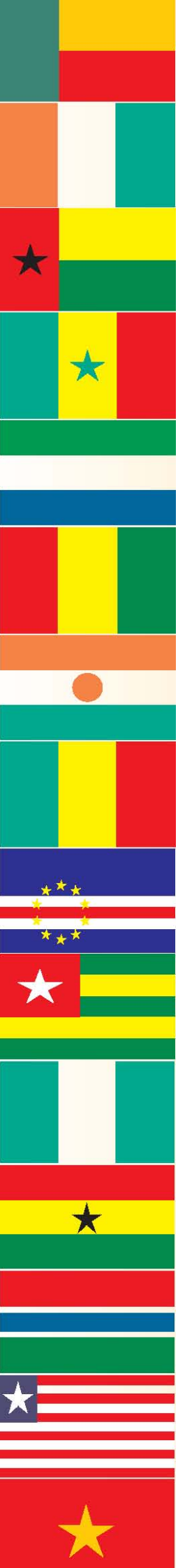
International Telecommunication Union



West African Common Market Project:

Harmonization of Policies Governing the ICT Market in the UEMOA-ECOWAS Space

Licensing

European Union

International Telecommunication Union

Licensing

TABLE OF CONTENTS

1 Introduction

The International Telecommunications Union (ITU) launched a regional project, in cooperation with the European Union, to support the establishment of an integrated ICT Market in West Africa.

The project takes account of the UEMOA and ECOWAS vision for the telecommunications sector, shared by National Regulatory Authorities throughout the region, which is *"to have a single liberalized telecommunications market in the Community, following on the adoption of uniform legislative and regulatory frameworks, and the interconnection and integration of national networks."*

The project was designed based on several Government requests for assistance on Regulatory Reform aiming to harmonize the development of the telecommunications sector in West Africa. As such, it aims to build on existing initiatives and projects from other national, regional and international organizations such as UEMOA, ECOWAS and the World Bank, where applicable. Thus, the project will specifically take into account recent studies and recommendations such as the draft UEMOA Directives and the World Bank - ECOWAS Study on the Harmonization of Telecommunications Policies in ECOWAS. It also aims to build human and institutional capacity in the field of ICT through a range of targeted training, education and knowledge sharing measures.

The project focuses on a number of urgent regulatory issues of concern to the beneficiary countries. It recognizes that some of the constraints towards the objective of a common market are related to telecommunications regulations, but that other social and economic constraints to investment such as lack of information or of appropriate regulations or indeed lack of regulatory certainty also play a role.

The first version of this report as well as the present revised and updated document was prepared by: Sofie Maddens Toscano of TMG. The first version of the report was presented at the Validation Workshop on Licensing and Interconnection in Bamako, Mali, 22 to 24 November 2004. The present document will be presented to ECOWAS/UEMOA member countries for final approval

The present report focuses on the issue of licensing, detailing in the following chapters: the objectives of licensing, international and regional practices and the key issues relating to licensing. In conclusion, it makes a number of recommendations and proposes model licenses for the sector.

2 Objective of licensing

Regulatory change is being driven by technological change, market innovation, and by the needs of businesses to have access to sophisticated and seamless telecommunication services on a global and end-to-end basis. In the long term as markets liberalize, any service provider should be able to offer any communications service to anyone, anywhere, using any type of technology.

As contained in the Reference Paper of the Agreement on Basic Telecommunications (BTA)[1], the World Trade Organization (WTO) Regulatory Principles form the basis of competition in telecommunications services. The Paper outlines the need for competitive safeguards, non-discriminatory and commercially reasonable interconnection agreements, publicly available licensing criteria, independence of regulators, and fairness in the allocation and use of scarce resources.

These principles form the cornerstone for the transition from a monopoly market to a competitive one, and require that national regulatory authorities have transparent decision making procedures, and clear and efficient pro-competitive policies.

The objectives of licensing policy as listed in the World Bank's Regulatory Handbook are taken by many as guidance for a future licensing strategy[2]. Although these objectives may vary from country to country, they generally have the following common elements:

1) **Regulating the Provision of an Essential Public Service** – Basic telecommunications is viewed as an essential public service in most countries. Many governments use license conditions to ensure basic telecommunication services are provided in the public interest.

2) **Allocation of Scarce Resources** – Scarce resources required in the operation of a telecommunication service (such as radio spectrum, numbers and rights of way) should be allocated between operators fairly, efficiently and in the public interest. This allocation is normally achieved through the licensing process.

3) **Expansion of Networks and Services** – License conditions are important tools for expanding infrastructure investment and promoting universal service and universal access objectives in many countries. This is particularly true where state-owned incumbent operators are privatized, or where some exclusivity is granted (e.g. a duopoly cellular license, with a right to use scarce spectrum).

4) **Privatization or Commercialization** – A license is necessary when a state-owned incumbent (a PTT) is privatized. The license specifies the rights and obligations of the operator. It is a key document in the privatization process.

5) **Regulating Market Structure** – Regulation, broadly defined, determines the telecommunication market structure, and in particular, the number of operators licensed to provide telecommunications services. In many countries a prime reason for licensing new telecommunication operators is to increase competition. On the other hand, licensing requirements can also provide a means to limit market access. This is the objective of licensing authorities in some countries, where licenses have granted or preserved monopoly, duopoly or other exclusive rights. Such rights are often retained for political or financial reasons, such as increasing the proceeds of a privatization.

6) **Establishing a Framework for Competition** – Licenses frequently include conditions to establish a "level playing field" for competition, and to limit the prospects that incumbent

---

1 See: http://www.wto.org/english/tratop_e/serv_e/telecom_e/tel23_e.htm

2 *See* Telecommunications Regulation Handbook Licensing Telecommunications Services (Module 2), ed. Hank Intven (2000) at 2-9, http://www.infodev.org/projects/314regulationhandbook/.

operators will abuse their dominant position in telecommunication markets. Such conditions are generally referred to in licenses as “anti-competitive safeguards” or “fair trading conditions”. In other countries, such conditions are included in regulations of general application rather than in licenses.

7) **Generating Government Revenues** – Licensing telecommunication operators and the use of radio spectrum can provide significant revenues to governments. An auction for new licenses can generate one-time revenues. In addition, annual license fees often provide a continuing source of revenue to fund the operations of the regulator, or for other purposes.

8) **Consumer Protection** – In some countries, licenses impose conditions relating to consumer protection. Such conditions may relate to matters such as price regulation, billing practices, consumer complaint mechanisms, dispute resolution, limitations of liability for service defaults, and mandatory services to consumers (e.g. directory services, operator assistance and emergency services).

9) **Regulatory Certainty** – By clearly defining the rights and obligations of the operator and the regulator, a license can significantly increase confidence in the regulatory regime. Regulatory certainty is a critical element of licensing processes where the aim is to attract new operators and investment.

Although licensing is specifically dealt with in the WTO Telecommunications Reference Paper, licensing schemes have emerged as a significant barrier to new market entrants in many countries around the world. Many countries place restrictions on the number of new entrants, and provide little or no justification for the level of fees they require new entrants to pay, which can be exorbitant. Moreover, many countries continue to have very non-transparent regulatory processes, particularly in the bidding and awarding of licenses. That is also the case in Western Africa.

The real challenge for countries is to ensure that market-opening objectives, regulations and international commitments can be implemented in practice and are not frustrated by domestic approval or other regulatory requirements. Licensing is a key element in this respect.

3 Overview of licensing practices

3.1 General Trends

The World Trade Organization (WTO) Agreement on Basic Telecommunications (BTA) is one of the elements which accelerated the pace of fundamental changes in world telecommunications markets and their regulation. Not only were immediate practices on market access changed, but expectations and norms about the operation of the international market were also deeply affected.

At the origin of these "institutional" changes, was the realization that digital technology forced a major reexamination of the opportunity costs of protecting traditional telecommunications equipment and service suppliers. An inefficient market for telecommunications threatened competitiveness in the computer, software and information industry markets. For example, after experimenting with limited competition in data and mobile communications through the early 1990s the members of the European Union concluded that monopoly control of the public telephone network would always discourage realistic pricing and provision of the infrastructure for information services and equipment. Second, after suffering the dislocations created by global stagflation through the early 1980s reforms in the economic policies of developing countries stimulated interest in privatization of state enterprises as a tool of economic reform. State telephone companies were particularly promising targets for privatization. Once privatization became a serious option these countries also explored other options for allowing selective competition. Third, even as competition began in the major industrial countries, their phone companies looked to foreign markets to create new business opportunities. Yet all phone companies faced major limits on foreign market access, and once in a foreign market they confronted serious regulatory uncertainties about how they would be treated.

Interesting is that it is not only those countries that made commitments within the WTO that were affected. The process even changed the economic, political and regulatory options of those countries which did not take on commitments, making competition and open markets a reality which most countries around the globe saw themselves needing to face if they were to participate in developments in the communications sector.

Historically, as was the case in the rest of the world, state-owned incumbent operators provided telecommunication services on a monopoly basis in most markets. Telecommunications operators were treated as part of public administration along with postal services and as such licenses were not considered as necessary. In short, government controlled all resources. This model worked particularly well for many years in the more developed economies, where long-distance and international tariffs, which had stayed high despite technological changes decreasing their cost significantly as opposed to the initial phases of their exploitation, basically subsidized local and regional and even the establishment of rural telephony.

Indeed, in the more developed economies, this model enabled the development of the networks and of teledensity and the sectorial industrial development. Financial sources for sector development and for the provision of universal service, in particular, were obtained from the government budget which supported this well.

In the less developed countries, including in most African countries, the scenario of cross-subsidization worked less well. Financial resources were obtained in some cases from multilateral lending or donor agencies as well as from government or other government-sponsored sources, but this was not sufficient to develop the sector, provide communications to the people, lower certain tariffs, increase the range of services available to the consumers or even to expand businesses. As a consequence, private investment substituted public funds for investment in telecommunications services, thereby allowing the government to use their funds for the development of other sectors.

The WTO 1997 *Agreement on Basic Telecommunications*[3] laid the foundation for improved market access and the liberalization of foreign investment in the telecommunications sector. It was a necessary starting point for phasing out telecommunications carrier monopolies and providing the regulatory principles and fundamental commitments needed to introduce competition in basic telecommunications services across WTO Member countries. While the agreement produced significant gains, there remain considerable government-related trade barriers to enabling true and effective competition in WTO telecommunications markets and notwithstanding that former monopoly carriers remain very much dominant in many markets.

The challenge for the WTO in the next round will be to include more nations in the existing agreement, while improving the quality of commitments by those countries made prior to this round. Spreading the benefits of liberalization will encourage greater foreign direct investment, strengthen basic and advanced communications infrastructure, and allow populations greater access to the world through information technology. And that is especially the case for many African countries.

When adopting their strategies for the African markets, operators and investors today still confront a major problem in many countries in Africa – the lack of a consistent regulatory environment and often even still the presence of dominant (State) monopolies or operators. New entrants find out that the costs of operating in an uncompetitive environment adds considerable costs to their investments. State monopolies are usually given their licenses free of costs whereas new entrants have to pay exorbitant license fees. This reduces the level of competition in the market and gives the few dominant and most often monopoly operators the opportunity to levy high prices on consumers which reflects on expensive rates in most African countries.

Properly defined and managed licensing and regulatory frameworks and processes have proven to be very significant in the context of developing economies because they have provided certainty for investors and lenders and with it the confidence that is required to invest in millions of US dollars for the upgrading of telecommunications networks.

Licensing mechanisms operated by most countries in Africa are determined by economic factors linked to budgetary needs. Morocco is estimated to have raised close to USD 1 billion. Kenya was looking to raise almost USD 500 million from its bidding process. Nigeria raised an estimated USD 300 million. The constraint faced with this process by operators is that due to the unregulated and non transparent environments, within which these bids take place, the final outcome may be subject to political interference, which damages the reputation of the exercise.

3.2 International Practices

There are several ways that the different activities can be classified – examples of how other countries have classified the licensing of the different types of activities are:

- Licensing based on **type of** service provided (fixed; international; national long distance; local; mobile (PCS and mobile cellular where countries differentiate, such as in Latin America); data; VSAT; value added services, VoIP, ISP; various satellite services, undersea cables, etc. – this is an approach adopted by many countries, including, for example, many Caribbean countries, as well as many African countries such as Senegal, Ivory Coast, Togo, etc. – within this scheme many countries provide that there are two types of licenses: individual and class. An Individual License shall be specific to an individual operator and shall cover the basic Public Switched Telephone Network (PSTN) services, mobile and wireless services, and any service that requires frequency spectrum. A Class License shall

3 See: http://www.wto.org

be issued where Individual Licenses are not justified but there may still be a need to place certain conditions on the provision of the service. Class Licenses shall be issued by the Public Utilities Commission (PUC) within the framework of general authorizations made by the PUC. Class Licenses shall apply to services such as data transmission, resale, internet, value-added services and private networks.

