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The world's regulators respond to a changing market environment

■ *The Colombian highland city of Armenia played host to the 11th ITU Global Symposium for Regulators on 21–23 September 2011, held under the theme “Smart Regulation for a Broadband World”. Known as Miracle City (Ciudad Milagro) for its rapid urban growth and development, Armenia City has risen from the rubble of the devastating earthquake of 1999, and from a period of economic and social adversity.*

“Smart regulation is precisely what we need,” said Colombian President Juan Manuel Santos, noting that information and communication technologies (ICT) — and broadband in particular — contribute to the productive infrastructure of a nation.

“Broadband is the most powerful tool we have to accelerate progress towards meeting the Millennium Development Goals, and to drive social and economic progress on a global scale,” ITU Secretary-General Dr Hamadoun I. Touré added. “But we need to

see broadband Internet prices coming down below 10 per cent or even 5 per cent of monthly income before we can expect to have everyone online,” Dr Touré underlined.

Governor Julio Cesar López of Quindío Province welcomed participants to the coffee producing heartland of Colombia, known for its green landscapes. “This international symposium is an important event for the country and for Quindío, a region which has invested well in technology for connectivity,” he said.

Thanks to the Government of Colombia’s “Digital Life” policy, Quindío is the most advanced region in the country in the use of ICT, boasting 100 per cent mobile coverage, along with Internet connectivity in 276 educational institutions in urban and rural areas. Special attention is accorded to accessibility for people with disabilities.

Opening the symposium, Colombia’s Minister of Information and Communication Technology, Diego Molano, said that holding the event in Colombia recognized the efforts the country had

made to ensure that ICT “will reach all citizens and become an effective tool to reduce poverty, create employment and achieve prosperity.” In terms of mobile coverage, for example, Colombia has seen mobile subscriptions increase from 3.2 million (8 per cent of the population) in 2001 to 43.4 million (93.7 per cent of the population) in 2010.

The symposium was chaired by Cristhian Lizcano Ortiz, Executive Director of Colombia’s Communications Regulatory Commission. “The

holding of GSR in Colombia is a major landmark for the country and is recognition of its achievements in the regulatory field,” he said.

“Over the years, we have seen how regulatory reform plays an essential role in creating an environment where new technologies can flourish and be shared by all,” said Brahim Sanou, Director of the ITU Telecommunication Development Bureau (BDT). “The development of robust and flexible regulatory frameworks can help developing countries leapfrog technologies and make the best use of new developments in ICT”.

In the run-up to the symposium, regulators and policy-makers shared views with the private sector at the ITU Global Industry Leaders’ Forum, held on 20 September under the chairmanship



*Brahima Sanou
Director of the ITU
Telecommunication
Development
Bureau*

“Over the years, we have seen how regulatory reform plays an essential role in creating an environment where new technologies can flourish and be shared by all.”

of Orlando Ayala, Corporate Vice President of Microsoft Corporation. “Public-private partnerships are increasingly important to foster the technological development of countries, not only to create an infrastructure that allows them to be more efficient and productive, but also to promote higher levels of education and to foster increased economic development,” Mr Ayala said.

The regulators participating in the 2011 Global Symposium for Regulators

recognized that there is no single, comprehensive blueprint for best practice, but agreed that learning from countries’ experiences is possible. Based on a series of discussion papers commissioned for the symposium (see the September and November 2011 issues of *ITU News*), exchanges of views during the symposium, and contributions from Algeria, Belarus, Colombia, Côte d’Ivoire, Ecuador, Egypt, Jordan, Lebanon, Malawi, Paraguay, Peru, Portugal, Rwanda, Switzerland, Thailand and the United States, the regulators discussed and endorsed a set of regulatory best practice guidelines to advance the deployment of broadband, encourage innovation and enable digital inclusion for all. The main points covered in the guidelines are highlighted on pages 37–41).



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Best practice guidelines

on regulatory approaches to advance the deployment of broadband, encourage innovation and enable digital inclusion for all

■ Funding of broadband infrastructure

Public-private partnerships

The regulators recognize that the private sector will play the central role in developing broadband, but that supportive policy and good governance are essential for broadband deployment and take-up to succeed. When broadband deployment does not offer sufficient returns for private investment, public funds can be mobilized through public-private partnerships.

