

An eMarketer **Analyst Brief**

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# **South Korea – A Case Study:**

**South Korean internet users may  
resemble tomorrow's US and UK  
internet users.**

Written by Ben Macklin



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South Korea is a broadband phenomenon. eMarketer estimates that at the end of 2001 there were over 8 million broadband subscribers in the country, approximately 7.5 million of whom were household subscribers. This equates to nearly 52% of all households in the country having broadband access. Of all online households in South Korea, approximately 90% were broadband at the beginning of 2002.

**“There was growing demand, responsive supply and appropriate government policy. These three elements created synergism to prompt explosive growth.”** – Lee Sang Chul, President of Korea Telecom

One significant reason for the growth of broadband in the country has been the Korean government’s active investment in technology and infrastructure. The Korean government estimates the cost of developing the broadband technology, building the infrastructure and marketing it will be \$30 billion between 2000 and 2005. These are not insignificant costs.

The major broadband access provider in the country is Korea Telecom with nearly 50% of the market, followed by Hanaro Telecom and Korea Thrunet. Digital Subscriber Line (DSL) is currently the broadband technology favored by the majority of broadband households.

**Top Three Broadband Access Providers in Korea, 30 June 2001 & End of 2001 (in millions of subscribers)**

|                | <b>Major access technology</b> | <b>Subscribers as of 30 June 2001</b> | <b>Subscribers as of end of 2001</b> |
|----------------|--------------------------------|---------------------------------------|--------------------------------------|
| Korea Thrunet  | Cable                          | 0.96                                  | 1.38                                 |
| Hanaro Telecom | DSL                            | 1.50                                  | 2.45                                 |
| Korea Telecom  | DSL                            | 2.60                                  | 3.80                                 |
| <b>Total</b>   |                                | <b>5.06</b>                           | <b>7.63</b>                          |

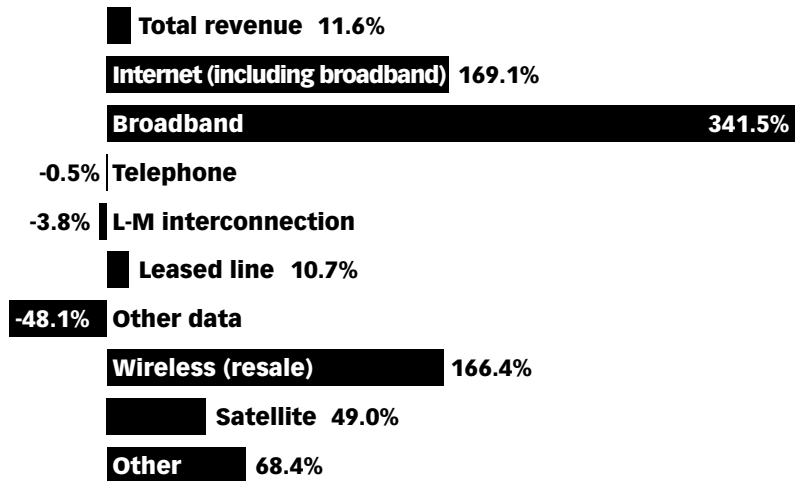
Source: eMarketer, March 2002; company data, 2002

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The growth in broadband had a positive effect on Korea Telecom's 'bottom line'. While the global telecom sector, particularly in the US, is suffering at the moment, Korea's leading telecommunications company recorded revenue growth of 11.6% during 2001. This was largely built on the growth of its broadband internet access business, which recorded revenue growth of 341.5%, according to data released in February 2002. In contrast, revenue in its fixed-line telephony business actually fell 0.5% over the same 12-month period.

