The internet and e-commerce:
why broadband is key

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The Internet's global impact – economically, culturally and politically –will depend heavily on the extent of broadband deployment and take-up by consumers.

The Global Business Dialogue on Electronic Commerce (GBDe), a group of CEOs and senior executives from many of the world's leading IT companies, has singled out broadband as one of the crucial components of an interconnected world. The GBDe has called on this vision to permeate the public policy decisions of both developed and developing nations.

Broadband benefits

In GBDe's views, Broadband can empower end-users to participate in, and reap the benefits of, the Information Society.

Economic growth is increasingly dependent on sub-second response times for downloads of files/web-pages of one to several Mbit/s per individual application. The "always-on" feature of the majority of broadband connections has already changed the purchasing habits and fuelled increased consumer spending online in countries with high rates of penetration. Broadband also permits greater participation in activities that would have otherwise been unavailable. For example, in Korea, broadband has allowed women office workers and homemakers to engage in more than half of the online trading in company shares.

Broadband is not specific to a particular technological platform, but can be provided through multiple and competing open platforms. It will thus create opportunities for new multimedia and content revenue-generating services. New technical protection measures and digital rights management (DRM) solutions offer the potential to protect valuable content from being pirated while securing new revenue streams for the creative community and other players. Broadband networks stimulate both supply and demand for richer and more diversified content using fine-tuned user profiles in better-focused markets. At the same time, content and service providers can address a much wider customer base thanks to direct access to worldwide markets.

Applications in the areas of e-health, e-government, e-learning, e-community and e-society have the potential of improving daily life for all citizens. Ubiquitous broadband is essential, not only to enable such applications, but also to bridge the digital divide between urban and rural communities, rich and poor. Broadband can also help address other social issues, for instance: video telephony can help fight citizen's isolation; teleworking from the home in office-like conditions can help limit road traffic congestion and provide flexibility to work schedules; e-health is a new vital tool which can serve every citizen; remote monitoring can contribute to increased security; distributed call centers, broadband SMEs and broadband public services are an asset for a decentralized development of society; and distance learning and other services over broadband networks promote progress not only for the developed world but also for emerging economies.

Broadband has an essential role to play in the elimination of the 'digital divide'. The provision of broadband technology to less-developed countries can help these countries to achieve economic development and reduce poverty and, at the same time, allow the private sector to generate an adequate return on ICT investment. In these states the government may play a proportionally greater role in fostering services to its citizens and in promoting the transition to a regulatory and fiscal environment favorable to ICTs. When implemented, broadband technologies can help citizens, consumers, SMEs and government to overcome disadvantages caused by economic disparities, gaps in education, and training and geographic isolation.

High speed impact

Broadband networks and services have been tremendous motors of growth for those countries which have fostered key conditions for their successful development. South Korea is a prime example. Broadband services were introduced in mid-1999. Internet connectivity in Korean households increased from 15% to more than 50% by end-2001. Now, more than 90% of these connections are broadband. At the same time, Internet usage has gone up to more than 16 hours per week. This has meant a shift from traditional television watching to Internet usage particularly for the 13-40 year-old age group. In addition, connections to web sites have shifted from 80% foreign to 80% Korean, reinforcing the development of local content and service providers. The impact is important not only on residential behaviour, but also on the productivity of SMEs.

In Europe, the advent of a mass market for interactive, multimedia services, addressing both the PC population and also the much larger number of TV households, represents huge potential for the overall economy. In addition to the connectivity revenues estimated at around €40 billion for the year 2006, new broadband services on Europe's fixed network will represent a comparable revenue potential by that date. Moreover, growth due to the impact on other sectors is evaluated at €60 billion per year – an increase of one-half percent of European GDP.

Today, Europe counts some 17 million broadband subscribers, almost 71% of whom employ ADSL technology. The current fixed-line to broadband conversion rate in Europe has jumped significantly since the beginning of 2003. The creation of a mass market of new broadband services assumes that two-thirds of Europeans are connected by 2010 – a fixed-line to broadband conversion rate of about 7% per year.