- Licensing based on **facilities-based and services-based competition** (Japan Class I, II, licenses - although Japan is now revising this, Singapore model) - The Info-communications Development Authority of Singapore (IDA), for example, adopted a two-pronged licensing approach that differentiates between licensees based on the nature of their operations, i.e., whether facilities-based or services-based type of operations. Facilities-based operations refer to the deployment of any form of telecommunications networks, systems and facilities by any persons, outside of their own property boundaries, to offer telecommunications services to third parties, which may include other licensed telecommunications operators, business customers or the general public. Operators intending to lease telecommunications network elements (such as transmission capacity and switching services) from any Facilities Based Operator (FBO) licensed by the IDA so as to provide their own telecommunications services, or to resell the telecommunications services of FBOs to third parties, may apply to IDA for an Service Based Operator (SBO) license. Operators who have deployed telecommunications networks, systems and facilities within their own property boundaries, but wish to offer telecommunication services to third parties resident within their property boundaries, should also apply for an SBO license.
- Licensing based on the **ownership** of infrastructure - In Australia, for example, there is an open licensing regime for telecommunications with no distinction being drawn on the basis of the technology used and services offered. A carrier license allows the owner(s) of a network to supply carriage services to the public subject to obligations set out in its license, the Telecommunications Act 1997, and any additional conditions imposed by the Minister. Carriers are individually licensed and pay application and ongoing license fees that recover the costs of regulating the industry. Carriage service providers provide telecommunication services to the end users. There is an obligation to take a carrier license if one owns a network unit.
- Licenses that **don't identify technology or service to be provided** - Uganda's 3rd operator license, for example, allows the operator to select either mobile or fixed line services to meet service obligations.
- In Australia [4], there is an open licensing regime for telecommunications with no distinction being drawn on the basis of the technology used and services offered. A carrier license allows the owner(s) of a network to supply carriage services to the public subject to obligations set out in its license, the Telecommunications Act 1997, and any additional conditions imposed by the Minister. Carriers are individually licensed and pay application and ongoing license fees that recover the costs of regulating the industry. Carriage service providers provide telecom services to the end users. There is an obligation to take a carrier license if one owns a network unit.

4 For more information see: http://www.aca.gov.au

- The license classes that have been developed by the Eastern Caribbean Telecommunications Authority (ECTEL)[5] are technology neutral. The determining factor for license classification is the service that will be provided. For example, a VSAT[6] license does not exist. In that case, the license that would be issued would be dependent on whether a private network or a public network is being proposed. VSAT could be the technology employed to provide the service.

Within this context, four (4) license categories have been developed within ECTEL:

Individual License	The services that fall under this license are generally infrastructure-oriented. Those services often provide the network foundation upon which other services (such as Value-Added Services) can be supported.
Class License	
Type A	The services that fall under Type A Class License are those for which applicants seek to be providers of telecommunications services, such as Internet Service Provision and International Simple Voice Resale.
Type B	The services that fall under Type B Class License are those for which applicants would be users of telecommunications services. They include Amateur Radio, Land Mobile Radio, Maritime Mobile Radio and Aeronautical Mobile Radio Services.
Type C	The services that fall under Type C Class License are those that can be construed as other support services and controls for the sector. They include Type Approval, Terminal Equipment Dealer's Certification and Customer Premises Wiring.
Frequency Authorization License	This is an ancillary license, which would be required in addition to the Individual or Class License for wireless applications or services that require use of the spectrum. In some cases, specifically for services under Class License Type C, the requirements for an Application for Frequency Authorization are satisfied within the respective license application forms.
Special License	This is a special license to be issued under the discretion of the Minister and only for emergency or exigent circumstances. These licenses are not to exceed ten (10) days.
Source: www.ectel.info	

Malaysia's[7] regime identifies service providers, infrastructure providers and content providers.

Kenya's[8] new licensing regime, as announced in September 2004, aims to adopt a unified and absolute technology neutral licensing framework that permits any form of communications infrastructure to be used to provide any type of communications service that it is technically capable of providing.

5 For more information see: http://www.ectel.info

6 VSAT – Very Small Aperture Terminal

7 For further information see: http://www.cmc.gov.my

8 For further information see: http://www.cck.go.ke

Kenya will introduce this regime gradually, meaning that in the next two to five years period, the Communications Commission of Kenya will create the following distinct and technology neutral market categorization:

- Network Facilities Provider (NFP) - who shall own and operate any form of communications infrastructure (based on satellite, terrestrial, mobile or fixed).
- Applications Service Provider (ASP) - to provide all forms of services to end users using the network services of a facilities provider.
- Contents Services Provider (CSP) - to provide content services such as broadcast (TV& Radio) material, and other information services and data processing services, etc.

The Telecommunications Regulatory Authority of India (TRAI)[9] has also adopted recommendations for its future licensing framework as follows:

- Unified License for all public networks, including switched networks, (irrespective of media and technology,) capable of offering voice and/or non-voice (data services) - Internet telephony shall be covered under this category.
- Class license for all services (including satellite services which do not have both way connectivity with the public network). This category excludes the Radio Paging Service and the Public Mobile Radio Terrestrial Service (PMRTS) and includes Niche Operators. (The concept of niche operators is being included to promote growth of telecommunication services in rural /remote /backward areas from a teledensity point of view).
- Simple authorization to cover services for the provision of passive infrastructure and bandwidth services to service provider(s), radio paging, PMRTS and Internet services, including existing restricted Internet telephony (PC to PC, SIP device to SIP devise using lease line only and PC to phones-phones outside India only) but not Internet telephony in general.

This licensing framework shall be hierarchical in nature with unified license being at the highest hierarchical level. Such a licensing regime would enable a licensee to provide any or all telecommunication services by acquiring a single license.

Migration to a Unified License Regime (ULR) will be optional at this stage. However, after a period of five years when there shall be a nominal registration charge (entry fee of Rs 30 lakhs), it shall be mandatory for all telecommunication operators to migrate to the ULR. All new service providers shall be licensed under the new ULR. Reselling is not permitted at this stage.

Apart from the categories listed above, there are also more ways to authorize particular types of services or service-provision – these include:

- **Geographically-based licenses** (India's circle regime; Brazil's regions, etc.). Some countries, typically large one such as Brazil, India and the United States, divided their telecommunication markets into specific regions for the purposes of licensing. However, recently, perhaps as a result of convergence, many countries have moved away from regional licenses and are taking a more national approach. TRASA[10] is also looking into a regional license to speed up market entry across the region.
- **Licenses for rural or universal access providers**: South Africa has such licenses according to the Balancing Act Issue 198 of 7 March 2004; Digitel, one of the mobile operators in Venezuela also has a Rural Telephone Service license

---

9 See: http://www.trai.gov.in

10 For further information see: http://www.trasa.org.bw

- **Spectrum-based licenses** (GSM, PCS, 3G, etc).

3.3 Regional Trends

3.3.1 The Role of Regional Organizations in Licensing

The role of ICTs for regional integration and cooperation has gained considerable attention. As a result, Regional Economic Communities (RECs) are taking a leading role in regional consultations and studies such as harmonization of policies, regulatory frameworks, infrastructure etc. as in some of the examples below.

Some regional economic communities in Africa have already begun initiatives designed to increase cooperation on ICT regulatory activities. For instance, the Economic Commission of West African States (ECOWAS) has created the West African Telecommunications Regulatory Association (WATRA)[11] designed to pool best practice in ICT regulation within the region and to harmonize policies. Similarly, the South African Development Community (SADC) has made good early progress in policy harmonization through their Telecommunications Regulators Association of Southern Africa (TRASA). TRASA, for example, is developing joint frequency spectrum planning and model policies and legislation. The Common Market for Eastern and Southern African (COMESA)[12], a 19-country association with a combined population of approximately 300 million people, has established a Model ICT Policy and Legislation Document as well as Regulatory Guidelines relating to a number of issues, including licensing.

A number of these models have been used to draw up national legislation that is in harmony with the economic community. The associations for West Africa and East and Central Africa have made much headway, and discussions have started in the other regional economic communities. When fully operational, it is expected that the associations will facilitate sharing of resources for education and training to build the needed skills for the sector; sharing of facilities for type approval; and "one-stop-shop" capacity for licensing cross-border network operators, for example, those using very small aperture terminals (VSAT).

3.3.2 Examples of Regional Organizations in Africa

The enlargement of the European Union is maybe the best example of global attention towards the agenda of regional cooperation and integration. In Africa several initiatives have been gaining momentum, particularly in the field of Information and Communications Technologies (ICTs). The transitions from the Organization of African Unity to African Union and the recent proposal for a New Partnership for African Development (NEPAD) have re-ignited the interest in regional cooperation in Africa.

Fresh global initiatives like that of the Millennium Development Goals and the rising information society on global agenda are also driving regional cooperation. Both the Millennium Development Goals (MDGs) and the World Summit for Information Society (WSIS) have called for enhanced regional cooperation. Regional economic communities like the Southern African Development Community (SADC) and Economic Community for West African States (ECOWAS) are some good examples of clear progress being made in regional cooperation and harmonization.

---

11 For further information see: http://www.watra.org

12 For further information see: http://www.comesa.int

3.3.2.1 UEMOA/WAEMU

The West African Economic and Monetary Union (UEMOA/WAEMU)[13] is made up of eight countries which, after using a common currency, the CFA franc, for several decades, decided to strengthen their monetary cooperation by adding an economic component.

In this respect, the Union set itself four main objectives designed to achieve a wider aim, namely, to strengthen competitiveness in economic and financial activities in the member States, in the framework of an open, competitive market and a rationalized and harmonized legal environment.

One of these four specific objectives is the creation of a common market based on free movement of people, goods, services, capital and the right of residence, as well as a common external tariff (CET) and a common trade policy.

In bringing about this common market, UEMOA embarked on a series of reforms in May 1996, the date of the Conference of Heads of State and Government, which led, in particular, to the conversion of the area into a customs union on 1 January 2000.

The UEMOA Council of Ministers adopted in 2001 a recommendation on a programme of action for improving ICT infrastructure and services in UEMOA. This recommendation aims at harmonizing the regulatory frameworks, the creation of a committee of regulators, and a forum of operators and service providers.

UEMOA is also working on a number of harmonization Directives in the Telecommunications Field.

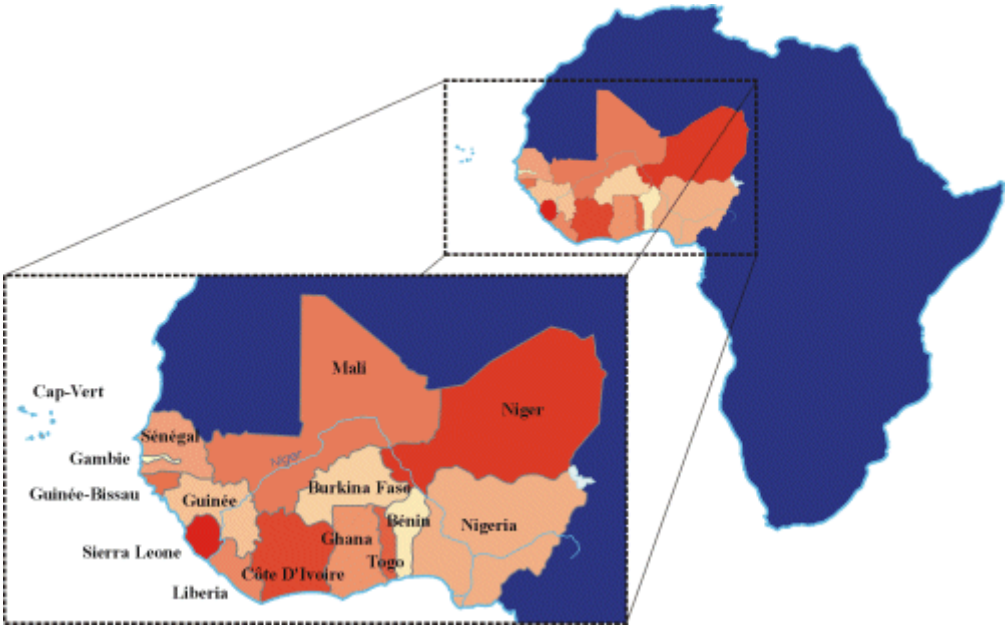
3.3.2.2 ECOWAS

The Economic Community Of West African States (ECOWAS) [14]is a regional organization founded in 1975. Its mission is to promote economic integration in *«all fields of economic activity, particularly telecommunications, industry, transport, energy, agriculture, commerce, natural resources, monetary and financial matters, social and cultural issues, ...»*. The primary objective of the ECOWAS is the constitution of a West African market and of a monetary union by 2005.

---

13 See: http://www.uemoa.int

14 See: http://www.ecowas.int



The member states have reached today the number of 15 and comprise Benin, Burkina Faso, Cape Verde, the Ivory Coast, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, the Sierra Leone and Togo.

In order to facilitate the harmonization of national sectoral policies, the ECOWAS Council of Ministers established an ECOWAS Consultative Regulatory Committee for Telecommunications to ensure the consistent and coordinated regulation of telecommunications within the Community.

All ECOWAS countries except one have separated Post and Telecommunications activities, and initiated the liberalization of the sector. Ten Countries from Fifteen have established Telecommunications Regulation Authorities, and a process has been started for Telecommunications Regulation Harmonization with the creation of the West Africa Telecommunications Regulators Association- WATRA. An action Plan has been formulated for the Telecommunications Harmonization process in Sub Region.

