In Brief

Interdependence of Human Rights and Sustainable Development

The Council of Ministers of the 45-member Council of Europe adopted a political message to WSIS stressing their commitment to "societies based on the value of human rights, democracy, rule of law, social cohesion, respect for cultural diversity and trust between individuals and between peoples." Ministers expressed the belief that "WSIS hold great promise to secure thee values." The statement continues "We reaffirm the indivisibility and interdependence of all human rights – civil, political, economic, social and cultural – and their ties to the principles of a democratic society, the rule of law and sustainable development. In the hopes and perils of the transformation to the information society, we are determined to maintain and strengthen all these values." Complete text can be found at http://www.coe.int/cm.

Following are excerpts from the Council of Europe statement:

The freedom of expression and information, as enshrined in Article 19 of the Universal Declaration of Human Rights and Article 10 of the Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights), is a keystone of our commitments. We share the vision that information and communication technologies (ICT) provide unprecedented opportunities for realizing that this freedom is fully enjoyed by everyone worldwide. Human rights standards recognize that other legitimate rights and interests may constrain the exercise of information freedoms. Indeed, the European Convention on Human Rights includes, in Article 8, the right to respect for private life and correspondence. Content and communications, including private correspondence, should nevertheless not be subject to restrictions other than those foreseen in these provisions and in the case-law of the European Court of Human Rights, or different forms of intrusion, simply because they are carried in digital form or by other means of new technology.

The quality of information becomes not less but more important as barriers fall. Our public authorities try to support citizens in reaching for reliable and comprehensive information through all media, and avoiding the real dangers of confusion and abuse, not by censorship but by education for discernment and exemplary public information. They should also put into place rules for the repression of wrongdoing and the protection and compensation of victims.

The traditional media, including local and community radio, have a vital role in programming, producing, and distributing diverse, high-quality content in the information society and providing moderated platforms for public debate. Independent public service broadcasting has a special mission to ensure access to information and culture for all citizens and drive the creation of domestic content. We hold that the public service principle should be maintained and developed in the digital environment through a range of digitized public information services.

We believe that equitable access to information is an essential factor in sustainable development. In an information-based world, information has to be regarded as a fundamental resource for balanced human development to which everyone needs to have access. We are concerned about the grave risks of a "digital divide" both between nations and within nations, widening existing disadvantages such as those arising from discrimination based on gender, religion, or ethnic or racial origin.

The exercise of all rights and freedoms is mediated more and more by digital technology. Effective and equitable access to communications services, skills and knowledge is becoming a precondition for full citizenship of individuals. We welcome initiatives for high-quality open-source and public domain software, as a complement to commercial software and a means to wider access. We recognize that public authorities should take positive action to widen access, deepen it by education and advice, and ultimately make it universal.

The statement continues, focusing on Democracy and Citizenship, Creating Trust by the Rule of Law, Cultural Diversity and Educational Empowerment and concludes with an Action Plan. Ministers state they "are ready to contribute to a global information society based on the principles set out above. We support international initiatives that converge with them. In this spirit we will examine the outcomes of the World Summit to identify further practical steps where we can join in wider efforts. We are willing to share with other regions of the world the expertise and knowledge embodied in our legal instruments, policy recommendations, educational tools and programs. We will keep assessing and improving these instruments through our intergovernmental, inter-parliamentary, and convention-based cooperation, making use of the many opportunities opened by these mechanisms for dialogue with other regions of the world and the international community."

A number of current and possible future initiatives are highlighted:

Examining the adaptation to other more recent forms of content delivery the standards applicable to the broadcast media, including:

- the separation of editorial content and advertising
- the protection of minors against illegal and harmful content
- the prohibition of certain types of advertising

Supporting the training of journalists in using ICT and in adapting their role to a changed environment with increased competition from non-professional information providers. Journalism adhering to standards of professionalism will continue to be vital in providing well-researched and credible information about matters of public concern;

Creating a forum for public authorities in member states to exchange information and experiences on the development of digital broadcasting, especially in providing access to new information services, and the European model of public service broadcasting. This model, combining journalistic and creative independence with public service goals of pluralism, wide access and social cohesion, may be of value to other regions;

Establishing standards for e-enabled voting, to allow elections and referenda to be held by electronic means in full respect of the fundamental legal principles of democratic elections. Adoption of these standards by the ICT industry would also favor the interoperability and cost-effectiveness of equipment and services;

