

Policy lessons to be learned from lagging US market

“America’s record in expanding broadband communication is so poor that it should be viewed as an outrage by every consumer and businessperson in the country.”

THERE'S NOTHING surprising about a politician – in this case, US Democrat Michael Copps – launching into a tirade about his country’s (Republican) government’s alleged failure to develop a high-speed broadband-for-all communication infrastructure. But you do stand up and take note when the politician in question is a member of the Federal Communications Commission, the regulator responsible for broadband policy.

Copps’ frustration about the state of the US broadband market is based on the country’s poor standing in global broadband rankings. The US is ranked 15th in the world in broadband penetration, according to the International Telecommunication Union (ITU). And it comes even lower – 21st – in a broader “digital opportunity” index (which considers price and other factors).

The lowly position of the US is extraordinary given its role in building and populating the internet and the worldwide web. The US is the cradle of the internet and the hotbed for IP innovation and application development; its technology companies (Cisco) built the internet and developed the browsers that make it usable (Netscape and Microsoft). Companies from the US also dominate the landscape for search and advertising (Google and Yahoo), social networking (YouTube and MySpace) and downloadable music (Napster, Apple).

So what has gone wrong with policy-making in the US and how does it compare with Europe and Asia?

There are big differences in the approach to regulating and developing broadband networks in the US, Europe and Asia. For

the author



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a country that has embraced free-market economics, the US has an extraordinarily ordered and controlled broadband market. American consumers face a cable and telephone broadband duopoly. Outside the big cities, many households have access to just a single broadband provider, and nearly 10 percent have no broadband provider at all. For businesses, it’s just as bad. The telecom merger spree that left the US with just a handful of network operators has left many office buildings with a single provider.

While telco consolidation in the US has meant a reduction in the number of potential broadband providers over the past five years, Europe’s broadband market has mushroomed. Many European countries now have fully competitive broadband markets. This has been achieved by forcing telcos to allow ISPs to piggyback onto their local network infrastructures in a process known as local-loop unbundling (LLU).

The impact of LLU has been spectacular. France, which has



often tended to lag behind in the adoption of new technology, has household broadband penetration of 47 percent against a European average of 41 percent, and is ahead of Italy (37 percent) and Germany (30 percent). The French broadband market has been led by two ISPs, Iliad and Neuf Cegetel, offering low-priced (EUR 30 per month) bundles of internet access, IPTV and VoIP. Broadband growth has allowed VoIP to take root and France Telecom expects that, by the middle of 2007, VoIP will represent up to 50 percent of fixed voice traffic.

But the LLU process has not been applied consistently across Europe and many regulators are still having problems getting telcos to provide access to third parties at acceptable terms.

Japan and South Korea have a different approach altogether. They are the undisputed world leaders in broadband, with household penetration rates of 51 percent and 75 percent respectively. Industrial policy and national champions are key aspects of telecoms and technology policy-making in both countries. There is a clear preference for manipulating market structures and market shares within an overall context of providing state-of-the-art, affordable communications services to consumers and businesses.

South Korea has no LLU at all. All the broadband service providers operate their own broadband networks. Korea Telecom has 47 percent of the broadband market, with the rest divided between cable-TV companies and local telecom operators, including Hanaro, LG Powercom and Dacom.

Japan's dominant telco, NTT, does provide LLU services but

it – rather than the telecom regulator – sets the market price for LLU services. NTT dominates the broadband landscape, accounting for two-thirds of the country's 24.5 million broadband subscribers.

It is not just the size of the broadband population that impresses in Japan and South Korea – it is the fact that so many individuals and businesses are connected to high-speed networks that makes Europe and the US look as if they are stuck in the slow lane. NTT has 4 million fiber-to-the-home (FTTH) subscribers and overall 17 percent of Japanese broadband customers are served by FTTH. South Korean operators have deployed several different broadband technologies, including high-speed VDSL.

Wireless and convergent broadband policies

So that's the shape today's broadband markets are in, but how are regulators trying to shape the converging broadband markets of the future? And what is the role of the regulator in fostering the development of FTTH networks, ubiquitous wireless broadband, and converged fixed and mobile services?

While the US and European governments see the benefit of delivering high-speed broadband communications to their citizens, there is a tenuous link between broadband policy goals and broadband regulation. Regulation tends to be reactive: regulators are more interested in preventing market abuse by dominant players than in fostering an environment where technical innovation and service creation can flourish.