Where public funds are invested in broadband infrastructure, regulators can employ open access arrangements (unbundling) to maximize the economic benefits across as broad a base of users and suppliers as possible. The sale or lease of infrastructure

facilities developed with public support should be implemented in a transparent and non-discriminatory manner, to avoid distorting the market.

When combined with a regulatory framework that eliminates barriers to new entrants (both domestic and international), market-based schemes are the most effective way to promote the deployment of backbone and access networks alike. Where such schemes also cover other infrastructure — such as electricity, water supply and transport — deployment costs can be reduced, generating greater incentives for private investment.

Universal service

The regulators believe that defining universal service to include broadband Internet access can help bridge the looming digital divide. Blanket access to essential broadband services can be chosen as part of a country's universal service programme.

Universal service should be defined in a technologically neutral manner, by defining services rather than networks or technologies. And universal service programmes could be financed by revenues raised from the activities of a wide range of market players, as well as from alternative sources. Smart subsidies can be used to avoid distorting the market while furthering universal service goals. Where a universal access or universal service fund exists, it could be modernized to serve as a:

- ▶ facilitator of the market, piloting innovative rural services and applications, and creating demand for advanced ICT connectivity and services (through financing broadband access for schools and hospitals, and direct subsidies to users);
- ▶ funding mechanism for bringing broadband networks into rural and high-cost areas, by providing support both at the retail end (for example, shared access), and at the wholesale end (for example, through subsidizing intermediary network facilities such as backbones, wireless towers and other passive infrastructure).

Incentives for private investment

There are several ways for policy-makers and regulators to provide incentives for the private sector to invest in ICT. These include adopting enabling policies, simplifying licensing regimes, making more spectrum available, reducing regulatory obligations, and offering tax incentives.

National policy

The regulators see the need for a consistent and overarching policy to foster broadband development across all sectors and to liberalize the broadband market. This will also entail a review of existing legal and regulatory frameworks in order to reduce barriers that hinder broadband roll-out and use.

In drafting national plans, policies and strategies for the ICT sector in general or for broadband in particular, the use of inclusive and wide-ranging public consultations will ensure that the monumental investments ahead are based on the collective decisions of government, industry and society. The establishment of a coordinating body encompassing the public authorities, investors and users, as well as a wider range of stakeholders, can serve as a platform for developing a common understanding, vision and strategy. Another way of nurturing a positive relationship with all stakeholders is by creating policy incubators to crowd-source and brainstorm ideas for taking broadband to the next level.

Licensing

In order to facilitate entry into the broadband market and increase competition, a unified licensing framework can be introduced to cover all services. Reducing licensing fees and administrative requirements enables ICT operators to start their activities rapidly. Provisional licences could be delivered free of charge (or for a fee that only covers administrative costs) for a trial period, before the delivery of the definitive licence.

Spectrum for mobile broadband

With the rising demand for more powerful, ubiquitous and seamless broadband services, the distribution of spectrum for broadband wireless services becomes a cornerstone of future growth of the digital economy. When considering national goals, economic realities and market pressures, regulators and



ITU Secretary-General Dr Hamadoun I. Touré with schoolchildren in Colombia

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policy-makers need to ensure that spectrum is used in the most efficient manner.

The regulators recognize that an incentive-based, market-driven approach to making more spectrum available for mobile broadband services is preferable because it enables inter-platform competition and spurs innovation. New types of spectrum auctions could be designed to extend access to broadband in unserved and underserved areas. These might include voluntary incentive auctions, reverse auctions, and offering all broadband spectrum bands in a single auction.

Allowing the flexible use of spectrum, including spectrum re-farming and secondary markets for spectrum, is key to ensuring that — with market maturity and change — spectrum moves to more productive uses, including mobile broadband. Leveraging the “digital dividend” spectrum allows the footprint of mobile broadband access to be extended, while television “white spaces” could be made available for unlicensed use enabling more powerful broadband services.