Reflecting on the possible drafting of a binding legal instrument on access to official documents, following the principles of an existing recommendation to governments;

Developing policy guidelines on e-governance at local, regional and national levels as a framework for addressing issues of:

- the necessary partnerships between the different levels of public administration
- increased public participation in decision-making with the help of ICT
- e-enabled access to publicly held information, social services and justice
- the development of comprehensive cultural strategies and sustainable spatial planning policies for the information society;

Preparing recommendations within the current project on social services on ways of using ICT:

- to improve user participation
- to achieve integration of the various services available to the public in order to improve their overall effectiveness;

Considering the possibility of offering a platform for a multidisciplinary activity, open to non-member States, international organizations and private stakeholders, to study the feasibility of preparing a Code of use of the Internet, containing the rights and duties of all users, and operating on the basis of the principle of co-regulation;

Promoting the rapid ratification and effective implementation of the Convention on Cybercrime and its Additional Protocol;

Drawing up a European Convention on the fight against the trafficking in human beings, including consideration of ICT aspects;

Promoting the implementation of the Data Protection Convention, its Additional Protocol, and other existing instruments on data protection, application of their principles to new technological developments, especially concerning:

- the use of smart cards, particularly multifunctional ones including a national identity card function
- video surveillance
- biometrics
- the rights of data subjects.

This work will be open to all member States of the Council of Europe and the other States Parties to the Council of Europe Data Protection Convention.

Business and Government Need to Create Conditions for Investment in Information Societies

Business was represented throughout the entire WSIS preparatory process, by the Coordinating Committee of Business Interlocutors – or CCBI – led by the International Chamber of Commerce (ICC), with the active participation of companies and business associations from all regions of the world. Richard D. McCormick, Honorary Chair of the ICC, presented the following business statement:

CCBI organized two events during the Summit, attracting wide participation from business, governments and other stakeholders.

One of our discussions focused on "What makes ICTs effective growth engines" and the other examined "Champions of the Information Society: Young Entrepreneurs, Innovators and Investors."

Both events highlighted the enormous potential of ICTs. Be it through the delivery of health care, the provision of government services, the encouragement of participatory democracies or the provision of education and training, we have the opportunity with ICTs – as never before – to change so many lives for the better.

But you can't just snap your fingers and have an information society. It requires investment, creativity and innovation – all of the things that business does best.

And business stands ready to make those investments.

To do so, we need to work with governments to create the conditions necessary for investment.

Among those conditions are:

- – intellectual property rights protection;
- – stable and predictable legal systems;
- – trade liberalization;
- – technology neutrality;
- – and a regulatory framework which promotes competition and fosters entrepreneurship.

There has been much discussion at this summit about the issue of so-called "Internet governance".

Business believes that this term is a contradiction in terms/a flawed concept/an oxymoron.

The Internet is a network of networks. Its success to date – and I think we can all agree it has been spectacular – has relied on its de-centralized nature.

We in business believe this is a model built on coordination and collaboration which works well. The fact that there is no real central locus is one of the Internet's most important features.

Let's not blunt this remarkable tool when it is bring about the most positive changes to people's lives.

The decisions we make at this summit, both here in Geneva and in Tunis 2005, will determine whether this fledgling experiment founders or goes on to become a full-scale information revolution.

There has been much talk at this meeting about access – about ways in which we can all work together to create digital opportunities for people in all corners of the world.

Business agrees that cables must be laid, satellites must be used, computers must be distributed – all technologies at our disposal must be employed and infrastructures built so that even the smallest school in the most remote village can log on to the world wide web.

But access alone will not bring all the world's people into this information revolution. By itself, access to the Internet will not create an information society.

For what use is Internet access if you cannot read or write? What good is a computer if you don't know how to operate it?

Education and training are fundamental building blocks of an information society – and business has a key role to play in the provision of both.

One of the main themes from our business events was the generational differences that exist with respect to ICTs and the internet.

As technologies spread and become more widely available, we are seeing the emergence of a younger generation who have ICTs and the internet in their inner fabric – some say it's in their DNA.

It is our responsibility to ensure that this genetic streak becomes common to young people no matter where they are born in the world.

And for the many people of the generations for whom a mouse is still a rodent, we need to provide education and training so that they too can join the revolution.

What we have with ICTs and the Internet are awesome tools. Never before have we been able to share knowledge, create networks and foster human interaction so quickly and efficiently.