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South Korea's and Japan's preference is to manage the evolution to the converged networks of the future. They see the benefits of competitive markets but are loath to risk causing too much damage to incumbent telcos with large workforces and strong unions.

In Europe, discussions around high-speed broadband networks and extending fiber closer to the home have become bogged down in the issues of investment, regulatory uncertainty and local-loop unbundling (LLU). Many telcos are arguing that they can justify making new local network investments only if they are granted a regulatory holiday during which they have exclusive use of those networks

Network versus service competition

Achieving a balance between network-based competition and service-based competition is arguably the biggest single challenge that regulators face in opening their communications markets.

The US, Japan and South Korea have opted for open competition in networks but limited competition in services in a model that allows incumbents to fix their own wholesale prices. Europe, on the other hand, has put the focus on service-based competition, with regulators fixing the price at which competitors can access telco networks.

For the first phase of relatively low-speed (less than 10Mbps) broadband rollout the European model is the most efficient. By setting a cost-plus price for LLU and allowing unlimited competition in retail broadband, European citizens are benefiting from affordable broadband services, in addition to service creation and innovation, as ISPs attempt to differentiate their offerings by providing services such as IPTV.

But this model may not be sustainable as telcos extend fiber closer and closer to – and, in some cases, into – the home. The local telephone exchanges that house local-loop unbundlers' equipment will become redundant – at least as far as the telcos are concerned – because telcos will need to install new, smaller cabinets serving fewer homes.

Several European operators are already in discussions with their regulators about the impact of their fiber build-outs on LLU. The early signs are that governments are reluctant to stand in the way of the telcos building new high-speed infrastructures provided they can provide some assurance that DSL providers will be able to continue providing services to their customers. However, such a move could mean that the onus for setting a wholesale price model would move away from the regulator to the telcos themselves. If this does occur, the competitive outlook in Europe will begin to

change and there is a risk that telcos could create new high-speed broadband monopolies.

In contrast, telcos in the US and Asia face the prospect of greater infrastructure-based competition from wireless operators and the growing influence of local facilities-based operators. In the US, Sprint is rolling out a nationwide WiMAX network that will compete with the telco-cable duopoly. At the same time, most cities in the US are deploying municipal Wi-Fi and WiMAX networks. In Japan, NTT is already building out FTTH and is optimistically forecasting 30 million customers by 2010. But it is coming under pressure from the regulator to offer affordable access to third-party operators and is facing growing competition from fixed-network rival KDDI, which is quietly buying up small, local, fiber-based operators across the country. In South Korea, there is intense

speculation that mobile market leader SK Telecom will acquire local fixed operator Hanaro Telecom and become a serious rival to Korea Telecom.

Where mobile broadband fits into this equation is anyone's guess. The long-term evolution of 3G technology gives cellular operators – in theory at least – the opportunity to compete on speed with advanced ADSL. But should regulators and governments factor in mobile broadband as they seek to implement broadband policy goals? And what about WiMAX? Should it be viewed as a mobile broadband or a DSL-alternative technology?

In Singapore and Hong Kong, mobile operators have launched DSL-type services over HSDPA – a 3.5G upgrade to WCDMA that gives maxi-

mum downlink data rates of 10Mbps. Mobile operators are also entering into alliances with laptop and notebook manufacturers to embed HSDPA chips in their devices. But mobile operators in most countries are wary of using cellular technology to compete with DSL in local-area networks, such as in homes and offices: the cost of providing coverage and capacity is just too great.

Mobile broadband data services to mobile devices – what we may choose to call the mobile internet – are a different matter entirely. With the advent of higher-speed networks and flat-rate business models, this market is poised for dramatic growth. In developed markets, most people will experience broadband and the internet via their mobile devices and networks, but in the developing world it is more likely to be an extension – rather than an alternative – to wireline broadband.

The role of WiMAX is likely to differ in developed and developing countries. In Europe and the US, it will be a Wi-Fi replacement in public hotspots and a DSL “fill-in” where there is no wireline network or where copper cannot be upgraded to offer DSL.


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But in the developing world – where few people are served by wireline infrastructure – it has the opportunity to become a genuine national broadband infrastructure, although 3G technology also vies for the same market by lowering its cost of coverage.

