for the Yamato Gun, as opposed to the Optic Flare").

Chong points out a 20-year-old in an orange sweatshirt, immersed in online tactical warfare. "He's a pro gamer. Most of them practice 10 hours every day, like musicians," he says. "In Korea, people play games using the Internet like that. It's a kind of boom. It's the culture, it accelerates things. The first person gets

something, other people get jealous, it spreads to the mainstream." Seventy percent of the country's Internet users are also online gamers, as opposed to 20 percent in the US.

SOUTH KOREA'S hypersocial culture affects how people connect in virtual space. *Lineage*, a homegrown online world, is a testament to the overlay of virtual and physical environments. It hosts more than 3 million players. On any given night, 150,000 of them are signed on simultaneously. Most play from PC baangs, which buy *Lineage* access for 20 cents an hour and sell it for a dollar, but an increasing number — those with wives and families — pay \$25 a month to subscribe from home.

Like its Western counterparts *EverQuest* and *Ultima Online*, *Lineage* is a role-playing game set in the Middle Ages. Based on a comic book, the story involves the efforts of an evil king's stepson (the rightful heir) to rally a group of faithful followers (the Blood Pledge) and topple the usurper. In practice, it unfolds like a massively multiplayer king of the hill. The goal is to capture the castle, which allows you to raise money by levying tariffs on chain mail and mead. That enables you to buy more weapons and recruit soldiers to guard the castle against the onslaught of other attackers who want to do the same thing. Competing Blood Pledges — large gangs of players that can number in the hundreds — lay siege to one another's castles for hours at a time on fat broadband connections that allow the battles to play out in full glory.



Photo by Peter Lau
The Huang family watches the action at home.

What makes *Lineage* a distinctively Korean experience is that when players assemble to take down a castle, they do so in person, commandeering a local PC baang for as long as it takes. In the middle of a battle, these people aren't text-chatting. They're yelling across the room. Platoons sit at adjacent computers, coordinating among themselves and taking orders from the Blood Pledge leader. *Lineage* has a fixed hierarchy, unlike American role-playing games, in which leadership structures emerge organically. At the outset, you choose to be either royalty or a commoner. If you're a prince or princess, your job is to put together an army and lead it. If you're a commoner, your job is to find a leader. You pledge loyalty and fight to take over castles, and no matter how great you are at it, you can never be in charge.

This kind of tightly defined clan structure, which mirrors the Confucian hierarchy of Korean society, would be anathema to American players, who generally want to be the hero-king Lone Ranger. "In Korea, everyone is very comfortable with taking on subordinate roles," says Richard Garriott, who created *Ultima* and now runs the US division of *Lineage's* developer, NCsoft. "Their groups are extremely well structured, to the point where they march in lines, attack in waves, and have a style of coordination that you could not possibly match in the United States."

Arguably, it is the tight-knittedness of Korean society, and its people's tendency to physically gather around technology, that makes *Lineage* and the PC baangs a success. Unsurprisingly, *Lineage* hasn't taken off in North America, partly because it's a game in which not everyone can be the boss. More fundamentally, the distance between Americans, physically and socially, makes it impossible to replicate the contagiousness of the game, which is also the contagiousness of PC baangs in South Korea and of broadband overall in the country. In the US, going online is not generally a group social experience and almost never a face-to-face social experience — in fact, we presume that if you're online, you're not talking to someone who's in the room.

The merging of virtual and physical space has huge implications, not just for the players but also for the way companies operate and where their costs are carried. NCsoft has only a few dozen customer-service reps to deal with 3 million gamers. Why? Because if a guy in a PC baang has a question, he can turn to someone next to him and ask "What is this about?" or "How do you do that?" If the person doesn't know, there's always the proprietor, who's been trained by NCsoft to troubleshoot. Afterward, not only has the question been answered, but the person who asked it is that much more of an expert, in case the player next to him ever has the same question. Essentially, customer support has been completely decentralized, because players help one another — and also market to one another. Buzz across the room sells broadband better than any targeted advertisement can.



IN THE US and Europe, where media companies are obsessed with pumping copyrighted content into living rooms, online games are not acknowledged as the market driver for broadband. But in other parts of the world, especially where population density is high and PC game rooms are giving millions of people their first taste of connectivity, online games are becoming the hottest high-bandwidth ticket in town.

"We're talking to Singapore, Thailand, Egypt, Saudi Arabia, South America," says Heo Hong, NCsoft's CFO. In Taiwan, there are a million *Lineage* players, most of whom play from home. In Japan, NCsoft has a joint venture with Yahoo! and Softbank to package *Lineage* as a subscription service. Last year, the game launched in Hong Kong. This year, a Chinese partner will roll it out in Beijing.



Photo by Peter Lau

Theoretically, guys play videogames while their girlfriends video-chat. But love seats are really an internet-mediated bar stool.

In Asia, where copyright law is only loosely enforced, massively multiplayer online games are less risky for media developers than movies, music, TV programs, or console games. Unlike freestanding content, online worlds are almost impossible to pirate. Someone could copy the client application, but the game itself lives on a centrally maintained network. Even if that person were able to duplicate the backend system (it costs millions to run *Lineage* as a reliable service), there is no way to replicate the presence of 2 million people and the dynamics that occur in a human system of that scale. The value isn't bound up in the content. It's bound up in the interactions — in the group experience.

South Korea's broadband commons challenges North American assumptions about what bandwidth is for and why it's relevant. In the US, cable, telephone, and media companies spin visions of set-top boxes and online jukeboxes, trying to "leverage content" and turn old archives into new media streams. There is a profound fear of empowering consumers to share media in a self-organizing way on a mass scale. Yet this is precisely what makes South Korea the broadband capital of the world. It's not a futuristic fantasy that caters to alienated couch potatoes; it's a present-day reality that meets the needs of a culture of joiners — a place where physical and virtual are not mutually exclusive categories.



Photo by Peter Lau

"I'm sitting at love seat 47 if you'd care to join me": While more than half of South Korea's households have broadband, many prefer to make a high-bandwidth connection in one of 26,000 PC baangs.

When NCsoft, originally a systems integrator, decided to move into broadband media, it could have chosen to distribute "webisodes," or online animation. After all, South Korea is the third-largest producer of animation after the US and Japan. Instead, NCsoft's Heo says, the company "wanted to focus on interaction. And what is more interactive than games? We made this market. We made new sectors. American media companies were just using online capacity to distribute offline media."

So what about those of us in channel-surfing American cocoon-land? The vision of streaming media piped into the home, video-on-demand 24/7, and needle-narrow target markets is heralded as the way forward. Yet it is possible that this vision is holding us back. Perhaps the real market opportunities have nothing to do with connecting people to the Universal back catalog and everything to do with connecting people to each other. If Seoul is any kind of signpost, the way forward does not lie in the single servings of media we consume but in the playgrounds we share — no matter who's manning the turrets and storming the castles.

J. C. Herz (jnhq@yahoo.com) wrote about *Star Wars Galaxies* in Wired 10.06.



Friends from High School



Roosevelt
High (427)



Fairmont
High (661)



YOUR High
School (820)

[Copyright](#) © 1993-2003 The Condé Nast Publications Inc. All rights reserved.

[Copyright](#) © 1994-2003 Wired Digital, Inc. All rights reserved.