ECOWAS Treaty Provisions on Telecommunications

CHAPTER VII – CO-OPERATION IN TRANSPORT, COMMUNICATIONS AND TOURISM

Article 32 – Transport and communications

1 For the purpose of ensuring the harmonious integration of the physical infrastructures of Member States and the promotion and facilitation of the movement of persons, goods and services within the Community, Member States undertake to:

a) evolve common transport and communications policies, laws and regulations;

...

Article 33 – Posts and telecommunications

…

2 In the area of telecommunications, Member States shall:

a) develop, modernize, co-ordinate and standardize their national telecommunications networks in order to provide reliable interconnection among Member States.

b) complete, with dispatch, the section of the pan-African telecommunications network situated in West Africa.

c) co-ordinate their efforts with regard to the operation and maintenance of the West African portion of the pan-African telecommunications network and in the mobilization of national and international financial resources.

3 Member States also undertake to encourage the participation of the private sector in offering postal and telecommunications services, as a means of attaining the objectives set out in this Article.

Source: http://www.ecowas.int

In addition to the Treaty, ECOWAS Ministers have as priority, resolved:

- To harmonise local regulatory frameworks and institutions.
- To evolve a regional regulatory framework - The ECOWAS ICT Task Force has been established to harmonize ICT policies of member countries.
- To encourage competition.
- To facilitate the building of a Regional Backbone Infrastructure that is robust and big enough to support seamless cross-border connectivity.
- The installation of fibre optic cable on power lines that carry electricity supply between countries (where they exist) must be made mandatory to reduce costs associated with rights of way.
- Investors who have interest in setting up operations in several countries in the region should be accorded priority status in the Issuance of Operating Licences.

ECOWAS is carrying out a number of projects, including the ECOWAS Telecommunications Harmonization Project which includes the creation of a plan and draft timetable for harmonizing telecommunications policies in ECOWAS. A study which discusses various harmonization models and presents recommendations to achieve a harmonized telecommunications sector in the ECOWAS region has been carried out.

3.3.2.3 WATRA

The West African Telecommunication Regulators Assembly (WATRA)[15] was formed in 2002 with the purpose of establishing cooperation among West African States regarding telecommunications regulation. It is intended to promote the continuing development of ICT in the West African sub region. Another consideration was the fact that if the countries in the region were to have any significant input into the molding of the global telecommunications environment now and in the future, there is a need for a platform for coordinating regional positions prior to their participation in global ICT conferences.

It is the intention of WATRA that the body will grow to become a leading forum for regulators in the region to exchange ideas and formulate plans regarding regulatory and technical issues that will accelerate development of infrastructure across the region. WATRA also seeks to encourage uniform standards that will facilitate the deployment of interoperable ICT systems and services and therefore accelerate infrastructure development across the region. With WATRA, more countries are likely to benefit from limited resources available for developing regulatory frameworks aimed at promoting ICT Sector development.

Challenges facing ICT regulation in the Region include:

- Harmonizing existing national ICT Policies, including regional spectrum, licensing, etc.
- Evolving common principles for interconnection, universal access, etc.
- Establishing common responsibilities for NRAs.
- Safeguarding the interest of citizens (control of content, maintaining standards, etc).
- Encouraging investments to develop infrastructures & networks for access to services & information.
- Using ICTs to reduce barriers of distances among the dispersed populations.

Against this background, the objectives of WATRA have been defined as:

- Harmonize local regulatory frameworks and institutions.
- Evolve the regional regulatory framework.

3.3.2.4 SOUTHERN AFRICAN REGIONAL ORGANIZATIONS[16]

The Southern African Development Community (SADC)[17] is the most advanced of all of the regional economic communities when it comes to ICT related activities. From inception, SADC has been keen with communications. It has created the Southern Africa Transport and Communications Commission (SATCC), which is directly funded by member states. In August 2001, the SADC Summit adopted a Declaration on Information and Communication Technology (ICT) and created a task force to transform the policy document into an Action Plan consisting of policy measures to transform SADC into an information based economy.

The SADC Committee of Ministers has also established an e- readiness Task Force (composed of representatives of the public sector, industry, and academia) that has prepared a comprehensive report on e-readiness status in SADC and a Plan of Action.

---

15 See : http://www.watra.org

16 Source: Lishan Adam , " ICTs and Regional Cooperation in Africa – Implication for CSOs," Centre for Knowledge Dynamics and Decision Making, Department of Information Science, University of Stellenbosch, South Africa at http://www.ssrc.org/programs/itic/publications/knowledge_report/memos/adammemo2.pdf

17 See: www.sadc.org

Other activities of SADC in the area of ICTs include:

- the adoption of a SADC Protocol on Education and Training that promotes the use of ICTs in curriculum development and teaching and learning.
- the Southern African Transport and Communications Commission (SATCC) Model Regulatory Framework for Telecommunications that was issued in 1998 and which paved the way for enabling regulatory framework in the region. Of the 14 member states, 11 have operating policies and autonomous regulatory authorities.
- The creation of the Telecommunications Regulatory Association of Southern Africa (TRASA)[18] to promote regulatory harmonization in the region. TRASA developed a Model Telecommunications Bill within the spirit of the WTO Basic Reference paper on telecommunications regulation. It has issued guidelines on interconnection, tariffs and a frequency band plan for the 2.0MHz -30.1GHZ band range. TRASA has also produced draft guidelines on universal access and services, licensing fair competition and wholesale pricing. It is currently developing guidelines in the area of wireless and satellite regulation. The Association has also developed a partnership with NetTel@Africa; an E-learning platform for training regulators in aspects ranging from ICT applications to spectrum management.

The Common Market for Eastern and Southern Africa is another regional group that has cooperated closely and invested much time and energy into ICTs development in the region. In 1998 COMESA established a regional telecommunications network, known as COMTEL, with the aim of facilitating increased trade relations within the region of eastern and southern Africa.

COMESA has also been actively building the capacities of its member states to harness ICTs for harmonizing and upgrading crossborder information systems in transport, customs, import/export and trade.

Besides building capacity, COMESA also provides technical assistance in several areas, including customs data management, network connectivity and tariffs.

More recently, COMESA has initiated programmes to harmonize ICT policies in the region as a basis for creating large markets to attract foreign investment to the region. Within this context, and following the example of SADC, COMESA has drafted and published a Model ICT policy and licensing rules and frameworks. It has also established an Association of Regulators of Information and Communication in Central and Eastern Africa (ARICEA) to stimulate regulatory harmonization. This association is inspired on the experiences of the Telecommunications Regulators Association of Southern Africa (TRASA).

3.3.3 National Licensing Practices in the ECOWAS Countries

3.3.3.1 General Regulatory Environment in the Region

At present, all ECOWAS countries have a draft telecommunication act, although some have not drafted or approved a Policy Document. With the exception of Sierra Leone, the Gambia and Liberia, all of them have now approved some form of basic telecommunications law. In terms of transparency and availability of information, where the National Regulatory Authority (NRA) has a web-site, then some form of Basic Law is usually published. This is the case for Burkina Faso, Ivory Coast, Guinea Bissau, Mali, Nigeria, Senegal and Togo.

Nigeria has made a particular effort to publish all information regarding its legal and regulatory framework, including all licenses (class and individual) and the licensing guidelines. Mali, too has

[18] See : www.trasa.org

embarked on a program of liberalization and effective regulation of the sector. Senegal has seen the end of the monopoly of the incumbent and the regulator is carefully analyzing the sector and related issues, consulting stakeholders and pulling in expertise on issues such as universal service, interconnection and especially on the mechanisms to allow full liberalization of its market – to the extent even of analyzing the unified licensing model.

Major changes in the Western Africa Telecommunication Sector took place in 2004, with countries like Senegal and Cote d'Ivoire facing the end of the monopoly of the incumbent and Nigeria and Ghana introducing new licensing and regulatory frameworks to accommodate convergence and make their respective markets more attractive to investors.

In Ivory Coast, for example, the monopoly on fixed telephony, telex and international expired on 2 February 2004. On 22 January 2004, Ivory Coast adopted a Decree specifying transitory measures for the sector, including the recognition of the need for the adoption of a new legal and institutional framework for the sector which would be better adapted to a competitive marketplace. The transitory measures also stipulated that the existing legal and regulatory framework would remain in force until the new framework is adopted or at the latest until 20 December 2004. During this period no licenses or authorizations will be granted to new operators.

The Western Africa sub region continues having countries whose Regulatory Authorities are attached to the Ministry's structures and remain financially and organizationally dependent from their (tele)communication Ministry.

During 2003, Cape Verde passed in the parliament laws for the creation of two separate regulatory bodies. One will be in charge of all Telecommunication technical issues (to be named: Instituto das Comunicações de Cabo Verde) and is to be attached to the Ministry in charge of the Telecommunication sector, and the second one (to be named: Agência de Regulação Económica) that is multi sector, in charge of all telecommunications economic matters. This last one is attached to the Ministry of Finance.

Ghana has also reviewed the telecommunication structure at the Ministry level. The former Ministry of Communication and Technology has now been split. The Ministry of Telecommunications is in charge of the telecommunication sector only. This new Ministry has a main priority on creating mechanisms and incentives to attract investors to the rural areas. Matters related to ICTs have been transferred to the Ministry of Science and Technology.

The Gambia announced the creation of a multi sector regulatory body – such has not yet been established as of this date.

3.3.3.2 Trends in Telecommunications Licensing in the Region

Telecommunications licensing and its accompanying regulation in the region is in different phases of development and regulation, with some countries (e.g. Cape Verde and Guinea Bissau) still caught in long-term contracts with the incumbents (signed for 15-20 years during the late 1980's and 1990's usually at the time of privatization of the incumbent) and providing them almost total if not a total and blanket exclusivity on all public networks and services, others (such as Sierra Leone and Liberia) not only coming out of difficult times of armed conflict with little or no infrastructure left, but also in unmanaged situations with too many "licenses" granted without any appropriate policy framework or indeed without any or at least any appropriate legal and institutional basis or framework, and others (for example Nigeria and Senegal) following and indeed setting the example of international best practices regarding effective regulation, particularly as concerns the liberalization of the sector and in their handling of the transition to a competitive market situation. Mali has adopted a unified licensing regime.

The following paragraphs give an overview of the situation of each country in the region as regards licensing and summarize the major issues as identified during the analysis.[19]

BENIN

Since 1988, the legal and regulatory framework of the Republic of Benin has gradually evolved towards the liberalisation of the telecommunications sector, with certain activities being opened up to competition.

In June 1999, the Government adopted its strategic policy for the sector[20], which included the following major points :

- the decision to separate post and telecommunications and to operate each activity separately;
- the decision to partially privatize the incumbent telecommunications operator, OPT. As such, the government decided to sell 30% of the shares of OPT to a strategic partner (which was yet to be decided), keep 20% within government hands, sell 12% to OPT employees and 38% would be capitalized within the Bourse Régionale des Valeurs Mobilières (BRVM);
- the option of allowing a second national operator for the fixed telecommunications sub-sector was kept open.

In order to implement this policy, government adopted two texts on January 31, 2002, being:

- The Law foreseeing the creation of the Autorité de Régulation des Télécommunications (ART)[21]; and
- A Basic Telecommunications Law, which defined the basic rules relating to the establishment, management and offer of telecommunications services, confirmed the liberalization of the sector, promoted fair competition, defined the legal regimes relating to telecommunications services, etc. The Basic Law in its Article 35 also set a deadline for the end of the exclusivity of the incumbent and thus to open the sector fully to competition.

Despite the adoption of these texts, at present, the telecommunications sector is still structured around two major players : the Ministry of Communications and of the Promotion of New Technologies, and the incumbent, the Office des Postes et Télécommunications du Bénin (OPT). The Ministry is responsible for the definition of sector policy. The Ministry also grants licenses.

Despite delays in implementing its policy and in creating the institutions it has foreseen, Benin has three private mobile networks whose combined connections exceed fixed lines by almost 6:1. A fourth mobile network launched in December 2003. While the country's fixed-line infrastructure is completely digital, it serves less than 1% of the population and severely hinders adoption of the Internet. Envisaged sector changes still include the unbundling of the national operator and privatisation of the resultant entity charged with provision of basic telecom services.

VoIP is not allowed in Benin since this is seen to be a service still under the OPT's exclusivity.

The provision of Internet Access is not within the monopoly of the OPT and a few ISPs have entered the market since 1997. Several other private internet service providers are also operational,

---

19 Information on each of the countries' licensing regime has not been readily available from the countries despite requests addressed to different actors and stakeholders – such information may be validated and completed at the time of the seminar.

20 «Note de stratégie de réforme du secteur des Postes et Télécommunications» of 9 June 1999

21 Our research has shown that this Agency has not yet been created to date

and they offer access through switched telecommunications network (STN), local radio loop, or VSAT satellite

There are several internet service providers including OPT, the traditional government operator (www.opt.bj); Firstnet (www.firstnet.bj); Sobiex informatique (www.sobiex.bj); Espace Informatique et Télécommunications (EIT) (www.eit.bj); and Unitec-Bénin, Afripa-Télécom. The latter offers VSAT; Firstnet offers dial-up solutions as well as permanent radio connections (local radio loop) through UNITEC-Bénin (like OPT);

a new operator Global Trading Agency also offers acces via satellite http://www.globaltradingagency.biz/fr/INDEX.htm. The Campus Numérique Francophone (Francophone Digital Campus) (www.bj.refer.org) provides connectivity to the university community; whilst the Ministry of Planning (http://www.planben.gouv.bj) connects the government.

