

Enabling broadband everywhere, on any device

The Internet is changing the lifestyles of millions of people around the world, and bringing benefits to society as a whole. A generation that has grown up with instant messaging, music downloads and video calling is now looking for a more interactive and personalized experience wherever they are and whatever device they happen to be using – whether it's a PC, laptop, mobile phone, TV or any other connected device. Ericsson's broadband solutions that combine fixed and mobile broadband to Full Service Broadband are giving operators what they need to meet these new consumer demands.

The Internet has been the most significant communications technology since telephony. With almost a billion daily users, it has had an impact on almost every aspect of our lives – how we work, how we spend our leisure time, how we learn, and how we access public services.

High-speed broadband Internet access has accelerated the pace of change and is delivering the real potential of the 'digital revolution'. There are already more than 350 million broadband subscribers and this figure is set to rise to 1.8 billion by 2012 – and around 1.2 billion of these will be mobile broadband users. Of these, we expect the vast majority (70 per cent) to be served by Wideband Code Division Multiple Access (WCDMA)-based networks.

Broadband is the fastest growing telecoms service in history and its uptake has only really been limited by supply. Ericsson expects annual fixed traffic volumes to rocket from 50 million Terabytes in 2007 to 350 million Terabytes by 2012, as demand grows for broadband services like IPTV, music downloads and online gaming.

Ericsson's aim is to help operators create and maintain a broadband mass market – and deliver the desired digital society benefits – by delivering broadband connectivity everywhere, for everyone, accessible from any device.

Benefits to society

Enabling the digital society is a key priority for governments and international bodies, as the benefits of access to broadband services in social and economic terms are well established.

Broadband improves many aspects of our lives – education, healthcare, security, efficiency and, of course, communication – and facilitates industrial growth, advances in research and development, and can enable a more sustainable society.

However, only when broadband is widely available to everyone will it deliver the full benefits of e-government, e-learning and e-health.

The new broadband opportunity

While there are close to 350 million broadband subscriptions worldwide, the vast majority of the world's population does not have access to broadband. Even in developed regions like Europe and the USA, typically less than 50% of all households have true high speed broadband, and most of these are in urban areas – rural areas have been left behind.

So how can broadband be brought to a wider public, bridging the digital divide between rural and urban areas, and become affordable to everyone?

The answer lies in combining wireline broadband delivery systems with the new generation of radio-based broadband technologies. The latest generation of 3G technologies enables user speeds equal to ADSL to be rolled out quickly and cost-efficiently to deliver high-speed broadband – to everyone, everywhere. Telstra in Australia is a good example, having rolled out mobile broadband access with WCDMA/HSPA (High Speed Packet Access) to more than 98 per cent of the population in less than 10 months enabling broadband services also to houses in rural areas. The possibility to use broadband wherever you are is an added benefit provided by a wireless broadband technology such as WCDMA/HSPA.

Combining all the benefits of broadband with the added value of instant access everywhere will open up many new applications and revenue streams. A number of mobile broadband solutions are already taking off in mobile health, mobile email, mobile enterprise and mobile entertainment. Already, more than 170 commercial mobile TV services have been launched, with over 150 of these delivered over mobile cellular networks – more than half of which were built by Ericsson. High-speed access to the Internet is no longer limited to the urban home and office, but can be made available anywhere.

Enabling the multimedia revolution

The introduction of Internet Protocol TV (IPTV) services marks the beginning of a multimedia revolution – and represents an excellent new revenue opportunity for telecom operators. Ericsson's broadband solutions enable wireline operators to deliver new and advanced mass-market services.

The next wave of broadband infrastructure development far exceeds the last Internet build-out ten years ago – both in terms of capacity and capability. IPTV will be a key driver in exploiting new broadband technologies and turning multimedia broadband services into a global, mass-market business opportunity for telecom operators. It puts them in a unique position to transform TV from a one-way, single stream of channels into a two-way communications service that offers seamless media interactivity, communication, convenience, entertainment and personalization.