Removal of barriers to broadband

Countries with policies and regulations that remove barriers to the building of broadband infrastructure, especially where governments are making efforts to stimulate demand, will be in the vanguard of the digital economy. Reducing regulatory burdens and minimizing regulatory interventions will lower the cost of laying infrastructure, providing services to end users, and stimulating new applications and digital content. Regulatory imperatives embedded in formal instruments that cannot be revised in a timely manner to address evolving circumstances will inhibit broadband growth, particularly when they affect technology choice or the operational activities associated with broadband deployment and use.

As well as following the best practice guidelines drawn up by the Global Symposium for Regulators in 2008, regulators could act to:

- ▶ facilitate the granting of the proper permissions to build infrastructure, especially where the access network requires rights of way for fibre-to-the-home deployment as well as to accommodate the delivery of broadband multiple-play services;

- ▶ adopt rules or promote policies and incentives that encourage infrastructure sharing, particularly the sharing of towers, ducts and other support facilities;
- ▶ encourage the establishment of national Internet exchange points that enable local Internet service providers to exchange Internet traffic at the local, national or regional levels, thus lowering the cost of content delivery and optimizing bandwidth use, especially for advanced multimedia services;
- ▶ facilitate the establishment of virtual landing points for submarine cables — a virtual landing point would be required to supply bandwidth at high capacity to all licensed operators in the country under standard market best practice terms and conditions, such as open access, and non-discriminatory and transparent pricing.

Tax incentives

Regulators and policy-makers need to cooperate to reduce taxes on services, devices and equipment. This, in turn, will increase penetration levels and the demand for broadband services.

Targeted fiscal incentives to providers of fixed or mobile broadband networks, services and equipment can stimulate a robust and competitive broadband marketplace. Such incentives might include: relief from spectrum fees in specific areas of interest; preferential import duty on equipment and materials; exemption from value-added tax on imported equipment and material that is manufactured or sold locally; and tax deductions for research and development of applications and digital content.

Stimulating innovation

Applications, services and digital content

The regulators believe that the wide diffusion of e-government and e-finance applications and services will considerably raise consumer demand for broadband.

Electronic applications such as e-procurement, e-payment, document tracking and workflow management can improve government business processes while increasing citizen participation in the country's socio-economic development.

Applications such as e-health, e-agriculture, and e-education help governments achieve critical national goals, provided that there is confidence in the use of ICT. Policy-makers and regulators have a role in the broadband ecosystem to create an environment in which dynamic digital content creation, dissemination and adoption can thrive. As a first step, a thorough and forward-looking review of the regulatory framework of the ICT sector is essential to identify the changes that are needed to permit new and emerging services and applications, such as m-banking and social networks.

Investment in research and development

The growth of the broadband economy depends on innovation and on ensuring the right to access, use and create digital content. The regulators believe that private investment in research and development should be encouraged by all possible means. In addition, where money is available, public investment should be channelled to research and development. For instance, a universal service fund could partially finance research and development.



Partial view of delegates at the symposium

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Governments can encourage innovation to address specific challenges, notably to spur the provision of local content in local languages. Governments can also foster innovation by establishing technical training centres and encouraging students to innovate. Equally important in terms of local social and economic development is the creation and maintenance of ICT innovation incubators and business development centres that provide hi-tech hosting, training and advice to small and medium-size enterprises, and offer funding and other assistance to start-up ICT companies.

Enforcing intellectual property rights

It is essential to protect intellectual property, as this empowers researchers and inventors to lead the way to a smart and innovative digital economy. Innovation can be encouraged through intellectual property regimes that balance monopoly use of inventions with building a rich public domain of intellectual materials.

Ensuring that there is a balanced, proportionate and robust mechanism for content owners to address copyright infringement provides a stable and solid basis for innovation and creation. Designing rules and procedures for copyright enforcement, while fully protecting consumer privacy, means finding a way to both stimulate and protect all the different stakeholders in the digital economy.

Expanding digital literacy

In an open, competitive and digital global economy, digital literacy has become an essential personal and professional asset. Countries with high levels of digital literacy are more innovative and productive, and are capturing a greater share of the world's trade, investment and jobs.

Regulators and policy-makers have a role to play in promoting a first-class training system in all countries to provide creative human resources. Investment in all forms of education, and particularly in ICT education, is crucial. Sufficient and sustainable funding should be provided to universities, computer laboratories and other public research institutions, leveraging international partnerships when possible and advantageous.