ICTs and the Internet are in their infancy. Their future is bright. As one of their proud parents, business looks forward in helping to give further shape to their future – to taking part in all discussions regarding their development so that, in partnership with others, we can allow these marvelous creations to realize their full potential.

Bush Directive for Critical Infrastructure Protection Announced

The White House on December 17, 2003, released a Presidential Directive entitled Critical Infrastructure Identification, Prioritization, and Protection, which establishes a national policy for Federal departments and agencies to identify and prioritize United States critical infrastructure and key resources and to protect them from terrorist attacks. The directive calls for the Secretary of Homeland Security to establish appropriate systems, mechanisms, and procedures to share homeland security information relevant to threats and vulnerabilities in national critical infrastructure and key resources with other Federal departments and agencies, State and local governments, and the private sector in a timely manner. The directive also calls for the heads of all Federal departments and agencies to develop and submit to the Director of the Office of Management and Budget (OMB) for approval plans for protecting the physical and cyber critical infrastructure and key resources that they own or operate by July 2004. These plans shall address identification, prioritization, protection, and contingency planning, including the recovery and reconstitution of essential capabilities. The complete text of the Directive can be found at http://www.whitehouse.gov/news/releases/2003/12/20031217-6.html.

The following are excerpts from this Directive:

Purpose: This directive establishes policies to strengthen the preparedness of the United States to prevent and respond to threatened or actual domestic terrorist attacks, major disasters, and other emergencies by requiring a national domestic all-hazards preparedness goal, establishing mechanisms for improved delivery of Federal preparedness assistance to State and local governments, and outlining actions to strengthen preparedness capabilities of Federal, State, and local entities.

Development of a National Preparedness Goal: The Secretary of Homeland Security is the principal Federal official for coordinating the implementation of all-hazards preparedness in the United States. In cooperation with other Federal departments and agencies, the Secretary coordinates the preparedness of Federal response assets, and the support for, and assessment of, the preparedness of State and local first responders.

To help ensure the preparedness of the Nation to prevent, respond to, and recover from threatened and actual domestic terrorist attacks, major disasters, and other emergencies, the Secretary, in coordination with the heads of other appropriate Federal departments and agencies and in consultation with State and local governments, shall develop a national domestic all-hazards preparedness goal. Federal departments and agencies will work to achieve this goal.

The national preparedness goal will establish measurable readiness priorities and targets that appropriately balance the potential threat and magnitude of terrorist attacks, major disasters, and other emergencies with the resources required to prevent, respond to, and recover from them. It will also include readiness metrics and elements that support the national preparedness goal including standards for preparedness assessments and strategies, and a system for assessing the Nation's overall preparedness to respond to major events, especially those involving acts of terrorism.

Citizen Participation: The Secretary shall work with other appropriate Federal departments and agencies as well as State and local governments and the private sector to encourage active citizen participation and involvement in preparedness efforts. The Secretary shall periodically review and identify the best community practices for integrating private citizen capabilities into local preparedness efforts.

Assessment and Evaluation: The Secretary shall provide to me through the Assistant to the President for Homeland Security an annual status report of the Nation's level of preparedness, including State capabilities, the readiness of Federal civil response assets, the utilization of mutual aid, and an assessment of how the Federal first responder preparedness assistance programs support the national preparedness goal. The first report will be provided within 1 year of establishment of the national preparedness goal.

This directive is intended only to improve the internal management of the executive branch of the Federal Government, and it is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity, against the United States, its departments, agencies, or other entities, its officers or employees, or any other person.

Electronic Postmark to Build Confidence, Trust and Security for Global E-Trade and E-Business

The Universal Postal Union (http://www.upu.int) is working with some of the world's most progressive postal services to promote an electronic postmark that would facilitate electronic transactions and guarantee their security in a rapidly evolving information society.

Called the Electronic PostMark (EPM), the service applies a trusted time-and-date seal to an electronic document, validates digital signatures, and stores and archives all non-repudiation data needed to support a potential court challenge.

Currently used by postal services in Belgium, Canada, France, Italy, Portugal and the United States of America, the Electronic PostMark is the digital equivalent of the well-known indicia that appears on every stamped envelope today and has legally binding implications in matters of mail tampering.

The ability to apply a digital signature to an electronic document that can stand the test of law continues to represent a major hurdle for online business today.

"The Electronic PostMark proves who signed what document, at what time and for what reasons," says Thomas E. Leavey, Director General of the UN specialized agency for postal services. "The service uses the existing assets and trusted brand of postal administrations to bring business into the digital age."

