



26 October 2007
Original: English

Creating an Enabling Environment for Investment

Background Paper – Session Five

1. BACKGROUND

The creation of an enabling environment is one of the key building blocks in the establishment of an Information Society — the World Summit on the Information Society (WSIS) recognized that “to maximize the social, economic and environmental benefits of the Information Society, governments need to create a trustworthy, transparent and non-discriminatory legal, regulatory and policy environment”. Providing regulators with the tools and authority to regulate the sector effectively and efficiently can boost investment, promote innovation and build confidence in countries’ ICT markets.

Over the past decade, the majority of countries worldwide have initiated reforms in their telecommunication sector by establishing a national regulatory body, introducing competition and at least partially privatizing their operators (among other measures). However, much of the world’s population still remains without basic access to Information and Communication Technology (ICT) services, as further key reforms have yet to be undertaken in many countries. A fundamental shift in policy and regulatory frameworks is needed, to enable countries to achieve the WSIS targets by 2015.

African nations today have a unique opportunity to build on the success of initial sector reforms, which boosted the uptake of mobile services significantly. Technological advances in broadband wireless access technologies and new business models make the WSIS targets feasible, provided measures to build an enabling environment are undertaken. Political will is needed at the highest levels of government to establish an enabling environment that will create a level playing-field for all stakeholders to promote the roll-out of ICTs.

2. PURPOSE OF THIS PAPER:

This paper aims to:

- Underscore the importance of an enabling environment for the deployment and development of ICT networks and services;
- Identify the key constraints facing African decision-makers; and
- Recommend steps to further the implementation of WSIS commitments and make connecting Africa a reality.

3. SUMMARY OF THE EXISTING SITUATION

This section reviews key areas of sector reform in Africa and their impact on the ICT market:

Privatization, Creation of National Regulatory Authority and Level of Competition

Some thirty African economies (or 55 per cent) have at least partially privatized their incumbent telecoms operator. Privatization sends a strong signal that policy decisions and regulations will be fair to all in the market place. Fostering a level playing-field is more likely if the State avoids being both a market player (i.e. owner or part-owner of the incumbent) and a referee at the same time. Forty-five African economies (or eighty-three per cent) have established a Telecommunication/ICT Regulatory Authority, with sixteen created since 2000.

While competition is flourishing in the provision of Internet and mobile services in Africa, it is lagging behind in local, long-distance and international basic voice services. In addition, the legal status of services is not always reflected in the actual market situation or whether consumers can exercise a meaningful choice between service providers. Attracting investment is closely associated with the control that incumbents exercise over essential facilities (such as international gateways - see below) and the existence of an effective interconnection regime. A key challenge for many African regulators is the establishment of an interconnection regime that promotes competition and encourages investment.

Prices for ICT services and ICT Penetration Rates

With limited competition for local services, leased lines and international access, prices for dial-up and broadband Internet services are generally far higher in Africa than elsewhere. This has resulted in more limited consumer uptake than in other regions of the world¹. Today, Africa accounts for less than 0.4% of the world's total broadband subscribers and only 3.9% of the world's Internet users. In contrast, mobile subscribers outnumber fixed line subscribers by more than six to one, and over a fifth (21%) of Africans now subscribe to mobile services.

African mobile operators need to build on the success of current mobile deployment to grow the market still further and encourage second generation mobile operators to migrate to more advanced broadband wireless access services. Service providers can also promote fixed line broadband, where economically viable. In addition, it is critical for African countries to create national and international fiber backbones, where satellite connectivity remains costly and microwave backhaul technology lacks capacity for broadband services and applications. A broadband environment can only be fully realized in Africa, if prices for broadband services are slashed dramatically. The regulatory and policy initiatives outlined below can help African countries reduce the high cost of Internet and broadband services. Regulators can also monitor and benchmark retail costs for broadband services to persuade operators to reduce the prices of Internet and broadband services.

Liberalization of International Gateways

Many African countries have yet to introduce strategies to liberalize international gateways to reduce prices for international voice communications and Internet tariffs. Countries that have liberalized the international gateway have seen prices fall and quality of service improve. Liberalization includes licensing or authorization of multiple players for the provision of international gateway services and opening up cable landing stations to competition.