**Korea Telecom's Revenue Growth, by Business Sector, End of 2001 (as % change from previous year)**



Source: company data, February 2002

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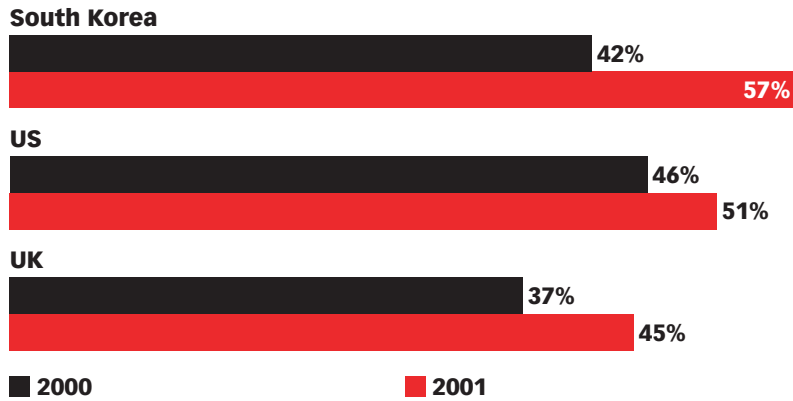
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Despite the staggering broadband growth in South Korea over the last 12 months, fewer than 60% of all households were connected to the internet at the end of 2001. This penetration rate is not radically different from the penetration rates in the US and the UK at the same time.

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**Household Internet Penetration in South Korea, the US and the UK, 2000 & 2001 (as a % of total households)**

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Source: eMarketer, March 2002

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The significant difference between the three countries can, however, be seen in the percentage of online households with a broadband connection. At the end of 2000, nearly 60% of online households in South Korea had a broadband connection and at the end of 2001, 90% of all online households had broadband. In the United States, only 13% of online households in 2000 had broadband and only 20% at the end of 2001. Broadband in the UK has barely gotten off the ground as yet.

**Household Internet Penetration in South Korea, the US and the UK, by Access Method, 2000 & 2001 (as a % of total online households)**

**End of 2000  
South Korea**



**US**



**UK**



**End of 2001  
South Korea**



**US**



**UK**



■ broadband households      ■ dial-up households

Source: eMarketer, March 2002

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Is the cost of broadband access a significant factor in the growth of broadband in Korea? Data from the Organization for Economic Cooperation and Development (OECD) shows that on a purchasing price parity basis, DSL monthly charges are actually higher in South Korea than the US and the UK. However, while the monthly charge may be greater, you get more bandwidth for your money in Korea compared to the US and the UK. A basic DSL subscription from Korea Telecom provides a user with 1.5Mbps downstream and 64kbps upstream. According to OECD this equates to 42.75kbps per \$1, per month. The premium DSL subscription from Korea Telecom provides 8Mbps downstream and 640kbps upstream, providing 224kbps per \$1 per month. In contrast, for every \$1 per month Verizon DSL subscribers are paying, they are only receiving 17.94 kbps. In the UK, British Telecom (in late 2001) was providing only 11.96 kbps for every \$1 per month. This data indicates that when someone in South Korea subscribes to broadband, they get 'real' broadband.

British Telecom recently announced some significant price reductions. Their ADSL product (500kbps downstream) is now (May, 2002) being offered for GBP29.99 per month (\$US43.99/month). It will be interesting to see whether this drives adoption of broadband over the next few months.

**Digital Subscriber Line (DSL) Price Comparison in South Korea, the US and the UK, March 2001 (with \$ purchasing price parity (PPP))**

| Company     |                 | Minimum downstream/upstream speed | Initial charge (PPP) | Monthly charge (PPP) | Kbps per \$US/month     |
|-------------|-----------------|-----------------------------------|----------------------|----------------------|-------------------------|
| South Korea | Korea Telecom   | 1.5Mbps/64kbps (8Mbps/640kbps)*   | \$43.32              | \$57.76              | 42.75kbps (224.32kbps)* |
| US          | Verizon         | 1.5Mbps/64kbps (8Mbps/640kbps)*   | -                    | \$49.95              | 17.94                   |
| UK          | British Telecom | 500kbps/250kbps                   | \$208.97             | \$55.66              | 11.96                   |

Note: \*This is a "premium" service available  
Source: OECD, October 2001

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One can also see, with the price comparison of cable modems, that Korea is not cheaper on a purchasing price parity basis than the UK or the US, indicating that monthly costs alone are not the reason for the explosion of broadband in South Korea.