Leavey says the Electronic PostMark holds out much promise for building trust, confidence and security in electronic transactions, and the UPU recently developed a global standard for it.

The UPU and Posts are now working with major software manufacturers to incorporate this standard for electronic postmarks into popular applications such as Microsoft Office, Adobe Acrobat and Sun StarOffice, which are used by millions of people worldwide.

Working with technical specifications developed by the UPU, software vendors are creating a standardized interface that will enable individuals and businesses to apply trusted digital signatures to electronic documents and transactions.

Trends in Telecommunication Reform 2003

The ITU/Bureau for Telecommunication Development has released the fifth edition of Trends in Telecommunication Reform which is being published on the occasion of ITU TELECOM WORLD 2003. This year's edition focuses on practical tools for regulators to promote universal access to information and communication technologies. The following is a summary of the report.

Trends 2003 includes one chapter highlighting global market trends. The other chapters explore universal access/service policies; the role of sector reform in achieving universal access – building on the experience of competition in mobile services; creation and operation of a universal service fund (USF); the role of minimum-subsidy auctions; access strategies through public facilities; and how regulators can promote rural access through innovative wireless solutions. The report also highlights USF success stories.

A competitive market, coupled with effective regulation, can go a long way toward ensuring universal access – widespread availability of telecommunications or ICT service-and even beyond that, to enabling universal service – that is, the availability of telecommunications or ICTs in the home.

Access to telecommunication services has always been the target of universal access/service policy. Recently, with the growth of the Internet and of broadband access service, governments are exploring ways of incorporating Internet access in the basket of services included in their universal access/service definitions. The first steps toward a universal access/service policy should be policies to harness the power of markets, on a sustainable basis, from the smallest entrepreneur up to the largest multinational carrier.

Mobile Leads ICT Sector

Since mobile cellular services became commercially available in the early 1980s, they have advanced beyond imagination in terms of coverage, services, technology, handsets and regulation. The number of mobile subscribers has also outpaced the number of fixed-line subscribers. By the end of 2002, there were 1.155 billion mobile cellular subscribers around the world, compared with 1.129 billion fixed telephone lines. One in five people around the world now has a mobile phone
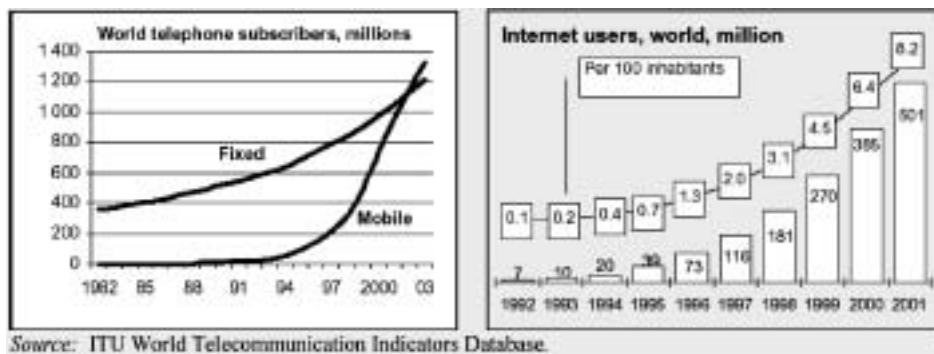
Fig. 1. What's going on. Number of worldwide fixed and mobile telephone subscribers; Number of Internet users.

– up from one in 339 in 1991. And many of these new subscribers are in developing countries given that mobile penetration in some developed markets has already approached 100 per cent.

Internet and Broadband

The Internet has grown at an astounding pace. At the beginning of 2003, there were an estimated 580 million Internet users around the world. Practically every country in the world is now online. The explosive growth of the Internet is driving demand for access at higher speeds. Broadband solutions are increasingly available for both wired and wireless technologies. Success factors vary from country to country and include platform-based competition (cable modem, DSL, fibre and wireless), development of innovative broadband technologies and applications, and affordable pricing such as flat-rate packages. Factors that can stifle broadband roll-out include continued monopolies and low levels of competition, cross ownership between telephone and cable TV networks and caps on data that can be downloaded under flat-rate pricing packages.

A new technology burst onto the wireless scene in 2003: Wi-Fi, or Wireless Fidelity. Its advent may well herald a new era for the ICT sector. Suddenly, inexpensive and easy-to-use subscriber equipment, often employing "free" unlicensed radio spectrum, can open the door to wireless broadband Internet access for the mass market. This new technology holds promise for rural and remote access because of its low-cost potential.

