

OECD EVENTS AT THE INTERNET GOVERNANCE FORUM (IGF) 2009

In November 2009 the OECD participated in the fourth Internet Governance Forum, which took place in Sharm El Sheikh, Egypt. Below is a report on the three events organized by the OECD at the IGF.

WORKSHOP ON EXPANDING ACCESS TO THE INTERNET AND BROADBAND FOR DEVELOPMENT, Monday 16 November 2009, 09:30 to 11:00

Abstract: The OECD/ *infoDev* workshop on “Expanding access to the Internet and broadband for development” focussed on the spread of mobile throughout the developing world based on prepaid services and the budget telecom network model, which exploits long-tail markets. Participants discussed the importance of effective competition, of access to spectrum, of removing bottlenecks in international connectivity, and discussed the merits of rationalising taxation in the ICT sector, including by phasing out universal service levies. About 80 people attended the workshop.

Dimitri Ypsilanti, *Head of Information, Communication and Consumer Policy Division, OECD*, chaired the workshop, of which the aim was to explore how developing countries can take advantage of developments in broadband, what lessons can be learned from the successful growth of mobile services, what policies and regulatory frameworks are needed to promote access to networks, how this can assist with broader capacity building (*e.g.*, science and technology, education, information sharing) and how to promote policy coherence to support the opportunities such networks create for development.

Rohan Samarajiva, *Executive Director, LIRNE Asia*, was the keynote speaker. He drew from research conducted in South and Southeast Asia in particular Bangladesh, one of the poorest countries in the world. He stressed that the biggest challenge facing the developing world in this area was to connect low-income groups, but that in turn, solutions to this problem would help with other wider development problems. He pointed out that while a common image of the Internet features a desktop or laptop computer connected by wire or wirelessly, awareness of the importance of the mobile phone as an alternative pathway is increasing. Millions of poor people are beginning to participate in the Internet Economy through their mobile phones.

Samarajiva questioned whether this participation was happening *because* of good policy or rather, *despite* bad policy. He described the “budget network telecom model” that is meeting the challenge of connecting the developing world. Akin to low-cost airlines such as EasyJet or RyanAir, this model has already been successful in driving the mobile success story in South Asia and is based on the exploitation of long-tail markets and controlling costs through business process innovations. Key feature are reliance on pre-paid billing and low cost. In South Asia (India, Bangladesh, Pakistan, Nepal and Sri Lanka), the total cost of ownership of a mobile is typically below USD 5 per month, compared with an average for developing economies of over USD 13. The budget telecom network model --with large numbers of users each with very low ARPU-- does not appear to have negatively impacted the profitability of local operators, with acquisition costs close to \$1 and volatile EBITDA sometimes exceeding 50%. Competition is the necessary pre-condition to lower prices that lead to greater participation by the poor, both urban and rural, in terms of demand side numbers.

For broadband, Samarajiva stressed that international connectivity represents the main bottleneck and that there is a need to reduce international backhaul costs by breaking international monopolies. He also spoke to the importance of getting away from “all you can eat” unlimited Internet models, because poor people pay as they go, when the need arises and money is available. He also highlighted the importance of new services/applications, such as CellBazaar, an e-commerce platform in Bangladesh that enables users to search for goods but not yet to order, pay, obtain delivery, or generate feedback. In discussing the role of policy and regulation, Samarajiva stressed that solutions must fit institutional conditions, the importance of market entry and spectrum management, the importance of the availability and wholesale access to large pipes, and the need to pay attention to anti-competitive practices, such as vertical price squeezing. In his view, “old-style” regulation should be replaced by forbearance and regulators in developing countries should be “gentle” on quality of service (QoS). He expressed the view that it would be preferable to phase out universal service levies which are incompatible with the Budget Telecom Network Model and are in case slow to be disbursed. There is a need to rationalise taxes.