Internet Exchange Points (IXPs)

The high cost of Internet services in Africa is also related to the lack of Internet Exchange Points (IXPs), enabling local Internet Service Providers (ISPs) to exchange Internet traffic at the local, national or regional levels (instead of routing domestic and regional Internet traffic

¹ See ITU-D Question 18/2 – Strategy for Migration of mobile networks to IMT-2000 and beyond: Mid-term Guidelines (MTG) on the smooth transition of existing mobile networks to IMT-2000 for Developing Countries at www.itu.int/pub/D-STG-SG02.18-2006/en.

through expensive international links). By 2007, eighteen African countries had created a national IXP and two regional IXPs existed — one in Cairo and another serving Kenya, Tanzania and Uganda² (in contrast, there are hundreds of IXPs in the Americas, Asia and Europe). ISPs in countries where no IXP currently exists must pay the full cost of international Internet connectivity, with Internet traffic often routed via the United States or Europe, resulting in higher prices for ISPs, which are invariably passed onto customers³.

Infrastructure Sharing, Open Access and Fiber Backbones Infrastructure sharing and open access are key elements to promote regional connectivity within Africa. Open access to submarine cable and satellite networks promises to dramatically reduce the costs of international connectivity. For example, the sharing of civil engineering costs for domestic networks (such as mobile masts and towers) can expand coverage, accelerate roll-out, cut costs, enhance competition and limit environmental consequences. The sharing of infrastructure with other utilities (such as gas, electricity, highways and railways) is also gaining momentum. A stable and predictable regulatory framework is necessary, however, to prevent anti-competitive behavior that can result from sharing infrastructure. Ensuring a steady power supply for telecommunications networks is also vital.

Licensing Ensuring vibrant domestic competition is vital to boost the growth of ICTs in Africa. Competition can reduce costs for end-users and drive innovation in technology and business practices, resulting in better services at lower prices. In most African countries, the government typically decides how many market players should compete in specified market segments, rather than the framework of open competition (where the market determines how many players can enter markets). Licensing policies also need to evolve to eliminate market entry barriers, fostering development and innovation. One trend that has emerged over recent years has been a move from specific licenses to technologically neutral and broadly defined service-neutral licenses. This trend should be further encouraged.

Voice over Internet Protocol (VoIP) Many African countries currently ban VoIP explicitly or limit its legal use – by mid-2007, VoIP had been legalized formally in seven economies. However, an extensive grey market exists in VoIP services and regulators and policy-makers are increasingly recognizing that they have only limited ability to restrict the use of VoIP, which is likely to represent the future of the voice services. After all, it is difficult to contain breakthrough technologies for which there are strong end-user demand. Some have even recognized VoIP “as an engine for the development of telephony in the country” and are seeking to legalize it, rather than restrict its use⁴. There are moves underway to legalize VoIP in at least six African economies⁵.

Fixed and mobile operators are moving to IP-based networks and many operators are seeking to deploy broadband wireless access or 3G technologies that are also IP-based. VoIP traffic in Africa is thus expected only to rise. Likewise, incumbent operators are installing VoIP gateways to carry international traffic. Where VoIP has been legalized, hundreds of small players have sprung up offering affordable voice services. VoIP services are generally cheaper than traditional PSTN services, so VoIP can also help meet universal access goals.

The rise of VoIP traffic also implies a need for VoIP peering exchanges (similar to IXPs), so that national and regional VoIP calls can be routed locally without transiting Europe or the United States. The introduction of VoIP peering exchanges can reduce regional calling rates.⁶ The legalization of VoIP requires regulators to address issues related to emergency services, contributions to universal service funds, interconnection with traditional PSTN networks and the allocation of numbering resources.

2 AfrISP at www.wideopenaccess.net/files/session7/ixp.pdf and ITU World Telecommunications Regulatory Database

3 2004 ITU/IDRC report, *Via Africa: Creating local and regional IXPs to save money and bandwidth* at www.itu.int/ITU-D/treg/publications/AfricaXPRep.pdf

4 ITU, 2007, The Future of Voice in Africa, www.itu.int/osq/spu/ni/voice/papers/FoV-Africa-Southwood-draft.pdf

5 Including Egypt, Ghana and Nigeria.

6 ITU, 2007, The Future of Voice in Africa, www.itu.int/osq/spu/ni/voice/papers/FoV-Africa-Southwood-draft.pdf

Spectrum Allocation Broadband Wireless Access (BWA) services offer significant benefits to developing countries. The benefits of these services ultimately depend, however, on the amount of spectrum regulators make available. Spectrum has traditionally been allocated for operators to deploy on a national or regional basis, but operators can also provide broadband wireless access services on a small scale. Care needs to be taken, however, not to fragment spectrum plans so the emergence of sustainable business models is not prevented. In addition to innovative spectrum practices, African countries need to ensure competitive allocation of adequate spectrum for a full range of BWA technologies. Global and regional harmonization of spectrum allocation is important to reduce deployment costs for operators.