**Cable Modem Price Comparison in South Korea, the US and the UK, March 2001 (with \$ purchasing price parity (PPP))**

| Company     |                              | Initial charge (PPP) | Monthly charge (PPP) |
|-------------|------------------------------|----------------------|----------------------|
| South Korea | Thrunet                      | \$47.26              | \$54.87              |
| US          | Cablevision (Optimum online) | \$108.9              | \$32.95              |
| UK          | NTL                          | \$34.83              | \$27.85              |

Source: OECD, October 2001

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The International Telecommunication Union identified that in countries where broadband demand has taken off, there are a number of broadband applications and services that have come to the fore. Korea provides a good example of this:

- Education - in Korea, expenditure on broadband access for the Internet is considered an important family investment.
- Entertainment – games and streaming media are particularly popular in Korea.
- IP Telephony – internet protocol telephony is considered a bonus to Korean broadband users, and with the ITU estimating over 7.6 million IP telephony users at the beginning of 2001, the service is increasingly popular. Flat-rate broadband makes IP telephony very attractive.
- Peer-to-peer applications - music and software downloads are also very popular applications in Korea.

Examining the internet usage patterns in Korea, the US and the UK reveals significant differences. The use of services outside of the web browser is far more popular in Korea than in the US or the UK. Audio-video usage, games and file transfers are very popular activities for Korean internet users compared to their US and UK counterparts. This data clearly shows that the internet in Korea is far more than just the world wide web. A high-speed connection in Korea is providing users with the ability to access additional entertainment, services and applications outside of the web.

**Internet Usage of Non-Web Protocols\* in South Korea, the US and the UK, February 2001 (as a % of internet users)**

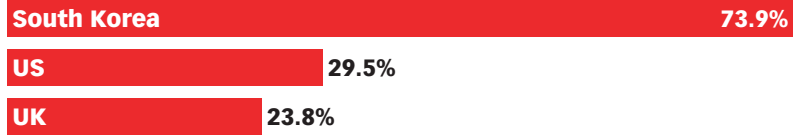
| Non-web protocols | South Korea | US    | UK    |
|-------------------|-------------|-------|-------|
| Audio-video       | 73.9%       | 23.8% | 29.5% |
| Games             | 54.1%       | 5.8%  | 4.1%  |
| File transfers    | 39.2%       | 22.8% | 21.4% |
| Instant messaging | 29.9%       | 38.1% | 29.4% |
| Chat              | 15.7%       | 6.0%  | 7.8%  |
| Mail              | 11.7%       | 46.6% | 58.6% |
| News              | 1.3%        | 6.4%  | 10.8% |

*Note: \*Non-web protocols are defined as those activities used outside the web browser*

*Source: NetValue, May 2001*

The use of streaming media in Korea is nearly three times more popular than in the US or the UK according to NetValue's Feb, 2001 Streaming Media Report.

**Streaming Penetration in South Korea, the US and the UK, February 2001 (as a % of internet population)**



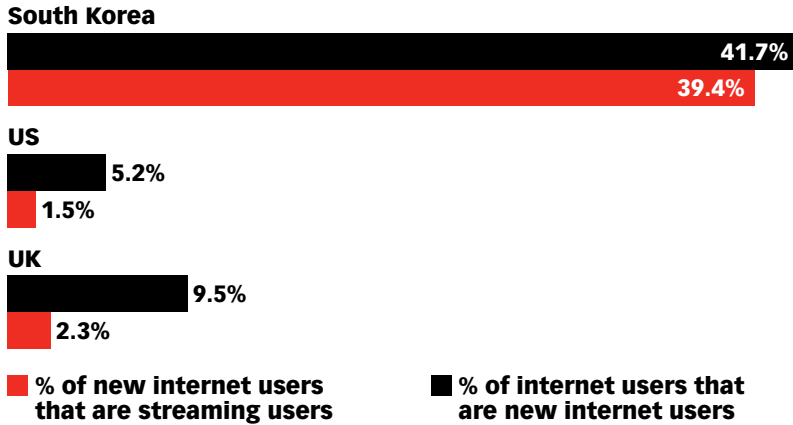
Source: NetValue, May 2001

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Additionally, new users of the internet in Korea are far more likely to use streaming than are new internet users in the UK or the US. This would indicate that the learning curve for Korean internet users may be shorter than their UK and US counterparts, but also that streaming is a significant driver of demand for getting online. Many late adopters to the internet in Korea are not going from dial-up access, then to broadband, but rather jumping over the dial-up step and going straight to broadband immediately.