Similar benefits are anticipated in the United States. Job creation based on high speed technology and commercialisation is estimated to exceed one million.

In Canada, it has been estimated that savings of between 10% and 30% could be achieved through increased on-line e-business in the aerospace, chemical, communications, computing, components, forest product, freight, life sciences and paper industries. The percentage of 'internet households' with access speeds greater than 56 kbit/s grew from 20% to over 60% between 2000 and 2003[1].

Emerging wireless broadband technologies have shown promise in reducing access costs. Progressively, these technologies will achieve appropriate mass market economies of scale in many countries and service providers will have a greater incentive to deploy broadband to rural areas enabling rural penetration to improve significantly.

Encouraging take-up

To encourage a global environment in which broadband services and content are accessible, we need more harmonization of regulatory, technical and market practice and standards. That must mean closer global co-operation and dialogue.

For its part, the private sector will develop new business models based on broadband services, through alliances and collaboration across industries, and promote their implementation through trial services. In the phase where innovative business models between the business partners of the multimedia value chain are being considered, policy-makers can greatly help as facilitators by bringing all stakeholders together in continued dialogue.

The GBDe believes both governments and private sector can contribute to the successful take-up of broadband. Public authorities at national level should lay down specific national targets for broadband subscribers. Each country needs an ambitious and publicly declared target to equip its citizens and enterprises with broadband connections and to create a favourable environment for long-term investment in suitable technologies.

GBDe members are encouraging governments to invest and to create a fiscal environment to stimulate broadband demand by improving public services and accelerating investment in e-

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[1]   derived from Nielsen//NetRatings and Ipsos-Reid data

government (including e-procurement), e-Health and e-Education. In addition, the GBDe is urging governments to provide fiscal incentives such as lower value-added taxes for broadband devices, usage fees and content; acceleration of capital write-off possibilities for SMEs and for non-urban areas; and tax incentives to promote teleworking.

Governments should also consider supporting selected end-users (both institutional – such as libraries, schools, hospitals – and citizens who would otherwise be victims of the digital divide) to facilitate purchase of broadband equipment and to foster an environment which increases citizen and consumer confidence in e-Government and e-Commerce services.

Removing barriers

Service innovation, through broadband, can only occur if market entry is not burdened by unreasonable, prohibitive barriers.

The GBDe believes that these services should be free of legacy regulatory structures. In some cases, the transition may not be free of difficulties, as all players should be able to compete on a level playing field. In any event, all players – whether traditional providers of services and infrastructure or new entrants – should be able to participate fully in competitive Information Society services. In all regions, on-line availability of rich content should be encouraged, and a level playing field for access to content and for content delivery should be guaranteed.

Because both technology and markets are permanently subject to dramatic change, it is necessary to monitor the progress of initiative such as eJapan/eEurope periodically. Governments and the private sector should cooperate not only in conventional benchmarking but also in reviewing their action plans regularly.

Furthermore, it is necessary to set a predictable regulatory and competitive environment that stimulates investment in broadband.

Suppliers and service providers need to develop open standards or, at least, reach consensus on adapting existing ones to facilitate competitive service design and provision in a competitive broadband service environment with multiple actors at different levels of the value chain. In such an environment, however, it is essential that the consumer should not be compelled to acquire multiple "boxes" at home. At the same time, it is important that the end-to-end architecture should not be unnecessarily complicated by different sets of protocols and standards. The GBDe encourages efforts of industry cooperation in several standards fora, which are exploring interoperability between different consumer devices that would make them independent of the delivery channel.

The GBDe is confident that the implementation of these measures will help widespread application of broadband and, in turn, help bring the benefits of the Internet to all citizens of the world.

* Mr Nakamura and Mr Stofberg are Leading Co-Chairs of the GBDe's "Future of the Internet" Working Group for 2003. The Global Business Dialogue on Electronic Commerce (GBDe) is a CEO and Board Member-led initiative of 37 companies. The GBDe's mission is, in cooperation with businesses, governments, non-governmental organizations, and multilateral institutions, to create an environment to ensure that e-commerce can reach its full economic potential.

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