Permanent connections (by radio or cabled links) are in use by some large businesses like banks, international institutions, and service providers, and also some cybercafés. The speed of these connections varies from 64 kilobits/s to 1megabit/s. OPT has about 20 permanent connections (cable and radio), and Firstnet at least ten (only radio). There is also a Distance Education Centre that offers its customers a 512-kilobits/s satellite connection.

BURKINA FASO[22]

Despite ranking among the poorest countries in the world, Burkina Faso's telecommunication operator re-invests in the network and registers steady, though low growth in its teledensity. In stark contrast, mobile telephony has experienced outstanding growth in the past few years, with subscribers to the three digital networks passing the number of fixed-line connections during 2001. The telecommunication sector is still undergoing transformation and the privatization of the national operator is foreseen.

In Burkina Faso, Law No. 51/98[23] on the Reform of the Telecommunications sector initiated the liberalization process. This law was drafted with the goal to promote telecommunications as an economic, social, and cultural development instrument through the:

- Introduction of competition in the sector to facilitate access to new telecommunications services for users.
- Improvement of public service through better national coverage of basic telecommunications services.
- Protection of the interests of users and national security as they relate to the telecommunications sector.
- Implementation of universal service principles by providing basic services at reasonable prices.

This law changed the face of the telecommunications sector in Burkina Faso, opening the sector to private operators.

A national regulator, ARTEL (Regulatory Agency for Telecommunications), was established in December 1998. It has granted two operating licenses and resolved several legal cases – in favor of private operators. ARTEL ruled that private operators should get the same benefits as other

---

22 Source: Deloitte, Touche and Tohmatsu Study, 2003. "*Harmonization of Telecommunications Policies in ECOWAS – Country Case Studies: Burkina Faso*"

23 See also: http://www.artel.bf

providers, such as reduced international tariffs at certain times of day, and that all the services should be accessible from public phone booths.

Three actors make up the telecommunications sector: ONATEL (the National Telecommunications Office), with its mobile subsidiary Telmob, and two private mobile services, CelTel and TeleCel. Eighty-one per cent of Burkina Faso's telephone lines are in the capital Ouagadougou, and only 170 of the 300 districts in the country are covered by a fixed telephone connection. At present, ONATEL remains under state control. ONATEL was partially privatized in 1998 and was given a monopoly on fixed lines, fax, telex, telegram, international links and satellite access until December 2005 so as to allow the company time to adapt to a competitive market situation.

Telmob, the mobile subsidiary of ONATEL, was established in 1996, and has approximately 37 per cent of the mobile market.

Of the two private operators, CelTel (a subsidiary of MSI Cellular Investments Holdings BV) launched operations in Burkina Faso in January 2001 and covers 24 regions. It is estimated to have acquired 40 per cent of the market share. TeleCel (part of the Atlantic Telecom group of Ivory Coast), on the other hand, began its operations in Burkina Faso in December 2000 and now has 22 per cent of the market share.

The majority of capital in these companies is private. The investment policy of Burkina Faso was designed to attract foreign investment – companies get tax exemption for the first five years and can repatriate profits.

The arrival of mobile telephones produced a boom in the telecommunications sector. ONATEL limited its opening of lines saying it wanted to allow the new operators time to get established. But at the same time it constrained them in several ways: public services were only allowed to subscribe to TelMob, public phone lines could only call TelMob numbers and private operators had to pay more for access to international lines.

Licensing procedures are very clearly established in Burkina Faso. Rights to install and operate telecommunications networks are granted based on a competitive process. The stipulations and conditions are defined by the Minister of Telecommunications. The evaluation of proposals is completed by an evaluation committee. The authorization is granted by the Minister of Telecommunications, and can be revoked or canceled by the Minister, either with the agreement of the concerned operator, or if the concerned operator received notification to suspend activities by the regulator.

Teleceland and Celtel (private mobile operators) received their licenses under the conditions listed above, while Telmob (the mobile services arm of ONATEL) operates without a license – a situation strongly disliked by the private operators. Another pending issue is that ARTEL has been unable to solve ONATEL's refusal to pay licensing fees because the Government owes ONATEL unpaid bills. The private operators have paid their licensing fees regularly – thus this issue clearly shows ARTEL's (lack of) financial independence and its (in) ability to regulate the sector effectively.

CAPE VERDE

Cape Verde has made striking progress in growing its telecommunication sector and became the Least Developed Country (LDC) with the highest telephone density in 1996, a position it still holds.

Cabo Verde Telecom (CVT), the monopoly operator, has performed well and provided the country with an up-to-date telecommunication infrastructure. Nonetheless, there are the inevitable consequences of a monopoly situation, including higher prices, shortage of ancillary firms and deficiencies in innovation. In Cape Verde, the mobile base only accounted for 33 percent of all telephone subscribers at the end of 2001, one of the lowest rates among LDCs and among African

nations.[24] Although this is partly due to the country's relatively high fixed line density, it also suggests restricted growth in the mobile sector. The Internet faces similar barriers and considering the advanced state of its infrastructure, it is surprising that Cape Verde does not have a higher level of Internet penetration, which stood at 2.7 percent at the end of 2001. Although there is a high level of Internet awareness among senior officials and many civil servants use the government intranet, the level of awareness among the population needs to be raised. There are also very few public Internet access locations.

In two sectors - mobile and Internet access - Cape Verde's prices are above comparator countries and keep the country from fully benefiting from these technologies. At the end of 2001, there were around 32'000 mobile subscribers for a penetration rate of seven percent.

To consolidate the gains made from infrastructure developments and to move to a higher level, Cape Verde needs to open up the market to liberalization and solve the problems linked to the legal restrictions in the ICT sector. While CVT has a legal monopoly until 2021, there are a number of arguments and urgency for introducing competition now.

By the year 2000, CVT, by providing at least one telephone in all 241 communities with more than 200 inhabitants, fulfilled its universal access obligation. In spite of the difficult topographical conditions of the islands, CVT in some cases even installed telephones in villages with less than 200 people. In addition, CVT has covered most of the country with a GSM mobile cellular network.

Telecommunication services in Cape Verde are a legal monopoly of Cabo Verde Telecom (CVT) with the concession running until 1 January 2021. CVT was created in 1995 when postal services were spun off from CTT-EP. It was partly privatized in December 1995 when 40 per cent was sold to Portugal Telecom for US$ 20 million.

Cape Verde had the world’s fourth fastest growing telephone network between 1990 and 2000 (after Vietnam, China and Cambodia) raising teledensity from 2.4 in 1990 to 14.3 in 2001. Mobile cellular communications came relatively late to Cape Verde. Unlike many other nations, analogue mobile technology was never introduced. CVT launched its digital mobile (GSM) network in late 1997. The main reason for the limited success of mobile is the lack of competition. Here, Cape Verde is in a distinct minority. At the end of 2001, 65 per cent of countries in the world had competitive mobile markets. There is no legal barrier to mobile competition as this service is not included in CVT’s exclusivity. However, the lack of an interconnection system and doubts about a potential competitor being able to offer international services have delayed the introduction of competition.

The Atlantis-II fiber optic submarine cable and Intelsat satellite assure Cape Verde’s international communications. CVT is one of 8 co-owners of the cable which has a landing point in Praia at CVT’s headquarters.

Any Value Added Service provider[25] may operate in Cape Verde. The appropriate authorization will be issued on request and on a case-by-case analysis. The service,

however, must be offered according to the terms and conditions of the applicable laws and regulations. For Internet Service Providers a simple government authorization as indicated in article 3 of Governmental Order 69/95 is sufficient.

---

24 Source: http://www.itu.int/ITU-D/ict/cs/capeverde/

25 Decree 70, approved 20 November 1995, establishes terms and conditions for Value Added Services. Article 2 of the Law defines Value Added Services as: “all telecommunication services whose unique support is the basic telecommunications services or complementary services, and do not require separate infrastructure but are different from the support conducting services”

The regulation of the Internet in Cape Verde foresees a Code of Practice, which all ISPs must subscribe to and respect. Informative services must be differentiated from commercial ones and from those for entertainment. Interesting to note though is that ISPs are not allowed to use leased circuits or dial up connections offered by the incumbent operator for any other use than the one they have been requested for.

The Basic Law for Communications establishes in article 26 that the incumbent operator must interconnect all other telecommunication operators under the same competitive conditions. The incumbent operator may not take any measures that could inhibit competition in Cape Verde and is forbidden to either abuse its power or use dominant behavior.

CÔTE D'IVOIRE[26]

The telecommunications sector in Côte d'Ivoire has undergone transformation and liberalization. Three mobile operators, all licensed in 1996, had by mid-2003 connected almost 1.1 million subscribers, more than three times the number of fixed lines implemented by CI-Telecom. Owing to the high cost of access and availability of fixed-line infrastructure, Internet penetration, especially for individuals, remains very low. Major changes, including the licensing of a second fixed operator and further divestment by the government from CI-Telecom took place in 2004 after the CI-Telecom's monopoly ended.

In Côte d'Ivoire, the incumbent as well as the mobile operators are owned in majority by foreign investors. Liberalization of the fixed-line sector is ongoing, and was launched in 1997 when the incumbent was privatized and a concession contract was signed with France Telecom. The concession granted a seven-year exclusivity period to the incumbent. Exclusivity for the international gateway was also granted up to 2004.

Côte d'Ivoire has made the following commitments under the General Agreement on Trade and Services' (GATS) Basic Telecommunications Agreement:

- Voice telephony service over fixed network infrastructure and telex are reserved to monopoly provision for seven years but will thereafter be opened to unrestricted competition.
- Full competition (without phase-in) beginning in 2004 will be offered for all other basic telecommunications services including data transmission, all mobile networks and services, video transmission services and satellite services, links, capacity, and earth stations.
- The Reference Paper on regulatory principles.

Despite the fact that Côte d'Ivoire seemed to be preparing for the post-2004 period, the regulatory framework still needs significant revisions if it is to meet these commitments.

The first three cellular operators in Côte d'Ivoire were selected informally. Prior to 2001, they operated based on temporary authorizations granted by the Government. These authorizations were granted without any fee or deposit.

However, Law No. 2001-339 of July 14, 2001 instituted the payment of a fee for the final granting of a license. Decree No. 2001-409 of July 5, 2001 fixed the amount (USD 57 million) and payment clauses for the granting of a license to operate a network, and anticipated granting a fourth license to operate a wireless network through a public auction.

---

26 Source: Deloitte, Touche and Tohmatsu Study, 2003. "*Harmonization of Telecommunications Policies in ECOWAS – Country Case Studies: Cote d'Ivoire*"

When Law No. 2001-339 came to effect, operators already present in Côte d'Ivoire were given three months to pay the licensing fee for their 900/1800 MHz frequency. The operators were required to pay 40% of the fee when the license was granted, and the remaining 60% over a two-year period. The schedule was to be negotiated with the Government. The resulting agreements were approved by an order from the Ministries of Communications and Finance, as required.

The regulations did not specify a timeframe for issuing the licenses.

Operators currently pay a management fee to ATCI of 0.5% of revenues, a 2% fee toward a Universal Access Fund (Fonds de Désenclavement), and a 0.5% for training in the sector.

GAMBIA

Although Gambia has had a 100% digital network since 1995 its fixed-line penetration remains low with less than 50% of demand met. Gamtel, the incumbent operator, is still government-owned and provides virtually all telecommunication services. The country's two mobile networks – operated by Gamtel and Africell Gambia – together had less than 74,000 subscribers at the end of 2002. An equally small Internet market is served by four commercial ISPs.

Until present, there has been no clear and consistent policy on licensing in the Gambia – the cost and number of licenses, the actual licensing procedure and the text of the licenses depend on political influence and willingness, and are determined in a legal vacuum and on a case by case basis. Despite the fact that the (tele)communications industry has undergone significant changes, the present situation is still one that lacks clarity.

Indeed, the existing legislation still pertaining to telephone and telegraphy are to be found in outdated texts, being:

– The Telegraphs (Message Protection) Act 1887.
– The Telegraph Station Act 1913.
– The Telephone Act 1950.

At present, two licenses exist for the provision of mobile telephony, including one that is held by GAMCELL (a subsidiary of GAMTEL) and another by AFRICELL. Various licenses have also been granted to ISPs and to certain entities for the use of VSATs.

No licenses, authorizations or procedures exist as regards callback and VoIP, although it is believed that such services exist.

The situation as regards the licensing of mobile telephony is such that both mobile licenses were granted without any form of market analysis to decide on the appropriate number of licenses, nor was any consideration given to the availability of spectrum, nor was there an objective selection process.

Although a license for the establishment and operation of a GSM 900 network has been granted to GAMCELL, no clear policy has yet been defined as to the licensing of the incumbent, nor has anything been defined regarding the definition of possible new rights and obligations of the operator, nor has a timetable been fixed as regards the future monopoly rights of the incumbent. Nothing has been foreseen in the draft Telecommunications Bill regarding this issue.

