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# Fiber to every footpath

## The global challenge of equitable access to the information highway[1]

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[1] This is a summary article reflecting presentations and discussions at an event on equitable access to ICT infrastructure organised by APC in Rio de Janeiro in November 2007. The full workshop report, as well as the papers presented and commentaries on them, can be found at: www.apc.org/en/pubs/research

"Access to the internet is a thousand times cheaper in Scandinavian countries than in my village," says Nigerian activist John Dada, who specialises in information and communications technologies (ICTs) for development. "At the moment, there is no incentive for the private sector to provide rural connectivity. There is no electricity, there are no roads."

Statistics show that about 97% of the African population and 90% of the Asian population did not own fixed-line phones or computers and were not users of the internet in 2005. In today's world of high technology and change, how do we ensure that the majority of the planet's population – especially the poor and marginalised – don't get left out? Or, to put it differently: What can make access to ICTs *real* for people?

This key question was asked at a recent event held in Rio de Janeiro, Brazil, organised by the Association for Progressive Communications (APC). APC works in the field of ICTs and human rights, and its membership is international. The one-day event, which looked at the issue of "equitable access", took place in the run-up to the second Internet Governance Forum (IGF) held in the same city, and was attended by ICT for development practitioners, activists, policy-makers and academics from across the globe.

Equitable access is about addressing social and economic imbalances when developing policy and rolling out ICTs, so that people from diverse backgrounds have more or less similar opportunities when it comes to accessing and using technology. But, as ICT consultant David Souter, one of the presenters at the workshop, pointed out, "equitable" does not necessarily mean "equal". What can be used by local communities to improve their own lives may differ from one village to the next, or between cities, countries and regions. A Blackberry, indispensable to a businessman accessing his email in a New York airport, may have little relevance to a rice farmer in China, who might, in turn, benefit greatly from acquiring her first mobile phone.

APC director Anriette Esterhuysen noted that several issue papers presented at the event reflected the holistic approach to equitable access taken by the organisation. Equitable access is not just about building networks, but also about creating a good policy framework, choosing appropriate and sustainable technologies, and developing both for-profit and non-profit business models that work. The papers presented focused on ICT policy issues; people, networks and capabilities; business models for sustainable access; and tools and technologies, such as wireless and free and open source software (FOSS).


## "Access to ICTs is about human rights."

"The digital divide is real, and it has the potential to slow down overall development and the growth of many developing countries," APC Communications and Information Policy Programme manager Willie Currie emphasised. While many connect to broadband internet in

their home as easily as switching on a radio or TV, for the majority of the world's population, a lack of affordable and what Souter called "salient" – or valuable – access to ICTs can quickly translate into an economic and social threat. This is one of the reasons why the recent World Summit on the Information Society (WSIS) set specific access targets, such as connecting villages, schools, libraries, health centres and local governments, that were to be achieved by 2015.

But how do practitioners attain these sorts of goals in concrete and creative ways?

According to Lishan Adam, an ICT consultant based in Ethiopia who drafted the issue paper dealing with policy considerations, the market alone will not guarantee equitable access. As a result, policies are needed to "bridge the access gap at the bottom of the pyramid," and attend to underlying challenges such as economic, rural/urban, skills and gender "divides". The challenge is multi-sectoral, and needs to involve the participation of affected communities.

Participants shared several success stories that illustrated how a community-centred policy approach could work. One case study highlighted the Indian government's plan to roll out 100,000 telecentres, and emphasised the importance of a sense of grassroots ownership when connecting rural villages.

Another example from Brazil showed that a community could offer in-kind support for a network being constructed in its area – including security, the use of empty buildings, or cheap labour – and could also be actively involved in decision-making processes. This project successfully rolled out over 100 telecentres in Sao Paulo, Brazil, an industrialised city with a population of 12 million and a high level of poverty. Between 2004 and 2005, the ICT for development organisation RITS built the telecentres that ended up serving 600,000 people in very poor communities – and, three years later, they are still going strong. One of the reasons for their sustainability, said RITS Director Carlos Alfonso, is that the community decides the priorities of each telecentre. In one case it was decided it should target people with special needs, and in another people wanted to use the telecentre as a space to protect the local environment.

But moving from these best-practice examples to real-life policy practice is not always easy. While there is often a disjuncture between national e-strategies and conditions on the ground, policy-makers and regulators face many challenges, including their own "capabilities" shortfall. Moreover, as Souter pointed out, the global ICT landscape changes rapidly, technologies and markets are in flux, and it is difficult for even the best-intentioned officials to keep abreast of all the new developments. While one might be able to distill common policy principles, specific contexts are diverse, and may require tailor-made policy application. To complicate things, participants suggested that many policy-makers were simply self-interested. "Policies are mostly about power relationships [amongst various stakeholders]," said Adams. "The challenge is that policy-makers always see policies in the horizon of the next election."