Tim Kelly, *Lead ICT Policy Specialist, infoDev - World Bank*, the first discussant, drew attention to the link between ICTs and economic growth. He stressed that this link appears to be much higher in developing countries than in developed countries: World Bank research shows that a 10% increase of broadband penetration in developing countries leads to an increase of 1.4% of GDP per capita. In addition, the relationship is much stronger with mobile than fixed networks, and so the developmental impact of mobile broadband could be greater still. With regards to the role of governments, Kelly spoke of governments promoting: *i*) efficiency, *i.e.*, creating competition between and within platforms, citing the example of Korea’s early license that provided open access to networks through local loop

unbundling and established a national vision for broadband; ii) equity, by acting on the demand side, *e.g.*, by providing subsidies for rural access or access in schools and public institutions, and; iii) taking into account environmental concerns, since broadband can substitute for the physical movement of goods and people. Kelly said he believed that mobile broadband would overtake fixed broadband in most developing countries because of the lack of existing infrastructure and the decreasing prices of mobile broadband. He agreed with Rohan Samarajiva on the need to address bottlenecks in international gateways.

Olfat Monsef, *Vice President of National Telecommunication Regulator, Telecom Services, Egypt*, the second discussant, spoke about broadband availability and use in Egypt. With a population of 80 million, Egypt is focusing on availability and affordability of infrastructure through competition, as well as content development/ localisation of content into Arabic. Egypt has about 5 million broadband users compared to 17% narrowband penetration. Both fixed and mobile broadband access platforms are taking off, thanks to effective competition and the telecommunications sector contributes some 4.5% of GNP. Dr. Monsef underlined the importance of working on the supply side and the demand side in a policy coherence environment. Providing a future proof high capacity infrastructure should be planned while adopting national initiatives to promote applications such e-government and ICT in education and health.

Anriette Esterhuysen, *Executive Director, Association for Progressive Communications (APC)*, the third discussant, stressed the importance of broadband for development and opportunity to learn from lessons of the past, *e.g.*, from poverty reduction strategies (PRSs) that contained ICT components, or from ICT mainstreaming efforts that were successful at filling the connectivity gap. She emphasized the need for multi-stakeholder approaches, as well as the opportunity to look at how ICTs can help in other sectors, including health and education but also media or entertainment. In terms of public policy priorities, she felt that removing barriers at the last mile was still necessary and the role of governments in last-mile access, that governments can use ICTs to improve the services they deliver to citizens, and questioned whether using resources from universal service funds, *e.g.*, to stimulate local content, might be useful. Esterhuysen pointed to several risks, including that governments develop their national broadband plans too quickly or that they threaten freedom of expression by planning censorship and monitoring in the face of terrorism or to protect children. She also pointed to challenges related to market structure and excessive integration / concentration whereby incumbent mobile operators also offer content, payment services etc.

Jake Jennings, *Executive Director International External and Regulatory Affairs, AT&T*, introduced the "digital prosperity check-list" endorsed by the Senior Leaders of APEC in 2008 that includes access, availability and investment. While the checklist includes numerous items, there are some low hanging fruits that developing nations could address, namely, permitting entry without any limitations on foreign investment, technology neutrality and security and privacy for e-health records, online banking and data retention / privacy requirements. He stressed that it is important to have an open internet, but that operators should be allowed to manage their network, provided that they do so in a transparent manner. He also highlighted the many benefits from broadband deployment ranging from education, healthcare, energy use, climate change and economic development. In addition, he noted that the free flow of information improves citizenship and allows governments to operate in a more efficient manner.

The Chair, Dimitri Ypsilanti, launched the discussion by pointing out that while wireless platforms are the focus in developing countries, OECD countries are emphasising FTTH technologies. This led him to wonder whether we would see a *North-South Fiber divide*. Samarajiva pointed out that technologies depend on use. For example, for a farmer to obtain prices of agricultural produce, a mobile phone could be the most appropriate because it could be used in the middle of a transaction or on the way to market. With regards to *technological neutrality*, Juan-Carlos Solines-Moreno, who was previously the telecommunications regulator in Ecuador, stressed that when given the choice, operators opt for GSM because it is cheaper. Jake Jennings from AT&T confirmed that operators were willing to spend more on spectrum, but that it is important for the operators to use the spectrum using the technology standard of their choice such as GSM, LTE or WiMax, in other words technology neutrality is crucial. For example, repharming unused spectrum from Defense departments can no longer be postponed and secondary markets can be put in place so that companies are able to share frequencies with other companies. Samarajiva mentioned that WTO provisions exist to make transparent spectrum inventories in every country.