These licenses seem to have been granted within a legal vacuum and seemingly on a case-by-case basis without solid legal grounding, and as such do not carry the legal weight which they should. No analysis has been made as to the size of the market, nor of the availability of spectrum for services.

Although existing interconnection agreements are generally and theoretically in line with international standards, they are not properly applied nor respected and the legal vacuum in which

telecommunications operators must function today increases business risk and affects both their financial and operational performance.

There have already been a number of difficulties within the context of the competitiveness of the mobile market, and the relationship with the incumbent operator. Examples have included controversy regarding the licensing fees[27], and issues regarding interconnection between one of the mobile operators in particular and GAMTEL. Furthermore, until today no legal measures have been taken to monitor or act against companies operating without licenses, largely because of the absence of an appropriate legal framework governing the sector, but also because of lack of enforcement by the authorities.

As a result, new market entrants and potential sector investors are not obtaining a clear picture regarding market and licensing conditions, or operating parameters, including interconnection requirements with the incumbent telephone operator.

GHANA[28]

Ghana is one of only four African countries with a vastly liberalized telecommunication market. It led the way in telecommunications liberalization and deregulation in Africa when it privatized Ghana Telecom in 1996. Now, with two national operators and four mobile networks, annual growth has been significant, notably in the mobile sector where the number of lines exceeds fixed-lines lines by almost 2:1. The two national operators (Ghana Telecom and Westel) held a duopoly on international service until February 2002.

Since 1994, the number of fixed line telephone subscribers in Ghana has grown from app. 50,000 to 275,000 and, in the same period of time, mobile subscribers have gone up from a couple of thousands to more than 300,000. Ghana was amongst the first countries in Africa to achieve connection to the Internet.

All in all, this looks like a success story. However, the goals set by government have only partly been met – especially with respect to the development in rural areas – and the quality of service is still low and has even deteriorated on some indicators. There is, therefore, a widespread dissatisfaction with the general telecommunication development in Ghana among users as well as policy decision makers and administrators.

Ghana's efforts in deregulating and liberalizing its telecommunications services sector began in 1994 when the Ministry of Transport and Telecommunications launched the Accelerated Development Programme (ADP).

In terms of international telecommunications agreements, Ghana is a signatory to the WTO Basic Telecommunications Agreement (BTA). More specifically, Ghana is committed to:

---

27 Africell, for example, received a letter in 2003 from the Ministry doubling their yearly license fee without any previous notice or indeed without any explanation. They have tried to discuss this issue but feel that their arguments are not being heard

28 Sources: WDR Dialogue Theme 2003 - Discussion Paper for WDR (0305): "Telecom developments and investments in Ghana" Godfred Frempong & Anders Hentenat: http://www.regulateonline.org and Source: Deloitte, Touche and Tohmatsu Study, 2003. "Harmonization of Telecommunications Policies in ECOWAS – Country Case Studies: Ghana"

- Duopoly operators for the provision of local, domestic and international long-distance services, and private leased circuit services for an exclusive five-year period, which ends in 2002. Additional suppliers of local services can be licensed to supply underserved areas where duopoly operators have declined right of first refusal.
- Full competition in data transmission, Internet and Internet access (excluding voice) and teleconferencing.
- Mobile services (terrestrial and satellite-based) including mobile data services, fixed satellite services, paging and cellular with the reservation that cross-border voice services can only be supplied through commercial arrangements with the duopoly operators.
- The Reference Paper on regulatory principles.

In 1996 Ghana privatized its incumbent telecommunications firm by selling 30 percent of Ghana Telecom to Telekom Malaysia, licensing a second network operator, and allowing multiple mobile firms to enter the market. The reforms yielded mixed results and the outcome of the Program was not as expected, namely:

- Licence obligations were not met.
- Failure of Duopoly to introduce effective competition.
- Long waiting periods for new applicants for service.
- High access charges and corruption.
- Poor quality of service.
- Weak Regulatory Agency.
- Poor interconnection and spectrum management.

Landline telephone penetration increased dramatically while the number of mobile subscribers surpassed even this higher level of fixed line subscribers. On the other hand, the network did not reach the levels the government hoped, the second network operator never really got off the ground, and the regulator remained weak and relatively ineffective. The sustainability of competition is unclear. The government ended Telekom Malaysia's management of Ghana Telecom and has invited Norway's Telenor as a strategic partner. What this means in practice remains unclear, and the process for selecting Telenor lacked any transparency. Meanwhile, some of the mobile firms are in precarious financial positions. Competition is still relatively strong, but its sustainability will depend on the government's future commitment to ensuring it.

The expiry of the duopoly has paved the way for the licensing of more operators, promotion of competition and improved efficiency. Ghana is now re-addressing its policies and a draft National Telecommunications Policy has been drafted – this Policy looks to define a vision for the sector, including further liberalization in all sub-sectors of the Telecommunications Market, the definition of clear and transparent licensing procedures and the strengthening of the Regulator so that it may be effective in regulating the market and arbitrating among stakeholders in the sector, including government.

In Ghana, the National Communication Authority (NCA) is the authority responsible for issuing and managing licenses. Nevertheless, the existing regulatory framework (the Draft National Policy proposes a clear and transparent new framework and process for the future and includes guidelines on how to license the various activities) provides no detailed guidance on the licensing process, and the process is not transparent to the operators or the public. At this time, there are still no public license standards or a defined process.

Fixed-line and mobile operators require a license to operate, whereas value-added service providers like data processing, transmission and Internet service providers, do not need one. Fixed-line and

mobile operators are issued with operator specific licenses, also known as individual licenses.[29] They are usually a customised and detailed license document frequently granted through some form of competitive selection process. These types of licenses are used when a scarce resource such as spectrum is to be licensed and when the regulator or government has a significant interest in ensuring that the service is provided in a particular way. Operator specific licenses were issued to Ghana Telecom, WESTEL and other mobile operators outlining their rights and obligations.

A major issue with the liberalisation process related to the detailed identification of the existing and new rights of the incumbent, Ghana Telecom. The rights and obligations had to be adapted to the new sector policy and to the new regulatory regimes.

For example, Ghana Telecom was automatically granted a license for the operation of other value-added services such as data communications, ISP and mobile telephony.

The licensing of Ghana Telecom involved a process of negotiation between Malaysia Telekom and the Government, with no consultation of stakeholders at all as to the reform of the sector or regarding the rights and obligations of the incumbent under the new regime. Malaysia Telekom wanted to maintain as much exclusivity and market power as possible.

The second fixed-line operator WESTEL was also granted a license to operate fixed-line long-distance and domestic calls. The main difficulty it has faced over the years has been related to obstacles placed in its path by Ghana Telecom.

As part of the individual licensing process the Government auctioned off spectrum licenses. Spacefon and Mobitel were among the winners. Cellular operators were required to use the required spectrum allocated to them as well as operating the cellular networks. One of the most important problems with licensing mobile operators has related to the form of licensing though since these operators aren't licensed but rather operate on a "letter of authority" issued by the NCA. This "letter of authority", which is not the same as an "authorization" or class license, authorizes the operators to carry out their telecommunications business within the confines of the law. The "letter of authority" serves as a continuing authority for the operators' business once the operator abides by the terms of the conditions therein. The implications are that unlike the license, the "letter of authority" does not spell out the obligations and rights of the operators particularly with regards to performance targets. These bare authorizations given to operators and the regulatory overlay that will most probably develop constitute a 'fault-line' in the telecommunications sector that will surely bring about disputes on contractual rights, retrospective derogations from contract, etc.

Fortunately, much of the uncertainty surrounding licensing is expected to be addressed with the new regulatory regime for the NCA. Part VI of this new draft regime talks a great deal about the regulatory framework for licenses and the licensing process, which will provide the NCA and the sector with a better regulatory tool that will bring greater transparency, clarity, and more certainty. For example, Section 100 of the NCAR draft Bill gives the NCA clear authority for "Cancellation or suspension of a license" as a result of non-compliance, non payment of license fees, making false representations, failing to keep a letter of credit when required, failing to fix a failure within 15 days, or because of liquidation.

Ghana has also drafted a new National Telecommunications Policy – under this Policy, further expansion of the telecommunications market will be encouraged through a process of active, phased liberalization of market segments.

---

[29] Source: *" 3G Mobile Policy: The Case of Ghana" by Chris Addy-Naayo* – the study is part of a series of Telecommunication Case Studies produced under the New Initiatives Programme of the Office of the Secretary General of the International Telecommunication Union (ITU). It can be found at http://www.itu.int

GUINEA BISSAU

The government of Guinea Bissau signed a 20 year concession contract with its strategic partner, Portugal Telecom, in 1989, basically giving the newly formed company blanket exclusivity over the provision of telecommunications networks and services in Guinea Bissau for the duration of the contract – 20 years. Following the end of the armed conflict, however, it was felt that the development of the telecommunications infrastructure and services offered in the country was insufficient– thereby putting Guinea Bissau far behind its neighbors. The government embarked on a deeper reform programme in 1999, adopting a Declaration of the Sectorial Telecommunications Policy, opting for liberalization and aiming to define a legal framework adapted to new realities and technologies within the sector at national, regional, and global levels. A number of Decrees were also adopted which are aimed at completing the Basic Law, and which deal with the following aspects:

(i) access to the activity of network operator and supplier of public-use telecommunications service.

(ii) statutes of government's consultative and regulatory bodies.

In addition, and in accordance with progress and requirements, other norms have also been adopted to complete the new legal framework. These include:

(i) the regulation of competitive bidding for granting of licenses for new operators (especially for mobile telephone services), and

(ii) the regulation of exploration of the different telecommunications services (especially for mobile telephone services).

An independent regulator, Instituto das Comunicações da Guiné-Bissau, (ICGB) was created by Decree Law of 20 August 1999. ICGB staff is minimal and recently a number of changes have been made to the Board of Administration, thus leading to uncertainty and lack of transparency about who regulates the sector and how.

The long-running dispute with Portugal Telecom over the ownership of Guiné Telecom. seems to have been settled in early 2004, with Portugal Telecom actively back and clearly anxious to protect any losses to its former monopoly. Some licenses have been granted to other players – unfortunately, however, there have also been unclear decisions and change of direction in the licensing policy.

Eguitel, for example, has five ten-year operating licenses covering: VoIP, VSAT, wireless network, ISP and telecommunications operator. Its founder launched the first cyber-café and web server in the country back in 1997. Eguitel was launched in 2001 and has developed a wireless network covering the capital city Bissau and surrounding areas. The second mobile operator Spacetel (owned by Canadian Investcom) has had a license since 1996 but for reasons of civil war and interconnection has only just set up for business. Previously the incumbent Guiné Telecom (which has hastily launched its own mobile operation) had refused to interconnect with Spacetel leaving it in the cold. However when this dispute was finally[30] settled, Spacetel decided to use Eguitel for international calling. It struck a deal with Eguitel to use both its wireless networks and VSAT and VoIP connections to offer an alternative service to Spacetel. Working through Global Sat, it set up the necessary connections to create the new service for its partner. Spacetel's was offering SIM cards at between FCFA5-10,000, compared to its rival's FCFA 75,000 offering. It sold out of its 9,000 SIM card allocation in two days. By contrast, Guiné Telecom has 20,000 subscribers but estimates put the total addressable market at 100,000. But the deal with Spacetel seems to have

[30] See: http://www.balancingact.com

upset somebody, probably in Guiné Telecom. Only last week the regulator ICGB wrote a letter to Eguitel revoking its VoIP license saying that it had not paid some part of the license fee.

LIBERIA

Twelve years of civil war left Liberia's landline telephone system and broadcast television network in ruins. But the need for reliable and inexpensive communication by businesses and Liberian residents led to a growing market for pre-paid GSM mobile phones, rooftop satellites to access international television broadcasts and the Internet, and the proliferation of "mom-and-pop" Internet cafés charging just a few Liberian dollars to send email or browse the web.

The various business enterprises that sprouted to meet the communications needs in this devastated nation benefited the enterprises and residents alike, but this phenomenon left the telecommunication industry in Liberia in a disorderly state characterized by a virtual monopoly in mobile phone service, lack of regulation, higher costs then necessary, no reliable sources for business communications needs, and no long term telecommunications strategy.

Emerging from 12 years of civil war, the Liberia telecommunications industry is now at a critical stage. One path or another could tilt the entire industry towards the economic benefits of the wireless age or revert it to its previous unreliable and inefficient state.

Liberia lacks a clearly defined sector policy as well as guidelines for developing the sector and has not yet put in place any effective institutional and regulatory framework for the sector. The result is that a series of adhoc and often conflicting decisions have been made regarding sector growth and management, and there is little clarity in institutional responsibility for sector management and indeed a high level of inconsistency and frequency of changes in decisions made within the Ministry.

Liberia's telecommunication oversight agencies comprise of the Ministry of Posts and Telecommunications, the Liberian Telecommunications Corporation (LTC), and the Liberian Broadcasting Corporation (LBS). LTC was established in 1973 and operates as a quasi-independent agency with monopolistic control in providing land-based phone service in Monrovia and throughout Liberia. It also still remains the de facto controller of Liberia's telecommunication industry. LTC's primary stakeholders are the Liberian government and a few private investors. The Ministry of Posts and Telecommunication has a legal mandate to provide telecommunication and postal services in Liberia, but operationally is limited as a telecommunication provider or overseer. LBS, another quasi-independent agency, was established in 1960 as a national provider of broadcast television and radio entertainment and news to the general public. All three agencies have little power. Private telecommunication enterprises such as the Lone Star Communications mobile phone carrier and other enterprises stepped in to fill the void and have retained a stronghold in their markets.