4. OPPORTUNITIES AND CHALLENGES

Harmonization of Policies and Regulations Many initiatives are currently underway by international and regional specialized agencies and African development partners to promote harmonized policy and regulatory frameworks and best practices throughout Africa, in collaboration with the Regional Economic Communities (RECs).

The African Union is undertaking a study on a reference framework for Telecommunications and ICT Policy and regulation harmonization that seeks to respond to challenges in the development of ICT infrastructure, expected to be adopted by the next Meeting of the African Ministers responsible for Communication and Information Technology. Likewise, e-Africa Commission-NEPAD has developed a Protocol of High-Level Policy and Regulatory framework for NEPAD ICT broadband infrastructure network for the Eastern and Southern African region. The United Nations Economic Commission for Africa (UNECA) has supported ECOWAS, UEMOA, CEMAC and CEEAC in developing harmonized frameworks on ICTs and e-commerce.

The countries of West Africa have developed a harmonized regulatory framework designed to integrate the Acts covering ICT markets in the sub-region and to keep policy and regulatory frameworks in line with the constant evolution of technologies, applications and services. The project was launched in June 2004 by the International Telecommunication Union (ITU) in cooperation with the European Union. In January 2007, ECOWAS Heads of State and Government adopted Acts that cover ICT policies, the legal regime, interconnection, numbering, spectrum management and universal access. They have embarked on the challenge of transforming these decisions into national legal frameworks, creating a common ICT market in the region.

ITU Members have adopted regional initiatives for Africa and the Arab States that provide for the strengthening and harmonization of policy and regulatory frameworks in their regions. The work carried out by West African countries will certainly serve as a basis for such regional harmonization of ICT policies and regulatory frameworks. For more information, see www.itu.int/ITU-D/treg/projects/itu-ec/index.html. Additional examples of regional harmonization and sharing of best practices are included in Annex 1.

Capacity-Building for Regulators Many regulators seek to build the capacity of their staff in order to become more effective. In response, ITU and *infoDev* have launched the ICT Regulation Toolkit (<http://www.ictregulationtoolkit.org/en/index.html>), which contains modules on many of the issues in this paper, including authorization, radio spectrum management, as well as interconnection and price regulation. ITU, in collaboration with *infoDev* and the World Bank, have sought to build on the success of the ICT Regulation Toolkit to develop a Global Capacity Building Initiative (GCBI) for regulators that facilitates the development and transfer of know-how to support regulatory reform, offering face-to-face and e-learning training opportunities, with the goal of partnering with local universities and training institutes in developing countries. ECA and the Government of Canada have organized a series of workshops on Access and Regulation in Central, Western, Eastern and Southern Africa, aimed at building the capacity of regulators for designing harmonized strategies and guidelines for legal and regulatory frameworks.

5. CONCLUSIONS AND RECOMMENDATIONS

African countries can undertake a series of concrete steps and adopt key regulatory measures that promote affordable, widespread access to a full range of broadband ICT services, including technology and service neutral licensing/authorization practices, allocating spectrum for multiple, competitive broadband wireless service providers, creating national Internet Exchange Points (IXPs) and implementing competition in the provision of international Internet connectivity. This would help develop an enabling environment to attract investment and make affordable access to ICTs more widely available. Governments can consider the following measures, including:

- Promoting the role of regulators as enablers and agents of change by ensuring that ICT regulators are free from political and industry interference;
- Promoting improved capacity of national regulatory authorities by adopting harmonized policy and regulatory frameworks and supporting capacity-building initiatives;
- Ensuring transparent policy and regulatory processes;
- Launching public consultations and other mechanisms for dialogue with industry and consumers;
- Introducing strategies such as liberalizing international gateways to reduce the costs of Internet and voice connectivity;
- Opening up ICT markets to greater competition through models such as general authorizations or unified licenses, which take a technology-neutral approach to market entry;
- Making adequate spectrum available for IMT-2000 and broadband wireless access services so that end-users in Africa do not have to wait for fixed line broadband services. This includes the availability of spectrum for small market-players providing connectivity in rural areas;
- Encouraging the roll-out of broadband infrastructure to rural areas by reducing regulatory or spectrum fees or lower taxes and by including roll-out requirements in license agreements (e.g. requiring an operator to connect a specified number of new villages);
- Leveraging Africa's success in the mobile market, while leapfrogging to fiber backbone and backhaul networks, by providing financial and fiscal incentives to encourage the deployment of backbone infrastructure;
- Creating national and regional Internet Exchange Points (IXPs), as well as VoIP peering exchanges, to keep African Internet traffic local, and pooling international Internet connectivity to keep the costs of peering and transit low;
- Reducing customs duties on ICT equipment to make it more affordable for end-users;
- Considering the legalization of VoIP (where this has not yet occurred);
- Publishing and benchmarking retail costs for broadband services to persuade operators to reduce costs for broadband access and services.