Rohan Samarajiva stressed that *universal service obligations* were the equivalent of taxes whereby the poor people coming onto the networks are being taxed, as opposed to rich people who are on fixed networks. In such situations, economics teaches us to use non-distortionary general taxes if subsidies need to be funded. On *security*, a participant from Symantec asked whether with security statistically linked to penetration, any work was being done on skills development with regards to security issues. Jake Jennings replied that AT&T was entering partnerships for online safety, and that users need to be confident that the Internet is safe and secure. Furthermore, in order to provide a safe and secure Internet operators need have flexibility to manage their networks. For example, some countries prohibit encryption which limits the ability of operators to offer a safe and secure Internet service. On *illiteracy*, participants pointed out that while the success of the mobile model relied on voice and voice recognition technologies, a new generation of keypad-literate people is emerging.

OECD OPEN FORUM ON THE IMPORTANCE OF INTERNET ACCESS AND OPENNESS FOR A SUSTAINABLE ECONOMIC RECOVERY, Tuesday 17 November 2009, 9:00 to 10:30

Abstract: Participants at the OECD Open Forum discussed the role of the Internet and broadband in the economic recovery as enabling other sectors -healthcare, education, or smart transportation and electricity grids- to develop. They agreed a multi-stakeholder approach is needed to address current challenges, in particular the global deployment of the newer version of the Internet protocol (IPv6) and ensuring the Internet remains open to innovation.

Richard Beaird, *Senior Deputy Coordinator for International Communications and Information Policy, Department of State, United States*, the meeting Chair, opened the Forum by recalling that policy makers are responding to the economic crisis using a variety of stimulus packages as well as reforms aimed at producing a sustainable recovery. In particular, Governments are using investment in infrastructure including, as a key component, investment in broadband IP networks. Some of the criteria being taken into account include the immediate potential for such projects to improve services in underserved regions and to provide employment. It is also recognized that broadband IP networks are critical for longer term economic and social development. In OECD countries networks are primarily owned by the private sector, which is also responsible for the vast bulk of investment in networks. This raises several questions about how governments can best accomplish their goals without displacing or disrupting private investment. What criteria / principles should be applied in assessing where to allocate resources, encouraging further investment by the private sector and promoting open and competitive choices for users?

Constance Bommelaer, *Senior Manager, Strategic Global Engagement, Internet Society (ISOC)*, stressed the role of governments in encouraging the transition from IPv4 to IPv6. For her, the 3 key challenges facing the Internet are: *i)* scaling the Internet and IP addressing, in particular encouraging the transition from IPv4 to IPv6; *ii)* increasing trust, and; *iii)* encouraging multilingualism through internationalized domain names (IDNs). None of these challenges can be developed by one party alone. She stressed that the “Internet model”, based on principles of openness, was the key, and that ICT and the Internet are transforming the way innovation and information sharing is done.

Taylor Reynolds, *Communication Analyst, OECD*, compared broadband to a general purpose technology (GPT), likening it to electricity in the 1950’s as a platform that enables other sectors such as transportation, education, health or electricity to develop and grow. He emphasized that telecommunications firms are among the large investors but that governments have a role to play in helping to expand networks with public investments. In his opinion, cost-based non-discriminatory access should be given to market users and the social benefits of extending access to rural/remote areas should be taken into account. In his view, when governments invest in networks, they need to consider topology and technology of broadband networks, since the level of competition is tied to topology and technology.

Willie Currie, *Communications and Information Policy Programme Manager, Association for Progressive Communications (APC)*, representing the *Civil Society Information Society Advisory Committee to the OECD (CSISAC)* explained that APC had worked on national ICT strategies and that it was helpful to have access to this research. He ventured that it could make sense for governments to look at the logical infrastructure and the impacts of IPv4/IPv6 as an instance of market failure and investigate various options including regulatory options (e.g., requiring ISPs to implement by a given deadline), government procurement or tax incentives and subsidies for IPv6 transition.

