Big in South Korea

A nation still living in the shadow of its colonial past and civil war leads the world when it comes to broadband. **ANTHONY TOWNSEND** on what we can learn from this success

Wired city: the capital, Seoul

Frustrated with the slowness of your dial-up internet connection? Dismayed at how your business or organisation has been prevented from improving productivity through online communications? Join the millions of frustrated Britons, Americans, Germans, and so on, whose broadband dreams (along with their retirement portfolios) were flushed down the drain with the telecoms bust of 2001-02. As G7 policy-makers debate, discuss and wrangle over the wreckage of the global telecommunications industry, it is tempting to believe that universal deployment of broadband infrastructure is just another utopian dream born in the 1990s and best left to die there.

But wait. What if I told you that it's not just a utopian dream? What if I told you that there is a nation – still living in the shadow of its colonial past, still reminded by its artificially abridged geography of its 50-year civil war (which is officially still not over) and with a per capita income closer to Greece or Portugal than the US or UK – that has managed to deploy broadband faster and more extensively than any other nation in the world? Would you believe it if I told you that nation is South Korea?

When it comes to broadband, South Korea not only leads the world, but has left the competition far behind. The latest reliable statistics published by the OECD rank Korea number one in the world, with 23 broadband lines per 100 households as of last June. This is almost twice as many as Canada, ranked second with just 13 lines per 100 households. The US – which created the internet in the first place – has only eight lines per 100 households. The EU? Fewer than five per 100 homes. Even Japan, with 85 per cent of the world's robots, barely pulls ahead of the US.

National statistics don't capture the astonishing and nearly universal use of broadband in South Korea's capital and largest city, Seoul. In a speech in October 2001, Korea Telecom's president, Lee Sang Chul, noted that in some apartment complexes, the residential penetration rate hovered over 75 per cent. Nothing like this exists anywhere in the west.

From a distance, Korea's broadband success is striking. On the ground in Seoul, it is breathtaking. Few aspects of Korean society have been untouched by the internet, and most have been utterly transformed by ubiquitous access to broadband. In the past six months, social network services such as Friendster have revived the English-speaking world's interest in new internet applications. By contrast, such services have thrived in Korea's clannish culture for years. Today, young Koreans construct their identity online in a way that few in the west could imagine.

If aliens had visited earth in 1999 or 2000, armed only with *Wired* magazine as a guide, they might have believed that Finland was the planet's technological powerhouse. The industry watched as Nokia pioneered a fundamental shift in the way information technology was developed – by designing devices that would appeal not just to geeks, but to everyday consumers. The world's business leaders learnt about this isolated, rather peculiar nation and the wireless society of the future it was supposedly birthing. But a few years later, Nokia is on the ropes and the futurists have stopped talking about Finland as a technological utopia.

> Is it a flash in the pan, a technological shooting star like Finland seems to have turned out to be?

Already there are signs of a new kind of "Helsinki syndrome" among the technorati. For the first time since 1953, the flow of Koreans heading overseas to learn about the ways of the west is being matched by an equally eager cadre of corporate researchers and scholars heading east to have a look. Companies as varied as Intel and Lego are after the next big thing in South Korea. The British government even sent a high-profile fact-finding team in 2001 to study the nation's successful broadband policy.

Is Korea a flash in the pan, a technological shooting star like Finland seems to have turned out to be? And if it isn't, what lessons does its experience offer countries that are struggling to reduce gaps and delays in broadband deployment?

The good news is that there's an enormous amount to be learnt from South Korea. In his ground-breaking study of Korea's broadband policies, the Japanese telecommunications scholar Izumi Aizu summarised it this way: "In Korea, bottom-up, grass-roots entrepreneurship and aggressive netizenship ▶

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Americans get a raw deal

High prices and poor technology are symptoms of a deeper malaise. By **MARK BEARN**

America, the joke goes, doesn't have broadband. At best, it has "middleband" – overpriced, sluggish internet connections, transmitting grainy video and tinny music over ageing technology. While 89 per cent of American households now have access to some kind of high-speed internet connection, either through their telephone with DSL technology or through the cable lines down which their television programming also runs, less than 20 per cent bother to subscribe. As a consequence, the US ranks behind countries such as Finland, Iceland and South Korea in its adoption rate. For a nation that prides itself on technological and economic primacy, this is an embarrassment, and indicates a huge policy failure.