The addressable market for IPTV services is as large as the broadband market itself. IPTV may be in its infancy, but analysts anticipate it will become a mass-market service within the next few years. From a base of 6.4 million in 2006, subscriptions are expected to reach more than double that in 2007, and reach 48 million households worldwide by 2010, according to Gartner.

The technical demands of delivering interactive TV in High Definition (HD) quality are extremely high, and fulfilling them in an economically viable solution is the next key challenge for the operators. Ericsson is making significant investments in the new technologies needed to deliver its 'broadband everywhere' vision: in multimedia (where the acquisition of Tandberg TV is the most recent example); in core IP infrastructure (bolstered by the acquisition of Redback); in fiber access network technology (including the purchase of Entrisphere); and in the underlying transmission and switching technologies (as highlighted by the acquisition of Marconi).

Broadband connectivity gets moving

Today, most broadband connections are accessed from a desktop or laptop computer, but consumers are looking for connectivity from other devices, in other situations – while using a laptop or mobile device on the move, while watching television, or while listening to music on an MP3 player, to name a few.

Increasingly, people want to be constantly connected to family, friends and co-workers. When they're working, people need access to their enterprise network to get e-mails and files. When they're not working, they want to connect to residential networks and access their personal media collections and other content.

Technologies like HSPA with over 300 devices and more than 130 commercially deployed networks providing ADSL speeds (up to 7 Mbps) to users are enabling operators to offer true broadband mobility to the growing band of consumers using portable devices to communicate and enjoy multimedia services on the move, as well as in the home or office. They are also enabling mobile workers to boost productivity by giving them greater access to business colleagues, information, and customers.

Convergence means convenience

As the variety of devices and services grows, user convenience is fundamental to turning broadband into a true mass market with a penetration well beyond one billion users. Ericsson can deliver seamless connectivity across wireline and wireless networks – giving consumers access to all their services anywhere and on any device, with seamless consistency of service that's independent of device and access method. [The Full Service Broadband architecture defines an open, standards-based combined wireless and wireline architecture.](#)

The convergence between wireline and wireless telecoms networks enabled by Ericsson solutions – and convergence of media and telecoms companies – opens up a host of new services for consumers. Converged broadband networks provide an extremely efficient platform for delivering all types of digital media content – video, games, TV, radio, music or text.

With converged broadband networks, consumers are also able to enjoy greater interaction with their media, with a two-way channel to content providers and network operators that enhances their broadband experience – for example, through interactive TV shows and presence-based social networking sites.

The intelligent connectivity enabled by advanced network functionality gives consumers seamless access to their home or work network anywhere, anytime. This network intelligence can also be used to differentiate the quality of service that customers receive. For example, a ‘platinum’ subscriber can be given priority for certain services over a ‘basic’ subscriber.

Mass-market affordability and profitability

Ultimately, the creation of a global mass market for mobile broadband services will not rely on having competing technologies: it is global availability, economies of scale, services and sound business models that will make the difference.

Ericsson’s broadband solutions are designed to be flexible enough to connect to a huge range of devices and support services that are both affordable for consumers and profitable for operators. [Ericsson Full Service Broadband offers](#) operators end-to-end solutions, whatever their network technology or topology, and encompasses leading solutions for fixed and mobile broadband, including access, transport, IP routing, mobile core and IP Multimedia Subsystem (IMS) and management systems. Ericsson’s solutions enable full service broadband and efficient network evolution to all-IP operation – from access to core.

Another way Ericsson is driving the broadband mass market is through establishment of a new product area, [Mobile Broadband Modules](#), with the aim of getting built-in HSPA modules into more than half of all notebooks sold by 2011.

Ericsson’s intention is to become the prime broadband business partner for our customers. Whether they are wireline, wireless or mixed operators, Ericsson will help them consolidate their legacy networks and services quickly into a new IP-based broadband architecture for the future – with minimal cost and risk.

Ericsson is shaping the future of Mobile and Broadband Internet communications through its continuous technology leadership. Providing innovative solutions in more than 140 countries, Ericsson is helping to create the most powerful communication companies in the world.

Read more at <http://www.ericsson.com/press>

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