Jackie Ruff, *Vice President, International Public Policy and Regulatory Affairs, Verizon Communications*, representing the *Business and Industry Advisory Committee to the OECD (BIAC)*, noted that in looking at the economic crisis, there were few certainties except for the positive role of ICTs in the recovery. She emphasized BIAC’s Declaration at the Seoul Ministerial that identified the following requirements for ICTs to continue to contribute to ICTs and growth: *i)* innovation, enabled by technology; *ii)* education; *iii)* increased user choice of applications, provided through a wide variety of platforms; *iv)* better access to healthcare, through remote applications and governments stimulating demand; *v)* better respect and empowerment for all stakeholders, and; *vi)* increased trust and confidence in the Internet, especially for the young. She stressed that government funding for infrastructure, because of its finite nature, should avoid crowding out markets or favoring technological solutions. For example, the US Government is investing 8 billion USD in broadband but it is estimated that to get very high speed broadband in the United States would require another 30 billion USD. She pointed out that Verizon has installed FTTH in 15 states.

In discussion, participants stressed that IP addresses are a pre-requisite for broadband penetration and that there is an important role for the OECD to play, alongside other organizations such as APECTEL, in helping with education and awareness building on the transition from IPv4 to IPv6. Speakers felt that additional research was needed into what should be done to encourage the deployment of IPv6. In addition, they put forward the idea that the copper in telecom networks was put in place 50 years ago and used in many unintended ways: today, we are in the process of upgrading to the networks that will be foundation for the next 50 years.

**WORKSHOP ON USING ICTS AND THE INTERNET TO MEET ENVIRONMENTAL CHALLENGES,
Tuesday 17 November 2009, 11:00am to 12:30pm**

Abstract: The aim of the workshop was to debate which actions to take in order to utilize ICTs and the Internet to meet environmental challenges. This involved discussing policies and next steps for improving environmental performance, making more effective use of the Internet in meeting environmental targets, and harnessing the ICT sector's potential for sustainable growth and employment in view of speeding a green recovery and underpinning green growth in a time of economic turmoil.

The workshop was moderated by *Dr. Hossam Allam, Regional Programme Manager, Centre for the Environment & Development for the Arab Region & Europe (CEDARE)*.

Heather Creech, Director of Global Connectivity, IISD, emphasized the importance of researching third order/systemic changes, as increased global connectivity causes economic and social transformation. Several specific issues to tackle were outlined: - Better analysis of systemic effects is needed including methods to measure systemic effects. - Application of ICT-enabled networked governance approaches to sustainable development policy-making and implementation. - An integrated approach to issues and policies at national and international levels. - Sustained attention to capacity in the South: Revitalization of bilateral, multilateral ODA agencies on ICT: What does "mainstreaming" ICT mean? - R&D on how to drive "green intelligence" out to the edges where the individual is.

Finn Petersen, National IT- and Telecom Agency, Denmark, explained about the Danish approach. In spring 2007 The Ministry of Science, Technology and Innovation started to explore the relation ICT and climate. Use of ICT was estimated to be accountable for 2 percent of the total CO2 emissions. It was discovered that the negative impact on the climate from use of ICT could be reduced and that smart use of ICT has great potential in reducing the overall impact on the climate. The Action plan for Green IT in Denmark was published in early 2008. ICT is not only a part of the problem, but also very much a part of the solution to the climate challenge. Clear targets needs to be set. Smarter and cleaner environmental and economic strategies and policies will help tackle global warming. This will also contribute to "green growth" in the economic crisis and recovery.

Ignacio Campino, Deutsche Telekom, stressed the importance of acting now, as the earlier we start, the easier it will be to combat global warming. If global warming can be stopped by a temperature not exceeding 2°C against the pre-industrial temperature, then dangerous damages can be avoided. This means, according to recent research, that the emissions by 2050 have to be halved compared to 1990. The later the peaking year is reached, the more expensive the reduction. Dr. Campino mentioned logistics and mobility, building management, production and industry as well as power supply and networks as areas where the potential is specifically great.

Graham Vickery, Head, Information Economy Group, OECD, presented highlights from the OECD report: "Towards Green ICT Strategies: Assessing Policies and Programmes on ICT and the Environment" released in June 2009. The report shows how governments and businesses have a wide range of initiatives dealing with the impacts of ICTs on the environment and climate change. By far most of the initiatives concentrate on greening ICTs rather than tackling global warming and environmental degradation through the use of ICT applications. Mr. Vickery also stressed, that measurable targets for evaluation of policies and programmes are necessary.