A principal reason for the slow take-up is straightforward: consumers are unwilling to pay high prices for the inadequate service on offer. They certainly get a raw deal compared to the South Koreans, who enjoy connection speeds up to 20 times faster than are available in the US. And American consumers are charged between $35 and $50 a month, roughly the same as the Koreans pay for their superior service. To put it another way, while Koreans are surfing the web, making internet phone calls and watching the latest Hollywood blockbuster on their laptops, Americans are still struggling to make out Paris Hilton in her murky home video.

High prices and underdeveloped technology are symptoms of a deeper malaise. As the policy analyst and entrepreneur Charles Ferguson has put it, "the principal source of the problem is the monopolistic structure, entrenched management and political power" of the local telephone and cable companies that control access. He might also have added President Bush's dogged anti-regulatory policies that have done so much to protect them.

More than 95 per cent of US broadband connections are provided by local cable and phone companies, which control almost every neighbourhood under a rigid duopoly. The local telephone companies, the "Baby Bells", are notoriously poor innovators and delayed the onset of DSL for years in order to protect their existing ISDN technology. The typical Bell company invests almost nothing in capital spending – while burning hundreds of millions of dollars a year on lobbying and political

contributions. Unlike Korea, which opened up its national phone network to competition, the US has shown little interest in smashing these local monopolies. Tellingly, while prices for every other telecommunications product have plummeted, broadband prices have remained steady for years, and have only recently begun to fall.

These companies have found a powerful protector in the Bush administration and in the chairman of the Federal Communications Commission, Michael Powell (son of the Secretary of State, Colin Powell). Since 2001, the commission has sought aggressively to protect broadband companies from competition. In 2003, it tried to redefine them as "information services" rather than telecommunications providers, and thus exempt them from the legal obligation to open their lines to competitors at all. Courts rejected the move. The commission has scorned calls to foster competition, instead supporting industry demands for further deregulation without competitive pressure. Meanwhile, Bush has mixed campaign trail calls for access to broadband for all by 2007 with vague policies and a commitment to the laissez-faire status quo.

Activist government policy could make a huge difference to usage, as it did in fostering the growth of canals, railroads, motorways and airports in earlier periods, and as it has done in Korea and Japan. The Bells and the cable companies could be forced to let other firms sell services over their lines for a fair (that is, low) price – as the 1996 Telecommunications Act committed them to doing and which they have lobbied ferociously against ever since. Government subsidies could expand the reach of quality broadband services to 100 per cent of US households by helping to finance a fibre-optic "last mile" and building networks in rural areas where private companies cannot recoup their costs (in parts of Alaska, connecting one new DSL subscriber can cost $9,000). State and federal government could help towns such as Burlington, Vermont, that in frustration have taken it upon themselves to build community-owned, advanced fibre-optic networks.

But in its slavish commitment to a free-market mythology, the Bush administration and its corporate backers have brought only delay, confusion and often chaos with misadvised policies. It's all horribly familiar.

▶ contributed the most to its rapid explosion of broadband, coupled with accidental excess of bandwidth supply, fierce market competition and freedom-hungry citizens' activities."

Going by this formula, there is certainly a lot for the UK to be optimistic about. The wireless internet service providers, both for-profit and co-operative, that have sprung up throughout the British Isles exemplify the population's newfound enthusiasm and ability to make broadband happen. But there's bad news for the UK, too. Competition is lacking in a major way. As Aizu's

colleague Adam Peake has written: "Broadband is growing where it is available, but affordable services are not available to around 33 per cent of the population, and realistic competition, a duopoly between DSL and cable, is a reality for only 40 per cent of the population. Broadband is provided by two cable companies whose networks do not overlap, and by resellers of a single wholesale provider of DSL service."

