



Press Release

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Next-generation networks set to transform communications

ITU issues guide for Regulators to foster investment and access

Geneva, 4 September 2007 — ITU has released a major publication, *Trends in Telecommunication Reform: the Road to NGN*. In its 8th edition, *Trends* reports on the evolution of circuit-switched telecommunication into "next-generation" networks, as operators around the world fight to remain competitive. The Report aims at enabling regulators and policy-makers in developing countries to better understand the changes transforming the ICT sector so they can evolve their policy and regulatory frameworks to leverage today's technological and market developments.

Next-generation networks (NGN) herald the shift from a "one network, one service" approach, to the delivery of many services over a single network. Based on the Internet Protocol (IP), NGN migration builds on the expansion of broadband networks, the rise of Voice over IP (VoIP), fixed-mobile convergence and IP television (IPTV). These new networks are being developed using a number of technologies, including wireless and mobile, fibre and cable, or by upgrades to existing copper lines. While some operators are focused on upgrading their *core* — or transport — networks to NGN, others are tackling their *access* networks that reach the end user.

Fixed-line operators face increased competition from wireless telecommunication operators, providers of cable television networks and large Internet content providers with strong brands and deep pockets. The search for new revenue streams from the increasingly popular triple or quadruple play bundled package of IPTV, voice calls and ultra-high-speed broadband Internet access has accelerated the rolling out of fibre networks closer to homes and offices. In addition, operators increasingly seek to collect advertising revenue from the range of user-generated, social-networking and other content running on ever-higher speed broadband networks, dubbed "ultra broadband" or "broaderband" technology. At the same time, mobile operators are upgrading their networks to find new revenue streams fed by offers of seamless connectivity to bandwidth-intensive applications like mobile TV.

ICT sector in transition

The transitions underway are changing the way we communicate and the way in which the

information and communication technology (ICT) sector conducts its business.

Developing countries seek to join the NGN bandwagon, motivated by the goal of making the Information Society a reality for their citizens and the concern about falling even deeper into the digital divide as developed countries roll out high-speed broadband networks. The bottom line for developing countries is not necessarily to adopt the same NGN experience as developed countries, but to harness the potential of new technologies to meet their ICT development goals.

The good news is that developing countries do not have to wait to meet their goals. Technological developments, such as broadband wireless access, are making ICT development a reality — provided their regulatory framework is designed to remove obstacles to innovation and investment.

Growth in the ICT sector has been nothing short of buoyant in the past year. By the end of 2006, there were a total of nearly 4 billion mobile and fixed line subscribers and over 1 billion Internet users worldwide. This included 1.27 billion fixed line subscribers and 2.68 billion mobile subscribers. These numbers are even more impressive when updated to include two of the fastest growing markets: China and India, which in the first quarter of 2007 had reported nearly 200 million more subscribers between them — 87 million in China, and about 110 million more in India. Some 61 per cent of the world's mobile subscribers are in developing countries, fuelled by countries like Brazil, China, India and Russia. Mobile penetration rates in developing countries, excluding the least developed countries (LDCs), grew from 26 per cent in 2005 to nearly 34 per cent in 2006. While there is still considerable potential for Internet growth in developing countries, where the average level of Internet usage in 2006 was only 10 per cent, an increasing number of developing and emerging countries have joined the ranks of the list of top broadband subscribers (ranked by total number of subscribers rather than penetration rates), including Argentina, Brazil, India, Mexico, Poland, Russia and Turkey.

But the least developed countries still lag behind. Only 22 out of 50 LDCs offered broadband service in 2006, and users in these countries often pay extortionate rates for relatively low-speed broadband.

New regulatory frameworks to the rescue

Policy-makers recognize the need to abandon regulatory practices designed for an earlier era — such as those based on providing only one service on a dedicated network — that can stifle innovation and investment and lead to arbitrage opportunities. It makes more sense to embrace new regulatory practices that are pro-growth and pro-end user. With a growing range of wireless technologies that offer ever-increasing broadband capabilities, many countries seek to upgrade their regulatory frameworks to match today's technological developments. So while wealthier countries test the business case for NGN services like IPTV and mobile TV, developing countries can already exploit today's technological developments, leapfrogging their way to meet the pent-up demand for communications services — both basic and advanced.

What about the needs of end-users? NGN is regarded as an effective tool to achieve the goals of the World Summit on the Information Society (WSIS), especially to provide universal access to ICT. By enabling new businesses to flourish in rural and urban areas in both developed and developing countries, NGN helps achieve the broader development goals, promising socio-economic growth, reducing poverty and integrating citizens into the global economy, while preserving and promoting local content and culture. Associated with Internet access at higher transmission speeds than ADSL, NGN will facilitate a full range of public services such as e-government and e-health. For this reason, government policy makers and regulators increasingly question not whether they should promote this relentless evolution, but rather how they can hasten it.

This year's *Trends in Telecommunication Reform* contains ten chapters each addressing different NGN-related challenges and opportunities to enable regulators to harness the potential of NGN to build an Information Society for all. It includes an ICT market and regulatory overview to set the stage for the following chapters; an NGN overview, to introduce the more detailed discussion in the later chapters; an analysis of NGN technology in an effort to demystify the plethora of NGN terms under discussion; a look at fixed-mobile convergence as one of the trends leading to NGN

deployments; interconnection and access in an NGN environment; international Internet interconnection, which will take on greater importance as networks become increasingly IP-based; universal access and NGN; Quality of Service (QoS), consumer protection and cybersecurity in an NGN environment; the enabling environment for NGN; a conclusion and a look ahead. Additional information about the report is available [here](#).

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