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ANNEX

Examples of Regional harmonization and Sharing of Best Practices

UN Economic Commission for Africa

The UN Economic Commission for Africa (UNECA), supported by the Canada Fund for Africa and its ePolicy Resource Network (CePRC) and the Government of Finland, has been providing upstream policy advice to assist countries and Regional Economic Communities (RECs) in the design of strategic approaches to ICTs as an enabler for development through the African Information Society Initiative (AISI) framework. These strategic approaches to ICTs are linked to Poverty Reduction Strategies (PRS) and related development goals, including the UN Millennium Development Goals (MDGs). To this end, ECA has been assisting African countries in developing national and sectoral ICT strategies for accelerating their socio-economic development, through the National Information and Communication Infrastructure (NICI) Plans process.

Support was also provided to ECOWAS and UEMOA in West Africa to develop the following harmonized regulatory guidelines on ICT and electronic commerce for adoption by Member States: Guidelines on a harmonized ICT framework; Guidelines on e-commerce; Guidelines on personal data protection; and Guidelines on fighting against cybercrime.

The Central African region was supported to develop the following harmonized guidelines in the framework of its regional e-strategy (e-CEMAC): Guidelines on a harmonized ICT framework; Guidelines on harmonized interconnection costs; Guidelines on Universal Service; and Guidelines on harmonized electronic communications Tariffs.

CRASA (Ex TRASA)

- Policy Guidelines on Interconnection and Model Telecommunication Regulations on Interconnection;
- Regional Frequency Allocation Plan;
- Universal Service Policy Guidelines, 2002;
- Licensing Policy Guidelines, 2002;
- Fair Competition Guidelines Study report;
- Development of interconnection Guidelines;
- Tariff Guidelines;
- Model Tariff Regulations and Model Telecommunications Bill;
- Recommendations for effective Regulation and structures;
- Regulatory Accounting Guidelines; and
- Administrative Rules and Procedures Template for Regulators.

EARPTO (IGAD & EAC)

The main achievements of this regulatory organization include the following;

- Coordination of Universal Access activities(for example, the East African Fiber Optic Project);
- Harmonization of frequency spectrum prices and licensing of satellite services in the region; and
- Cross-border connectivity and interconnection issues.

WATRA (ECOWAS Countries)

- The ICT common market in the ECOWAS/UEMOA space is in the process of transferring into national law a series of Acts adopted by ECOWAS Heads of State and Government in January 2007, that include a harmonized legal, policy and regulatory framework for the region. The adopted Acts were based on guidelines agreed by WATRA that were then adopted as decisions by ECOWAS Ministers in Charge of Telecommunications and ICT. Once they have been into the national legislative frameworks, the Acts will create a common ICT market in the region. The project was launched in June 2004 by the ITU in cooperation with the EU, to support the establishment of an integrated ICT market in West Africa.
- The Acts include: ICT model policy and legislation; access and interconnection regulation; issuance of licences; numbering plans management; spectrum management; and universal service/access.

Arab Telecommunication Regulators Network (ATRN)

North African countries are working closely with the other Arab countries within the framework of several structures, notably including the Council of Arab Ministers responsible for ICT. The major texts adopted in relation to policy harmonization at the AMU level or in the Arab region include a decision on the ICT Arab Strategic Plan and Recommendations on: Spectrum Management; Licensing; competition; Interconnection; Tariffs; standardization; Universal Service; Type Approval; Dispute Resolution; Health and Safety; and ICT Terminology. A first meeting to launch the regional ICT regulatory and policy harmonization initiative was held in Bahrain from 21-22 October 2007.⁷

ARECEA (COMESA)

ARECEA's main achievements are in the establishment of model guidelines on interconnection, Universal Access and several activities in capacity-building.

ARTAC (ECCAS Countries)

This Association was established in November 2004. One of its objectives is to promote the harmonization of regional legislative and regulatory frameworks and technical standards.



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⁷ The initiative is led by the League of Arab States (LAS) and supported by the ITU and ATRN. It is based on the output of the ICT Formalisation Committee that was established by the Arab Council of ICT Ministers. This initiative was endorsed by the Arab Ministers of ICT in June 2005, and subsequently by the 2006 ITU WTDC.