The role of cable television infrastructure as a competitive force for residential broadband should not be underestimated. In

this area, the UK's historical choice of satellite television as its primary alternative to terrestrial broadcasting places it at a severe disadvantage in the broadband race. While cable networks pass approximately 50 per cent of British homes, less than one-third of these are subscribers, and many networks lack the upgrades needed to provide broadband services. In the US, consumers are just now beginning to witness the opening salvos of a price war between DSL providers and cable companies that seems reminiscent of Korea circa 1998-99. This trend seems likely to generate an explosion in broadband subscriber rates in the US, in a similar fashion to what happened in Korea.

So much for policies aimed at broadband diffusion. What policy-makers really want to know is what the pay-off will be in terms of economic growth and social development.

On the economic front, there is certainly reason for excitement. Many credit the expansion of the telecommunications sector, driven by interest in broadband, as one factor in Korea's rapid recovery from the Asian financial crisis of 1997-98. Korean electronics firms are benefiting from the unique insight into new lifestyles and practices based on broadband, which gives them an edge in the global marketplace. And entrepreneurial Korean firms are pioneering a whole slew of new technological industries such as multiplayer online gaming and telemedicine.

But let's suppose the UK can get its broadband act together and achieve the government's goal of being number one in broadband among the G7 by 2005. Such success isn't likely to be of much help in solving the biggest challenge to the nation's economic development – the gap between south-east England and the rest of the nation.

In both economic and social terms, broadband has done nothing to divert Koreans' obsession with all things Seoul. Even as national leaders consider decentralising the capital, the city continues to grow more rapidly than the rest of the nation (and in a sprawling chaotic mess reminiscent of London). As urban planners and economists around the world have begun to recognise, the places that are most connected to begin with tend to get connected to new networks first. And by virtue of their bigness and their facilities for face-to-face interaction, they are able to turn technologies for communications such as broadband into economic development much more rapidly and effectively than outlying areas.

It is clear that Britain needs to do more to accelerate broadband use and catch up with Asia and America. Furthermore, the lack of effective competition, an area where good public policy can make a major difference, is the major force propping up prices and holding up deployment.

The government needs to follow the example of Korea and create an environment where communities and small firms can build broadband infrastructure from the ground up, where they need it and when they need it. It should not be left to the big telecoms providers alone to provide such a critical public infrastructure.

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A new kind of republic

Experiences of connecting cities and their citizens are different around the world, but a common theme is emerging: the people are being given greater power.
By **SIMON WILLIS**

A new political and economic phenomenon is emerging in cities around the world as a result of their approaches to connectivity. Experiences of connecting cities and their citizens are very different, but a number of common themes suggest that we are on the brink of some very significant changes.

People construct the complex architectures of their cities over time – driven by their desire to be with each other, learn from each other, and grow economically, culturally and spiritually. To satisfy these desires, we have developed physical spaces such as the street, the marketplace or the coffee shop. In recent times, these have been supplemented by digital spaces. As the means for the instant exchange of digital information are built, a new dynamic emerges at the heart of what makes a city – information can flow towards people rather than people towards information.

> In recent times, physical spaces such as the street or coffee shop have been supplemented by digital spaces

The consequences are subtle but profound. Looking at connected cities, three themes emerge. The first is the changing nature of work, as the boundaries of the working day and the workplace begin to blur, and more collaborative ways of working and decision-making emerge.

The second theme is the growing realisation that cities, in order to change in the way enterprises have changed, require the kind of information exchange environment that businesses now take for granted. In the process, they may have discovered the next pervasive social infrastructure to follow water, roads, power and telecoms.

The third theme is political – a new model becomes possible when new ways of working are combined with a new pervasive social infrastructure. These cities are collaboratively reconstructing themselves around the needs of their citizens.

In Milan, a unique set of circumstances allowed the service provider e-Biscom to take off in an impressive way. It ▶