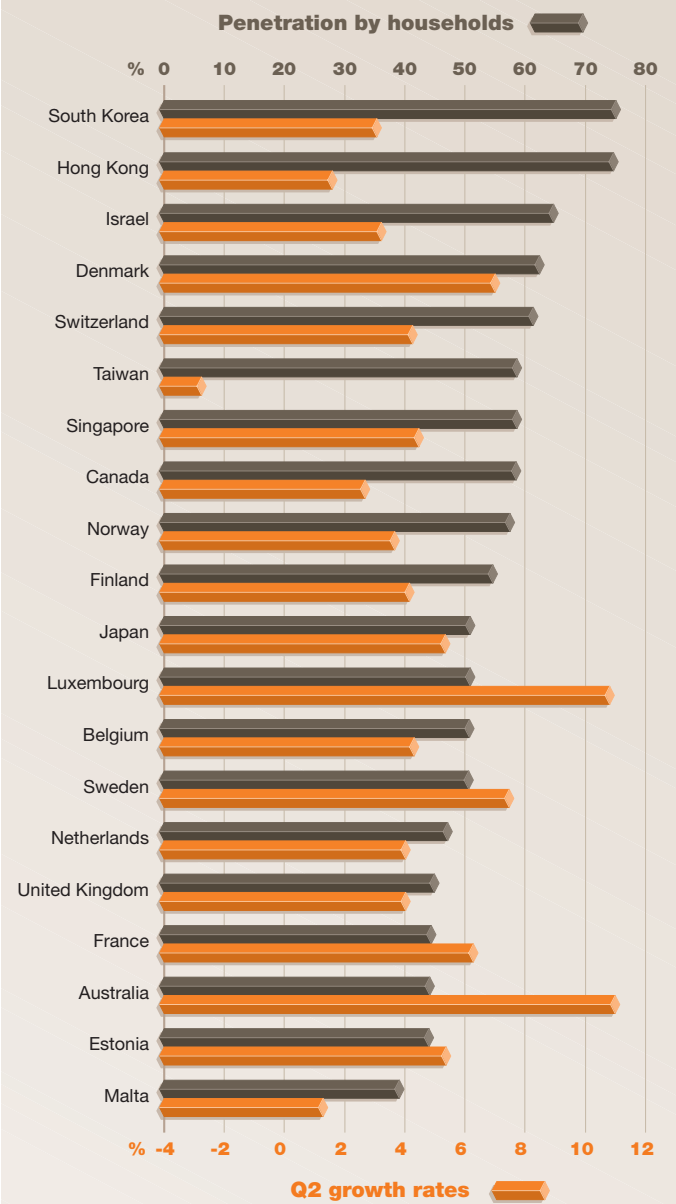
Flexible strategies essential for policy-makers

Pity the poor regulator. The experiences of policy-makers in the US, Europe and developed Asia indicate that there are different ways of creating a dynamic broadband market that serves the needs of businesses and consumers. Europe has taken a fundamentally different approach from Japan and South Korea. But their success – measured in terms of broadband take-up – is converging as Europe starts to reap the full benefit of LLU.

As we move into the second phase of broadband deployment – taking fiber closer and into the home – we will see regulators taking similar approaches as they seek to create a degree of regulatory certainty that gives telcos the confidence to invest billions of dollars in new networks. US carriers are making these investments but there is still a question mark of whether they are being given the stimulus – either from policy-makers or the marketplace – to catch up with Europe, Japan or South Korea. 

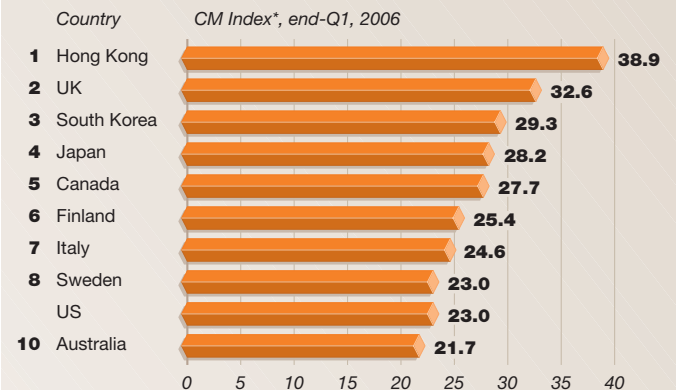


Top 20 broadband markets



Source: Informa Telecoms & Media

Global digital-content consumption



* The Converging Media Index is a measure of advanced-digital-content consumption, comprising broadband, TV and high-speed-mobile use

Source: Informa Telecoms & Media