Regulatory Developments

A vast majority of countries worldwide have reformed, or are in the process of reforming, their telecommunication sectors through the review and

adoption of new legislation to adapt to the rapidly changing communication environment. They have done so by opening some market segments, if not all, to competition, allowing private participation, and establishing a national regulatory authority. As of mid-2003, 123 countries worldwide recognized the importance of establishing a regulatory authority to foster competition in the ICT sector in a fair and transparent fashion. As the development of ICTs is making the convergence of different types of network platforms and services a reality, more and more countries are responding either by merging their telecommunication and broadcasting regulatory authorities or improving coordination between various agencies involved in the ICT sector. Additional functions and tasks are required from regulators as a result of convergence, liberalization and market growth, including dispute resolution and consumer protection. At the same time, regional initiatives are taking place worldwide to harmonize national ICT legislative frameworks and work together toward the ultimate goal of providing universal access if not universal service to all citizens of the world.

The liberalization of telecommunication markets through the introduction of competition is changing the way countries approach universal access and service policies. This is due, in part, to the fact that services are being provisioned at a more rapid pace, prices are falling and new and innovative services are being introduced.

Universal Access and Service: What role for regulators and policy-makers?

Regulators and policy-makers have a critical role to play in ensuring that universal access/service goals are reached. One of the first steps is to set measurable targets. The first qualitative measurement usually stems
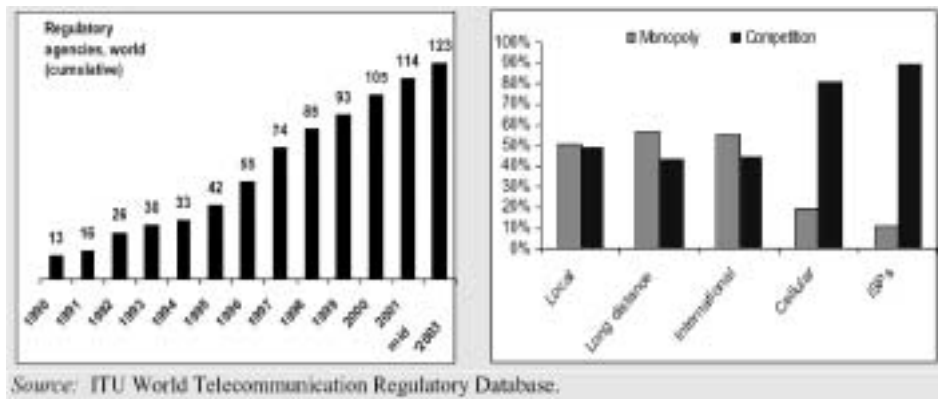
Fig. 2. The Boom for Regulators (1990–2003) (figure on the left) and Status of Liberalization (2003) (figure on the right).

from an examination of current market access figures. Regulators measure the difference between the current service penetration and the achievable level of penetration in a liberalized market. This is often termed the market efficiency gap. The market gap can be addressed, and even closed, through a solid sector reform policy framework. It does not necessarily require direct financial investment or subsidization. In addition to considering the market efficiency gap, it is important for regulators and policy-makers to look at the true access gap. This has been described as the difference between the population without service and that with service – even under efficient market conditions. The access gap concept posits that, even in the most efficient markets, a portion of the population may simply not be able to afford market prices. Trends 2003 identifies options for regulators in addressing the access gap.

How have regulators sought to implement national access targets and affordability goals, once these have been defined? Generally, governments have imposed two types of universal service obligations (USOs). The first is a general obligation to provide service to all customers willing to pay regulated rates for service. This obligation may be limited to certain geographic or population groups, such as a requirement to serve all urban areas, or to serve rural areas above a certain population. In addition, policy-makers and regulators have imposed obligations to extend certain types of designated services to a pre-specified number of subscribers or localities. These are referred to as roll-out or network build-out obligations, and are often incorporated into operators' licenses.

The funding of universal access/service support schemes often requires some form of regulatory intervention. On one hand, governments can impose performance requirements or levies on operators, essen-

tially directing them to pay the costs of providing universal access or universal service, either through rate mechanisms or though contributions to a special universal service fund. On the other hand, governments can provide incentives for carriers to provide universal access/service on their own, such as tax breaks or reduced license fees offered to carriers that extend their networks or improve services in target areas. This policy choice, between setting mandates and providing incentives, is often captured in the term "pay or play". That is, a carrier can either pay to support universal access/service or undertake to provide it itself.