Following the end of the civil war and faced with strong interest from international telecommunication providers wishing to enter Liberia's telecommunications market, the Ministry of posts and telecommunication has been faced with issues such as the duplicate sales of mobile GSM licenses to several competing enterprises as well as the monopoly position of Lone Star Communication. Lone Star was handed a virtual monopoly on all mobile GSM licenses by the previous regime without provision requiring the company to share its mobile phone infrastructure.

No reflection seems to have been made until present however on the subject of a long-term, broad reaching, and strategy to bring discipline to this industry. In the absence of an independent regulator and transparent policy and regulatory framework/guidelines, the Ministry has issued a number of licenses and allocated spectrum without having the necessary frequencies available. These decisions are, in fact, being challenged by several of the operators involved. In addition, the licenses that have

been awarded in Liberia do not reflect a clear licensing regime, with many of the licenses containing general authorizations to establish and operate GSM networks, Internet services, public payphone services, VSAT stations, international gateways, all in the same documents.

Where separate GSM licenses have been awarded[31], they have been based on bilateral negotiated arrangements between the interested parties and the Ministry, are generally under priced, and show major discrepancies in the treatment of operators and in terms of license terms and conditions. In addition, uncertainty exists about the authenticity of the licenses[32], although most of the licensed operators believe that they have binding contracts for GSM operations in the country. The list of new licensed operators includes Atlantic Wireless/Libercell (AWLI), Celcom, Comium/Libancell, Coastal, and Ducor/Celtel. Despite these problems, Atlantic Wireless has launched its services and may already have about 5,000 subscribers, Celcom is actively building its facilities and offices to house its equipment, Comium's equipment has been installed and is awaiting clarification of spectrum to begin operations.

In addition, while minimal fees had been charged for licenses (average of US$75,000)[33] none of the licensed operators were required to pay spectrum fees. In a number of cases, large blocks of numbers have been allocated to operators without any charge.

The license fees were in most cases set without detailed analysis of neither the real value of the license nor the economic value of the spectrum. Ranging from US$50 K to US$87 K, the fee structure was not detailed in any license. While most of the licenses have not specifically invoked any payment for spectrum, some of the licenses stipulate that the licensee will be subjected to a spectrum fee calculated by an independent expert, while others have set a specific price of US$10,000.00 as "spectrum usage fee". In one example, the license clearly stipulates that the Government of Liberia (GOL) or other entities shall not charge the licensee any fees or amounts for the use of frequencies. In some cases a subscription fee of US$15,000.00 was included in the payment without details of what such subscription fee entails.

In most cases in the Liberia case, no clear stipulation is made for the annual fees. In one case, the license clearly states that the operator is not liable for any fee (other than the initial license fee) for the whole term of the license. This unjustified "waiver" for renewal fee is major discriminatory treatment to certain operators and does not favor the development of fair competition in a liberalized environment.

MALI

Until 2001, telecommunications services were provided by a monopoly - the Societé des Télécommunications du Mali (Sotelma) providing fixed line services, cellular on analogue standard (AMPS) as well as Internet access.

Sotelma was established in 1989 and launched in 1990 after the separation of postal services and telecommunications. The network operated by Sotelma was very small, having installed 25 000 lines by end of 1998, generating a teledensity of 0.25 - which at that time was among the lowest in the world. Slightly more than 70% of the lines were in the capital city Bamako, leaving less than 7 000 lines to serve over 90% of the population in the rural areas, where teledensity approached 0.08.

---

31 At present 6 GSM licenses have been awarded.

32 During August, the Minister of Post and Telecom published a press release to revoke one of the licenses issued. On the following day, the Deputy Minister issued another press release to counter the decision of the Minister.

33 Terms of payment of radio license are quite inconsistent – while some licensed operators were only obligated to pay a one time fee, other licensees were expected to make annual payments.

Sotelma was also awarded a license to provide cellular on GSM 900.

In 1998, given the unacceptable situation of the sector, Government took a decision to reform the telecommunications sector with a view of expanding the sector. On July 27 1998, the government adopted a policy programme designed to liberalize the sector and open all market segments by 2000. Additionally it is intended that Sotelma be privatized through capital increase by a strategic investor. A regulator would be established to manage a competitive multi-operator market. Against this background, local groups positioned themselves to enter the previously closed market. One such group is Megatel, based in Bamako, and active in the customer premises equipment (CPE) market. The government of Mali also approached the World Bank to assist in the sector and prepared a project with the following important components: implementation of a new legal and regulatory framework enabling a multi-operator environment., organizational plan for the regulator and draft licenses for operators; assist the government in the privatization of the national telecommunication operator through a strategic sale; and preparation of a strategy for delivering information access and related services to rural and disadvantaged communities.

Mali — with its developed economy, larger market, more participatory political process, and well - developed media—appeared attractive to investors in the telecommunications sector. It had good export revenues from cotton and gold and enjoyed good relations with the donor community.

But despite the government's expressions of enthusiasm for telecommunication reform and a good deal of technical work, the words were not seen to have translated into action and the reforms were seen to have stalled. Two factors eventually turned things around: the government's need to maintain good relations with the donor community and an outcry from civil society and labor unions.

By August 2002, Mali had garnered US$44 million for the license of a second national telecommunication operator, alongside the yet-to-be privatized state operator. Mali's case illustrates how reforms that have been derailed can be brought back on track through the use of incentives and pressures by civil society and donors. It also illustrates the importance of disseminating information through the media, team and consensus building through dialogue and cross-country consultation, and high-level political commitment.

NIGERIA

Nigeria's government has shown commitment to reforming its under-developed telecommunications sector and has already instituted various positive changes. Ongoing liberalization of Nigeria's telecommunication sector has led to a multi-operator environment, the gradual end of monopolies, healthy competition, increased sector investment, greater consumer awareness, improved quality of services offered, better choices for the public, and more widespread availability of telecommunication services across the country, particularly in rural areas.

The Nigerian telecommunications market is highly deregulated with the Nigerian Communications Commission (NCC) licensing a wide variety of telecommunications operators. The Nigerian telecommunications market has undergone radical change over the past few years. Infrastructure licensing is the dominant route taken by NCC in its objective of increasing telephony penetration and access throughout Nigeria. Since liberalization began, competition has been introduced in the mobile market, a SNO and two national long-distance operators have been licensed, and the outsourcing of Nitel's management has been concluded. Over 200 companies have secured licenses to provide value-added services, community and rural telephony, regional and national telecommunication services. Since the licensing of three GSM networks in 2001, some 2.5 million new phone lines have been connected. Private sector investment in Nigeria's telecommunication industry increased to a record US$4 billion in 2003. In 2002, the NCC also embarked upon a process of licensing fixed wireless local loop operators.

The Nigerian market has moved to a fully liberalized market where the law of competition has become predominant. NCC has removed the barriers to market entry and is now relying upon natural market forces to ensure market sustainability. Nigeria has opted for an approach of "extensive cost distribution" to deregulate the telecommunications market, with dozens of smaller operators being licensed so that market demand can more rapidly be satisfied. Although successful in meeting some of this demand, the end result is a highly fragmented market which is very complex to understand and difficult to regulate (even with the "New Telecommunications Policy 2001").

Despite the failed attempt to privatize the incumbent operator Nitel, a Second National Operator (SNO) license was awarded to Globacom Ltd. in August 2002. In addition, 50 private companies have been licensed to provide fixed telephony services.

The market is quite crowded with many operators being able to build networks for access, national and international. While the mobile operators (MTN and Econet) can build their own national backbone they do so as Nitel is unable to meet their network requirements.

Three cellular operators have launched their services since 2001 – Econet, MTN and Rose (Nitel). Rose is the rebranded Nitel GSM brand. The fourth largest mobile market after South Africa, Egypt and Morocco, Nigeria is now regarded as the fastest growing market in Africa. With its huge population and high levels of pent up demand, the subscriber base reached an estimated 2.5 million in 2003, causing challenging capacity problems and forcing operators to suspend new subscriptions while investing heavily in infrastructure. Nonetheless, Nigeria's present telecommunications infrastructure remains a challenge given the size of population and potential economic base Nigeria commands within Africa.

The liberalization of the Nigerian telecommunications market is providing new challenges to all the existing operators. MTN specifically has raised the stakes considerably in the market, and is setting the pace with the other operators currently struggling to focus their operations and thus become fully operational. MTN have embarked on a very strong branding strategy that has by all accounts proven to be successful.

Unique challenges that exist in this market are the unstable and poor power supply and environmental conditions that directly have impacted upon existing telecommunications operator network deployment strategy. MTN have reported that the unforeseen power and environment issues have resulted in a US$100 million additional spending in rolling out their network.

SENEGAL[34]

In Senegal, like in most African countries, the telecommunications environment has evolved considerably. Senegal has developed one of Africa's most extensive telecommunications infrastructures, second only to South Africa. Thanks to the existence of a relatively modern infrastructure that covers a large part of the country, the technological environment is favorable to the introduction of ICTs.

Even though sector reforms began in 1985, with the unbundling of the posts and telecommunications monopoly, it was not until 1997 that real liberalization began, with the partial privatization of the national operator Sonatel. In late December 2001, a new national telecommunications legislation (the Telecommunications Act) was presented. The Act contained three main features. First, it partly liberalized international VSAT transmission (still, only local

34 Source: CENTRE FOR THE DEVELOPMENT OF ENTERPRISE: Fostering and facilitating access on the SAT-3/WASC/SAFE Diagnostic Study – SENEGAL at http://www.spintrack.com/itadvice/reports/Spintrack_Senegal_CDE.pdf

branches of international organizations can obtain VSAT licenses), which had hitherto been one of the incumbent's exclusive tasks. Secondly, it allowed for private investment in rural telephony, in order to improve access in all of the country. Finally it also created a national regulatory agency, the "Agence de Régulation des Télécommunications (ART)".

Senegal privatized its incumbent operator in 1997, and granted the newly privatized firm seven years of fixed-line exclusivity while introducing managed competition in the cellular market and free competition in value-added services (VAS).

Mobile services were introduced in 1997 and competition in that sub-sector in 1999. Since the introduction of competition, the number of mobile subscribers has grown dramatically, with cellular lines now representing around 70% of all telephone lines. By May 2001, two cellular operators, a number of VAS providers, and thousands of retailers operating telecenters had entered the market. Reform has thus significantly changed the landscape of Senegal's telecommunications sector and has brought with it tremendous improvement in sector performance. Between 1997 and 2001, fixed-line telephone penetration grew from 1.32 to 2.45 per hundred people, while mobile penetration skyrocketed from 0.08 to 4.04.

Senegal's WTO commitment binds the Government to end Sonatel's monopoly as soon as possible after 31 December 2003, and by 31 December 2006 at the latest. Also, under the 1996 Telecommunication Law, Sonatel was granted a seven-year exclusivity on fixed line services, expiring in 2004. Senegal fulfilled that commitment and the exclusivity ended in 2004.

The Agence de Régulation des télécommunications (ART) was established through the 2001 Telecommunications Act. Prior to the establishment of ART, much of the regulatory activities were carried out by Sonatel, along with a unit within the Ministry of Communications – the "Direction des Etudes et de la Réglementation de la Poste et des Télécommunications (DERPT)". ART's mission is to promote and develop both the IT and telecommunication sectors, in particular to create and maintain a dynamic and competitive business environment; to provide the operator licenses; and to manage the radio spectrum. It is also responsible for consumer protection and Senegal's participation in international telecommunications agreements.

Aside from the partial privatization of Sonatel, the only other major restructuring of the market to have taken place before 2004 was the issuing of an additional mobile license to introduce competition with Sonatel's existing GSM service. Private ISPs and telecentres or private call offices were only allowed to resell Sonatel services.

Sonatel has a dominant position in almost all telecommunication sectors. It had a monopoly until 2004 in the fixed line business; it has some 80% of the mobile subscribers; while its ISP "Sentoo" has 80% of the Internet subscribers. It has not been shy at using these strengths to control and improve its position. In the mobile market it has fought hard to avoid interconnection with the only competitor Sentel, and all ISPs have to buy international bandwidth from Sonatel. Sonatel is the sole company in Senegal that is part of the SAT-3 consortia, which gives Sonatel an exclusive control over the cable capacity in the country and further forwards its position on the market. Since Sonatel is extending the fiber to neighboring countries it will also give it possibilities to affect international pricing in the whole region.

In the 1996 Telecommunications Act, mobile and Internet services were opened up for competition, but Sonatel was allowed to retain its monopoly of the other markets - fixed national and international telephony, leased lines and fixed satellite services. In December 2002 a committee was, however, established under a presidential decree, to examine possibilities for licensing additional operators from 2004. This work is still ongoing. Sonatel retained its monopoly in fixed telephony until 2004 (including international services). So far it is not clear how soon new players will be let in on these segments, but according to a WTO commitment, a deregulation should take

place not later than end 2006, while there is an expectation in the market to see Sonatel's monopoly as voice and data carrier to last no longer than until 2004. As mentioned above, this could also include competition on the SAT-3 capacity, however as Sonatel is the 'owner' of this asset, it is not entirely clear how regulations could enforce this. In the market for satellite access, Sonatel is also the sole player, but will be exposed to competition in 2004. Consequently, only international organizations such as embassies and the United Nations, have been allowed to operate their own VSAT links.