**Percent of New Internet Users That Are Streaming Users in South Korea, the US and the UK, February 2001**



Source: NetValue, May 2001

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Data from Nielsen//Netratings indicates that Korean internet users lead the world in page views per month. Clearly, a high-speed connection allows broadband users to surf quicker and to view more pages within a site. Interestingly, the average banner click rate for Korean internet users was also significantly higher than in the UK or the US, which may indicate that broadband has the ability to make banner ads more attractive and appealing. Can broadband save the banner ad? Of course, cultural factors should not be underestimated.

**Number of Webpages Viewed per Month in South Korea, the US and the UK, April 2001**

|                | <b>Page views per month</b> | <b>Page views per session</b> | <b>Average click rate for top banners</b> |
|----------------|-----------------------------|-------------------------------|---|
| South Korea    | 2,164                       | 92                            | 0.62                                      |
| Global average | 774                         | 43                            | 0.41                                      |
| US             | 678                         | 35                            | 0.36                                      |
| UK             | 479                         | 39                            | 0.49                                      |

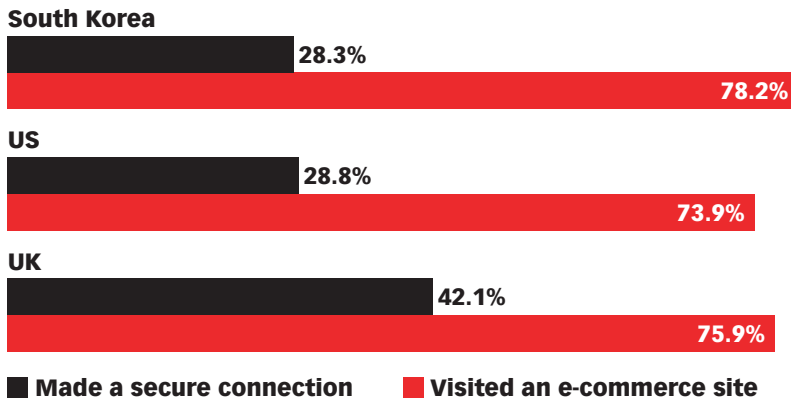
Source: Nielsen//NetRatings, April 2001

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NetValue's May 2001 study indicated that more Korean internet users also visit e-commerce sites than do users in either the US or UK, but those completing a transaction (making a secure connection) was greater in the US or the UK.

**Internet Users Visiting E-Commerce Sites in South Korea, the US and the UK, May 2001 (as a % of internet population)**



Source: NetValue, May 2001

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The preceding data shows that Korean internet users are indeed using their high-speed connections to go to the web to access information, to send and receive e-mail and to shop, but additionally, they are utilizing their broadband connection for applications outside the world wide web. Streaming media, audio-visual applications, games applications, IP telephony, file transfers and peer-to-peer applications are very popular for internet users in Korea. While one can not necessarily conclude that, with greater broadband adoption in the US or the UK that internet usage patterns will begin to resemble those of Korea, as cultural and other factors are also very important, the data does indicate that broadband provides greater opportunities and services outside the web than dial-up will ever do. If there is one thing that is evident from the broadband usage patterns of Korean internet users it is:

**“Broadband users think outside the Web.”**

## eMarketer Methodology

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The methodology for all of our statistical reports is founded on a simple philosophy of aggregation:

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**The key to approaching quantitative truth on the internet is to consider data from as many reputable sources as possible. No one has all the answers. But taken together, multiple sources, coupled with healthy doses of common sense and business intelligence, create a reasonably accurate picture.**

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Unlike other research organizations, eMarketer does not conduct primary research. eMarketer has no testing technique to protect, no research bias and no clients to please.

The eMarketer research team first aggregates data from hundreds of published, publicly available sources; we then filter, synthesize and organize the information into easy-to-read tables, charts and graphs. For each topic, we provide comparative source data along with our own analyses, estimates and projections. As a result, each set of findings reflects the collected wisdom of numerous research firms and industry analysts.

## The Benefits of Broadband

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**This report contains 138 pages and 124 charts.**

**For more information on The Benefits of Broadband, visit:**

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**Sales Contact:**

Nick Fainelli  
New Business Development  
[nfainelli@emarketer.com](mailto:nfainelli@emarketer.com)  
212.677.6300