A more nuanced, layered approach to the traditional top-down model of infrastructural roll-out was deemed necessary. Policy needs to pay attention to network services and the development of local content. New policy perspectives include piggy-backing ICTs on other infrastructure projects, such as the building of roads or hospitals, and insisting on "open access" regimes where national and regional infrastructure such as fibre optic cable can be sold at cost to all stakeholders. As one participant put it, the justification for ICTs entailing natural monopolies in developing markets is eroding. Core ICTs, such as national backbone infrastructure or submarine fibre, should rather be treated as essential services, off which myriad innovative value-added services and projects feed.

## "There is no free lunch."

"Zero-cost services are not free, as there is still an enormous amount of responsibility and cost implications," said Muriuki Mureithi, an ICT consultant from Kenya. Muriethi presented a paper on business models for equitable access, arguing that opening access to under-served areas also requires a business model solution.

The question is, who will pay, and how much will be paid? For Mureithi – echoing a perspective shared by other participants – the most sustainable approach is a strategic partnership between government, business and the community. While the market alone might not guarantee equitable access, evidence suggests that a market approach, including privatisation, has dramatically increased access to communications infrastructure. Mureithi argued that a "win-win" situation was needed, where both the private sector and the community benefited: by empowering the community, vendors and service providers could tap untapped local markets, or even lay the ground for fresh ones.

But can or should the poor have to pay? Souter, in his issue paper, offered three factors that influence whether or not a community is able or chooses to make use of services: affordability, saliency and ease of use, which includes the skills to use technology. "A farmer is always ready to pay if the telephone call is a matter of emergency," commented Ashis Sanyal, a senior director in India's e-government programme. "If the opportunity cost for the end-user can be reduced, then the end-user is willing to pay." Nevertheless, South African-based ICT consultant Mike Jensen suggested that moving into unknown territory from a business perspective was "an act of faith" – it just might not make straightforward business sense, especially in the absence of infrastructure.

Participants felt that the use of universal access funds – funds collected by governments through levy from private providers to bridge the access divide – should be reviewed. There is a need for increased stakeholder participation and transparency in how they are administered.

One innovative suggestion for "paying the bills" was the introduction of a voucher system,

which would allow the poor and youth to access services at telecentres using vouchers. A telecentre operator would, in turn, bill the government. This at least would amount to a creative way of spending universal access funds, especially when the funds had accumulated in state coffers without reaching the intended beneficiaries. For example, India has accumulated a reserve of USD 4 billion, according to Sanyal.

Participants discussed a range of issues that affect the take-up of technology on the ground, including affordability, energy efficiency and open standards, which increase the potential for interoperability of software and hardware, and allow the community to use, change and share technology more easily.

History shows that policy decisions – such as increasing spectrum bandwidth – made the rapid take-up of grassroots access technologies like wireless possible. For technical activist Alberto Escudero-Pascual, who presented his issue paper *Tools and technologies for equitable access*, these kinds of practical enabling policy shifts are necessary to catalyse access to ICTs for the poor.

The fact that choice of technology affects the financial sustainability of a community access project can be illustrated by the case of the FADECO telecentre in Tanzania. The telecentre was set up in 1997 in Karagwe, near the border of Burundi, with support from a local non-profit partner. According to APC's Karel Novotny, the project started with an expensive dial-up connection, which was replaced with VSAT satellite in 2004. This brought new innovations to the local community, including building point-to-point long-distance wireless connections that linked small businesses and institutions, and the sharing of costs. Telecentre operators learned about setting up networks and trouble-shooting viruses, amongst other technical problems. From the start, Novotny said, the project was mostly independent of "Northern experts": "The knowledge stays within the organisation, which is a great source for sustainability."

## "Communications is just one of a range of deficits communities suffer from."

While different understandings of equitable access can sometimes be a cause of policy confusion, or even inertia, ICT for development can be made simple, Jensen suggested: "The model of roads or road-building is probably the most appropriate reflection in relation to provision of ICT infrastructure." Ian Peter, an ICT policy strategist, agreed: "The basic standard should be fibre to every footpath."

And like the footpaths through the bush, there is a need to identify patterns of communications behaviour, so that a community's needs, habits, and capacities can be addressed. What is needed is a "citizen framework", where the community is involved in the development and management of ICT services, rather than a "consumer framework", said IT

for Change's Parminder Jeet Singh. Women and other marginalised groups, such as the disabled and language minorities, should be targeted. Global alliances are necessary, and, according to one participant, so is more "resistance" from local stakeholders: "The anarchy is missing, and social resistance is lacking." The starting point for analysis and action, added Al Alegre, head of FMA, an APC member organisation based in the Philippines, is that "everything is political."