Universal access/service policies are often premised on the assumption that the provision of service in rural and remote areas is expensive and, therefore, unprofitable. They are further based on the idea that low-income users will not be able to afford access without some assistance from the government. This report demonstrates that, in many cases, untapped rural and remote markets can be surprisingly vibrant given appropriate regulatory conditions. The economic potential of rural markets can be measured not only by outgoing call revenue, but also revenue from calls terminated to new subscribers in rural areas. The viability of rural markets is linked to effective regulatory conditions. Regulators, for example, must ensure that rural operators do not face excessive licensing fees and are given flexibility in choosing appropriate technologies to provide quality service to rural populations.

Trends 2003 examines the key steps that governments can take to improve market efficiency through regulatory reform. It demonstrates how the introduction of competition in the mobile sector has benefited universal access efforts, and identifies which lessons from the mobile sector's growth can be more widely applied. The introduction of competition in the mo-

bile sector has greatly reduced – and perhaps nearly eliminated – the universal access problem for the urban poor in many developing countries. Mobile service has had a considerable impact on low-income users in rural areas, as well. The effect stems in large part from the availability of prepaid services, coupled with the development of mobile payphone services. Moreover, the development of competition in many mobile markets has forced down prices for end users. Finally, the ability of some mobile-phone users to send inexpensive SMS (short message service) messages provides an e-mail substitute in many developing countries where PC penetration is low.

The lessons learned from the mobile experience can be applied more widely. Reducing regulatory barriers is the cornerstone of any effective universal access regulation package. Such effective regulation packages include promoting fair interconnection and flexible tariff regulation, fostering public access and resale, licensing practices that enable operators to choose the most appropriate and cost-efficient technologies and minimizing regulatory fees and costs. Trends 2003 explains why asymmetric interconnection regimes – providing higher termination rates for calls into rural areas than in urban areas – are of particular importance to rural operators. Since rural operators' income is largely based on incoming calls, asymmetric interconnection rates affect whether they will be financially viable. And, to the extent that rural operators seek government subsides to provide services, fair interconnection rates can actually reduce the size of such government subsidies.

Tool Kit

Three chapters that form a tool kit for policy-makers and regulators addressing the access gap that may remain even following sector reform. On the financing side, governments can draw upon a wealth of experience from countries around the globe in setting up and administering specialized universal access/service funds. The tool kit also examines how funds can be used, in conjunction with minimum-subsidy competitive auctions, to finance public telecommunication access facilities in rural areas, and explores policy and regulatory options to foster and support telecenters as key resources for community access to basic and advanced ICT services.

This tool kit is based on documents originally drafted and presented as telecommunication policy and regulatory models. They were prepared as part of a joint effort by the International Telecommunication Union and the Commonwealth Telecommunications Organization to offer guidelines on universal service funds and related mechanisms.

Trends 2003 also includes a series of valuable annexes, including one that analyzes the results of minimum-subsidy auctions in Chile, Peru and Colombia demonstrating that operators frequently bid and were awarded lower subsidies than the government had allocated for new rural public payphone projects. Another annex describes illustrative benchmark consumer rates and interconnection charges for projects financed by competitive auction mechanisms. In addition, there are annexes describing the universal service fund experiences of India, Jamaica and Malaysia.

Are new wireless technologies the universal access solution?

The report further examines what a growing community of technologists, public-policy officials and telecommunication practitioners foresee as a revolution in rural universal access. This revolution will be founded on a new suite of wireless technologies such as WiFi, matched by supportive public policies and business approaches, that can provide Internet access and voice service cheaply to rural and under-served communities. New and creative enterprises can make rural and low-income markets profitable, affordable, sustainable and served in ways that meet national and local development objectives. But this also requires innovation and creative business and public policies. The report includes a simple economic model that summarizes and underlines how sensitive profitability is to conditions in the technological, business and policy environment.

Conclusion

Regulators and policy-makers find themselves on the cusp of a new era. For the first time, the combined forces of competition policies that promote market entry, incentive regulation and new technologies promise to promote digital opportunities for all. This report is designed to assist those governments eager to use all the tools at their disposal to meet their national ICT development goals.

It is to be hoped that, in exploring these issues and creative responses, this report will be a catalyst for further innovation and experimentation, through sharing of experiences and approaches among regulators and other telecommunication professionals worldwide.