The call for bids for the cellular services and the competition was run in a transparent way, monitored by the presidency. It was not an auction, since the price was already set. The licensing of a third mobile operator has been planned for a long time, but so far no competition has been announced. Sonatel Mobile, branded Alizé, started its operations in 1996 and is now the market leader, accounting for over 550 000 subscribers in April 2003. It has one post-paid (Téranga) and three prepaid (Diamono Classic, Diamono Jeunes and Diamono Pro) packages. The post-paid package accounts for only 20% of its subscribers. Sonatel's network now covers areas of the country where 90% of the population lives. Sentel is 75 % owned by Millicom International Cellular and has about 150 000subscribers. This represents roughly 65 % and 35 % market share respectively for the duopoly actors. Sentel only offers prepaid packages (Hello One, Hello Diwaan, Hello Prestige and Hello Confort).

The implementation of the regulatory framework has been complex and uncertain and this has impacted the mobile sector's growth in particular. Competition in the mobile market is still relatively limited with only two operators. A third mobile license was forecasted in 2000 but was eventually not allocated. Sentel's mobile license was removed by the Government in October 2000 without any advance notification nor the agreement of the regulator (DERPT at that time). This decision was confirmed in January 2001, although Sentel has always continued to offer its services, and the subject is still in discussion.

Outside of mobile and fixed line provision, the local ICT market is relatively small and fragmented. To the extent possible, private ISPs compete with difficulty against Sonatel's ISP subsidiary, Sentoo, as they are not allowed to establish their own infrastructure or international gateways. Some private ISPs such as WAIT, Metissacana and Inf Inc. have been forced to shut down. Sentoo, has about 80% of the market and the 13 smaller ISPs have been forced to occupy niche sectors.

Despite Sonatel's monopoly in the provision of international IP connectivity, prices of leased lines have decreased in 2002 following the opening of the SAT-3, while the Director General of the ART also declared that the Sonatel monopoly in international IP would soon come to an end. And, while the private dialup and leased line ISP sector is thus relatively small, there are a relatively large number of private cybercafés, at least 200 across the country.

Since satellite access was a Sonatel monopoly, no VSAT licenses have been issued. Sonatel has a satellite link with WorldCom as international gateway. Iridium officially launched its activities in Senegal at the beginning of October 1999. Thuraya is in the process of appointing a service provider in Senegal.

SIERRA LEONE

In Sierra Leone, the new Basic Law is yet to be adopted, meaning that the sector is, in fact, still ruled by the Telegraphs Act 1900, Chapter 164 of the Laws of Sierra Leone and the Wireless Telegraphy Act 1913, Chapter 165 of the Laws of Sierra Leone as amended as well as by the rules made under both Acts.

Despite the lack of an appropriate legal framework, 5 GSM licenses were granted on a case-by-case basis in 2002 by the Ministry of Transport and Communications (MoTC). No analysis has been

made as to the size of the market, nor of the availability of spectrum for services. This trend has continued, with more licenses being awarded in 2003 and 2004. Digital Wireless operator, Intercellular Nigeria Plc, for example, was recently given an operating license to offer a basket of mobile cellular, fixed line and VSAT gateway for international trunk services.

However, there are already three mobile operators and a mobile incumbent so Intercellular will have its work cut out getting a foothold in either the mobile or fixed market. But its own access to an international gateway is a useful advantage.

Furthermore, no legal measures have been taken to monitor or act against companies operating without licenses, largely because of the absence of an appropriate legal framework governing the sector.

New market entrants and potential sector investors are not obtaining a clear picture regarding market and licensing conditions, or operating parameters, including interconnection requirements with the incumbent telephone operator, as well as other carriers.

TOGO

Togo Telecom is the national public company responsible for implementing and operating telecommunications infrastructure and services in Togo. The company was established as a result of the separation of postal and telecommunications services in 1996.

A government policy for the telecommunications sector which was published in 1996 led to the separation of postal and telecommunications services and to the formation of Togo Telecom.

The Ministère des Mines, de l'Equipement, des Transports et du Logement is responsible for the telecommunications sector. Subsequent to the 1996 telecommunications policy, a legislation was enforced in 1998 to set up an independent regulatory authority "Cellule de Coordination de la Réforme des P&Ts". The new legislation encourages competition in the telecommunications sector, and the national telecom operator, Togo Telecom, is to be privatised.

In January 1999, Telecel was licensed to operate a GSM network in competition with Togo Telecom which also provides cellular services.

4 Key licensing issues

4.1 Licensing Approach

Most of the key policy decisions relating to the development of the market structure of the information and communications sector, including, but not always limited to, telecommunications, ultimately determine the form of the licensing regime chosen to implement the policy option chosen. In designing the licensing regime and regulatory structures to address any of the issues linked to the licensing framework, it is essential to analyze the triggers and motivators of policy.

4.1.1 Vision of the Market

Recommendation

It must be remembered that in most countries, licenses comprise only one element of the regulatory framework. Other rules that govern operators are included in telecommunications laws, sector policies, regulations, decrees, orders, decisions, guidelines, directions and other such determinations.

Any licensing framework must be designed to cater for specific competition and consumer protection issues expected to be encountered, and can therefore only be developed with a specific vision of the structure of the liberalised market in mind.

The right balance between ease of market entry, competition between different access technologies, technical efficiency and customer protection must be struck.

The introduction of new and advanced technologies coupled with the liberalization of markets and the introduction of competition has created new requirements for entering and operating in the information and communication market. Addressing these needs constitutes the licensing process. Until recently, the information and communication market was dominated by statutory monopolies, with most telephone services being provided over the basic access network. Such a network has also typically been regarded as a “natural monopoly”, and reserved exclusively for state operator.

As their respective markets evolve to a more competitive framework, with exclusivity of incumbents ending, for example, in Morocco, Jordan, Senegal, and Mauritania, most countries in the region are reviewing their licensing and regulatory regime to accommodate new entrants, accommodate convergence, and promote the availability of modern communications to their populations.

Nigeria’s government, for example, has shown commitment to reforming its telecommunications sector and has instituted various positive changes. Since liberalization began, competition has been introduced in the mobile market, a SNO and two national long-distance operators have been licensed, and the outsourcing of Nitel’s management has been concluded. Over 200 companies have secured licensed to provide value-added services, community and rural telephony, regional and national telecommunication services. Since the licensing of three GSM networks in 2001, some 2.8 million new phone lines have been connected. Investment in Nigeria’s telecommunication industry increased to a record US$1.5 billion in 2003.

Looking beyond Western Africa, other interesting examples in Africa include the SADC Region as well as individual countries such as Mauritius and Uganda.

Since the mid-1990's, most SADC countries have been pursuing a 'managed liberalisation' strategy in telecommunications that has been proceeding at different speeds in different countries[35]. This approach is advocated by the Telecommunications Regulators Association of Southern Africa (TRASA)[36] in their model telecommunications policy. In the fixed line sector, the 'managed liberalisation' approach has involved:

- establishing a regulator,
- corporatising the public operator,
- granting an exclusivity period to the public operator of around five years coupled with finding the operator a foreign strategic partner to assist in building competitiveness and financing the rolling out universal access infrastructure. Exclusivity on voice traffic usually implies the outlawing of Voice-Over-Internet Protocol (VOIP), the need to direct all international traffic through the public operator or lease their facilities (including mobile and VANS operators),
- introduction of a second national operator (SNO) to provide facilities-based competition for another exclusive period
- introduction of voice resale competition and broader facilities-based competition

By January 2003, all SADC countries had completed the first two stages and began the exclusivity periods. Some countries have already liberalised certain aspects more rapidly. For instance, Tanzania and Botswana allow voice-resale competition, Malawi and South Africa permit local district facilities competition in rural areas, while South African and Zambia permit VOIP in rural areas with low teledensities only. Namibia planned to break the mould and move directly to a more competitive environment in 2004.

In mobile the approach has been more liberal from the start, with most countries initially licensing two operators with a limited exclusivity period before an additional operator is introduced. In both Zambia and Tanzania there are no legal restrictions on the number of operators but rather spectrum limitations.

In many countries there are foreign ownership limits that are considered market access limitations in terms of the WTO negotiations. This may be explicitly legislated or form part of the licence tendering requirements. In value-added network services, all countries have adopted a very liberal approach with the only limitations being those implied by the monopoly in fixed line - restrictions on building their own networks and on VOIP. As competition is introduced in fixed line, these will fall away. Finally, all countries except Namibia have legislation and regulatory practices that puts them in line with the general regulatory principles encompassed in the Telecoms Reference Paper.

Against the background of the 2004 Government Policy regarding the sector, *Mauritius* moved up the exclusivity period for the incumbent. The government thus brought forward the end of Mauritius Telecom (MT)'s monopoly by one year to 31 December 2002. Since the complete liberalization of the ICT sector in January 2003, the local ICT landscape includes 2 PSTN, 3 PLMN, 8 ILD and 13 ISPs licensees out of which 1 PSTN, 2 PLMN, 5 ILD and 6 ISPs are already in operation. The licensing structure was reviewed and an adapted regulatory framework put in place for effective regulation. However, with the constant state of flux within the ICT sector, the regulatory process is being viewed as a dynamic one and can therefore be subjected to appropriate adaptations as and when required. The first two ILD licenses were formally awarded to DCL and

---

35 See: Hodge, J. 2003 "WTO Telecommunications Negotiations: How Should SADC Countries Respond?", SATRN, University of Cape Town

36 See: http://www.trasa.org

mobile operator Emtel in December 2003. The Indian carrier MTNL was provisionally awarded a fixed network, ILD and cellular license which would put it in a position to offer strong competition to the incumbent MT. In accordance with trends around the world, the introduction of positive discrimination for new entrants in the ICT market is yet another step envisaged in Mauritius in the near future. Such a position, government believes, will provide a stable platform for competition to be ushered in all service segments of the Mauritian ICT sector for the ultimate benefit of end users.

The case of Uganda

Uganda is generally cited as an example of successful telecommunications reform program in Africa.

The Government prepared a national Telecommunications Policy early in 1996 that set out, among other things, the following:

- the postal and telecommunications operations of UPTC be unbundled into Uganda Post Limited (UPL) and Uganda Telecommunications Limited (UTL).
- UTL be privatized.
- the telecommunications sector be liberalized; and
- a regulatory agency for the telecommunication sector be established.

The core motivation driving this policy was that telecommunication services should be both affordable and widely accessible and that service quality – with respect to factors such as connection time and service continuity – should improve.

Specific reference to system extension (i.e. increasing the geographic coverage of service) was included in the policy. Maximization of privatization proceeds was not included – either explicitly or implicitly – as a core objective. Government's broader objectives were geared at for socio-economic development and poverty alleviation.

In 1997, the Government promulgated the Communications Act, which did the following:

- established the Uganda Communications Commission (UCC) as the industry regulator and the Uganda Communications Tribunal as the agency responsible for resolution of disputes within the industry.
- provided for the incorporation and privatization of UTL.
- provided for competition in basic telephone service through the licensing of a second national operator (SNO).
- required operators to provide payphones and public call offices and related services in rural areas; and
- established a fund for rural communications development, to be administered by the UCC.

The development of rural communications has been a part of the telecommunications sector reform program from the beginning. The 1996 Policy Statement emphasized the importance of increasing the geographic coverage of service, and the 1997 Communications Act specified the concrete meaning of increasing the geographic coverage.

Against the background of firm policy and concrete actions by government (e.g. an independent regulator was set up, the necessary regulation was passed, a clear vision and strategy for the sector was defined and followed), the market flourished.

The case of Uganda *(cont.)*

The state-owned Uganda Telecommunications Limited (UTL) was joined in 1995 by GSM mobile operator Celtel, owned by pan-African operator MSICellular. By 1998, Celtel had added 8,000 cellular subscribers to UTL's 56,000 installed lines, a picture which was dramatically altered by the entry of MTN as the second national operator late that year.

MTN Uganda's license came with the usual rollout obligations, requiring that MTN provide 89,000 lines in the first five years of operation—but left the choice of technical solutions entirely up to the operator, defining targets solely in terms of service quality, availability and price. It took just a year from MTN's launch to connect more people than UTL had managed in several decades. The growth trend has continued, with 400% growth over four years. The Ugandan market shows little sign of leveling off: operators are continuing to expand their networks into the smaller towns (UCC says 75% of the country is now covered), MTN just launched Africa's first dual-band GSM service in Kampala and a range of mobile data services is being explored.

While promoting competition was a core policy objective, the thinking was that, with two national operators competing directly, additional competition could be temporarily forgone for the sake of increasing the attractiveness of the investment opportunities (and obligations).

This has changed in recent years though. Celtel recently acquired Infocom, one of the larger ISPs, and UTL is soon to launch an ISP of its own.

SMS to email gateways already operate (not always reliably) and more ambitious mobile data services are promised. The national operators MTN and UTL currently enjoy exclusive rights to carry voice over IP, but UCC say it is negotiating with them to franchise these rights to ISPs; officials are clear that *"we think the technology has something to offer & should be used"*.

After 2005, the market will be liberalized further, with UCC saying it is likely to award as many licenses as the market requires.

Sources*: "The Internet in an African LDC: The case of Uganda"* at http:// www.itu.int as adapted and Shirley, M., Tusubira, F., Gebreab, F., and Haggarty, L. (2002), *" Telecommunications Reform in Uganda"*, World Bank Policy Research Working Paper # 2864, World Bank

The principal challenge facing regulators over the past decade has been the transition from monopoly and dominance to new entry and effective competition. The regulation of telecommunications has traditionally been aimed at the following two objectives: first, to regulate the activities of the incumbent monopolist or dominant network operator; second, to facilitate the development of and access to a national information infrastructure.

First, where the incumbent is a monopolist or a dominant player, regulation aims at curtailing the possibility for the incumbent to abuse its market power. Second, regulation has been used to promote construction of the national information infrastructure. Sometimes this is in the form of an encouragement to the incumbent to speed up the building of the telecommunications network. But it can also include other measures such as the encouragement of new Internet service providers and the licensing of cellular mobile networks. In all cases, a well-adapted and clearly formulated licensing regime as well as good regulation is clearly important in promoting and facilitating universal access to networks and bridging the digital divide.

Governments around the world are introducing options for liberalizing the deployment of access network facilities, and Ghana, for example, was among the first countries to license a second network operator, Westel. Although the most common model combines the access network with national and international backbone and transport networks under a single license, there is a trend to recognize these are separate market segments, with the potential for different policy, licensing, and regulatory treatment.

Competition in Latin America

Telecommunications services were provided initially by state owned companies, under monopolies. In Latin-American, due to national security or educational goals of the governments, the operation of most public utilities was provided by government, and telecommunication services in particular were reserved for the state since they were considered a strategic sector. Consequently private investment was prohibited and telecommunications services could only be offered by the government or in exceptional cases in association with it. The results of these policies were a limited variety of services, (i.e. only telephony services were offered), very limited number of lines in service, very low telephony penetration, inefficient operators, poor quality of services, high costs to access telephone lines (i.e.; in Peru telephone lines were sold by resellers at more than US$ 1,500).

With the accession of most Latin American countries to the WTO and their subsequent commitments to the Basic Telecommunications Agreement, Latin American countries privatized their stated owned monopolies and started to open their markets to competition. It was clear that the continual evolution of new technologies no longer justified or required the existence of a single dominant operator. Most countries also signed the Reference Paper, adopting policies limiting the power of dominant operators through the enactment of asymmetric regulation, tariff regulations, etc.

The results of these regulatory policies can be seen in indicators such as the level of tariffs, telephony penetration, and degree of competition in the market, among others.

The liberalization of the telecommunications markets in Latin American occurred gradually. The first countries where new operators were allowed into the market were Chile (1987) and the Dominican Republic (1988) followed by Colombia (1994 for local telephony and 1997 for long distance), which maintained a mixed structure of government participation. Mexico (1997), El Salvador (1998) and Peru (1998). In November 2000, Argentina and Venezuela liberalized their markets completely. In the case of Argentina, from October of 1999 a four-way monopoly was established. In Bolivia (YEAR) competition in the provision of Basic services was established and the same year Uruguay allowed new entrants to the International Long Distance Market. In (year), Ecuador granted a concession for the provision of WLL. Panama opened its market to competition in 2003. After the privatization of the state owned monopoly, Telebras, Brazil broke the company down into 12 companies, one long distance carrier, eight cellular operators and three fixed line operators. The 12 privatized operators were given specific areas to provide domestic, regional and fixed telephony services. A new entrant was allowed to provide service in competition with the incumbents and a duopoly for each area was created. Brazil has recently allowed all companies to compete outside their regions.

In countries such as Argentina, Bolivia, Mexico, Panama, Peru, Venezuela, a period of Exclusivity was established for the operation of the privatized operators, which meant a period given to fulfill the compromises assumed by the incumbent operators (quality goals, modernization and expansion) as well as a period to recoup the investment. However the maximum duration of this period varied from 9 years in the case of Venezuela to 5 years in the case of Peru. Chile, El Salvador and the Dominican Republic did not establish exclusivity periods.

The advantages of market liberalization in the region have been enormous, i.e.: better supply of services, advanced telecommunications services, better quality of services, lower tariffs for consumers, new jobs, etc. The experience in Latin America has proven that it is important for the private sector to become involved in the development of productive activities in a country that applies a free market economic policy, and that it is also important for the State to participate promoting and regulating private investment.

Licensing is a relatively recent development in many telecommunications markets. Looking at examples around the world, it is obvious that there is no one preferred model but rather that there are various solutions to this issue and that each country chooses what fits best into its own market reality as well as political and administrative tradition.

Exclusivity periods were often used in the 1980's to either convince incumbents to buy into the process of liberalization and/or to make those government-owned incumbents more attractive to investors (since incumbents were often inflexible, expensive to run and very politicized). The aim was mainly to "transition" a government monopoly situation to a different situation – sometimes countries created a private monopoly for all telecommunications services, sometimes they already started looking at the introduction of limited competition starting with data, mobile, etc.

The extent of the exclusivity period depended on various factors, including the timetable (if any) for liberalization and, if required, for privatization. Initially, the trend of liberalization was limited to the more developed markets such as Japan, the United States, Australia, Hong Kong, Canada, and the European Community where telecommunications networks were already well-established and the need for infrastructure development less relevant. In these countries, it was felt that a new stimulus could be given to industry and to the economy in general if new actors and service offerings appeared, and exclusivity periods were restricted both in terms of time and services. However, in many less developed countries, governments remained the operator and "benefited" from income from unbalanced tariffs and high accounting rates (a good source of foreign currency) and were therefore reluctant to give up exclusivity.

Often governments claimed that exclusivity periods were necessary in order to attract foreign investors to maximize the price that would be paid for the license.

Caribbean countries

The Telephone Service of Trinidad & Tobago (TSTT), provider of both external and internal telephone services in Trinidad & Tobago, was granted exclusive provision of these services for 20 years. In Barbados, Cable & Wireless secured two exclusive licenses to provide national and international services for 20 years from 1991 until 2011. In Jamaica, the holding company Telecommunications of Jamaica (TOJ) was privatized in 1987, and its control was passed to C&W in 1989. In 1988, the Telecommunications of Jamaica (TOJ) was given five licenses for domestic and international services for a period of 25 years. C&W claimed that as a whole, these licenses gave it an exclusive right to provide telecommunications services in Jamaica.

The long exclusivity period in the Caribbean countries became an issue of contention as the governments sought to liberalize the sector. For example, when the Fair Trading Commission (FTC), the competition and consumer-protection authority of Jamaica, attempted to challenge the limits of C&W's exclusivity, it had to be creative in its challenges. Instead of directly challenging the matters covered explicitly in the 1988 licenses, the FTC found areas where it could act without challenging the legitimacy of the licenses, such as interconnection of ISPs to public telephone networks and market competition for consumer premises equipment.

In an October 2000 paper entitled *"Telecommunications Privatization in Developing Countries: The Real Effects of Exclusivity Periods,"* Scott J. Wallsten concluded that maximizing sales price was the primary reason for granting exclusivity periods. He also found that granting a monopoly concession substantially increases the firm's value to investors. Investors paid more than double the price for a firm when monopoly rights were granted for a local fixed service, and granting an international service monopoly appeared to be even more valuable than a local monopoly. However, this increase in government revenue was obtained at the cost of substantially reducing investment. Wallsten's study concluded that granting a monopoly concession may reduce growth in telecommunications network by up to forty percent.

Once the first stages of liberalization had taken place in several countries and the benefits of liberalization were seen, the tool of "exclusivity period" started to show its weaknesses. Countries realized that a simple move from a public to a private monopoly was not achieving the goals of more and better services, lower prices and telecommunications development. Further, although

technology was advancing in a way never seen before and new applications and services were being introduced, monopoly providers were slow to invest in these technologies. Accordingly, exclusivity periods became more of an exception.

Today it is generally agreed that the trend towards competition is likely to be the most effective method of promoting improvement in the telecommunications sector. A 1996 study by Ben Petrazzini and Theodore Clark[37] found that cellular and mainline penetration in competitive markets is higher than in noncompetitive markets. Scott Wallsten's study in Africa and Latin America in 2000[38] found that competition (measured as the number of mobile operators not owned by the incumbent) is associated with network improvements. Bjorn Wellenius[39] also observed that Chile, which did not grant an exclusivity period, saw faster network growth than Argentina, Mexico or Venezuela, all of which did grant exclusivity periods to newly-privatized firms.

Countries may wish to accommodate convergence, or they may simply want to get the most they can in terms of revenues out of the privatization of the incumbent, or they may wish to maximize revenues from licensing fees – that is a choice they make. Some countries may just simply want to regulate the provision of what is seen as an essential public service and thus impose some controls to ensure basic telecommunications services are offered in the public interest. Others may wish to focus on the expansion of networks and services and other universal service obligations. In developing countries in particular, where service penetration is very low, licensing mechanisms may also be defined in order to facilitate the involvement of a variety of services providers in orderly manner, who contribute to extending services to un-served and under-served areas.

Some countries may define their licensing regime within the context of a well- defined long-term policy and legal and regulatory texts where ideally the opinion of stakeholders has been incorporated, whereas others may simply choose to follow a particular option the region is following without having a long-term policy that then leads to all kinds of complications with technologies, services and applications such as WiFi, VoIP, etc. Against the background of widespread WTO commitments by numerous countries, most countries are looking to become competitive, but not all are defining a licensing framework (including the necessary legal and regulatory measures) which accommodates convergence.

Licenses provide countries with a useful tool to ensure regulatory certainty for investors and to help a country keep up to date with technology developments and demands. License requirements and their associated costs vary worldwide, but a significant trend has emerged with countries around the world adopting state-of–the-art policy approaches. This trend is gearing towards a more simplistic, publicly available regime that is attractive and accessible for operators and foreign companies.

The European Union has made great progress in the move of the telecommunications sector from monopoly to competition. Its New Regulatory Framework, as adopted in 2002 after extensive consultation with governments, the public and with industry within the context of the "1999 Review of EU Telecommunications Policy"[40], is seen by many as an example of reform of the telecommunications regulatory framework, not only to accommodate the new market situation, but also to accommodate the real issues which convergence of technologies have created for

---

37 Petrazzini, Ben and Theodore Clark, *"Costs and Benefits of Telecommunications Liberalization in Developing Countries,"* Mimeo, 1996.

38 Scott Wallsten, *"An econometric analysis of Telecom Competition, Privatization, and Regulation in Africa and Latin America,"* Journal of Industrial Economics, 2000.

39 Bjorn Wellenius, *"Telecommunications Reform – How to Succeed,"* Public Policy for the Private Sector, Note number 130, October 1997.

40 See: http://europa.eu.int/information_society/topics/ecomm/all_about/todays_framework/overview/index_en.htm

telecommunications regulators around the world. The principles underlying the new regulatory framework are:

1) to create a coherent regulatory framework which applies to all transmission infrastructures, irrespective of the types of services carried over them (the so-called 'horizontal' approach). The new framework therefore covers all electronic communications networks, associated facilities and electronic communications services, including those used to carry broadcasting content.

2) to take account of the links between transmission and content regulation. These links concentrate on the following areas: authorization of networks and services, allocation and assignment of radio spectrum, must-carry, access to networks and associated facilities.

3) to leave the regulation of content broadcast over electronic communications networks (e.g. radio and television programs) outside the scope of the new Regulatory Framework.

The model has influenced the telecommunications regulatory landscape around the world. As such, EU Member States and the accession countries have implemented this principles of the new regulatory framework into their national legal and regulatory framework as part of the revision process and accession process respectively. The influence of the model is not limited to the EU and the accession countries only though. Through organizations, groups, programs and initiatives such as CEPT, ERG, IRG or the EEA, or through EU assistance programs such as @lis, PHARE, TACIS, or MEDA, as well as through cooperation with other regional organizations such as CITEL, Regulatel, the GCC, TRASA or UEMOA, other countries are bringing their legal and regulatory framework closer to the EU model. This may not, however, be the most appropriate solution for all countries and regions and it is important that they are aware of this.

4.1.2 Role of the Regulator versus the Ministry in terms of Licensing

Although it is generally recognized that it is the state that determines Policy and has a duty to encourage investment in the sector with the aim of making access to good quality Information and Communications Technology resources available to all its citizens at affordable prices, recent trends have shown that many countries look to the regulator as being the vehicle to ensure credible market access mechanisms, including the definition of and management of proper and impartial licensing processes. In regard to licensing, the relative merits of the assignment of licensing to either the regulator or the Ministry are not clear. In some countries, licensing is treated as a purely regulatory function that is carried out by the regulator. In others, it is seen as an attribute of sector policy and is the responsibility of the Minister with policy jurisdiction.

Licensing has two essential attributes – it effectively determines the structure of the market by determining the services to be licensed and the number of market players; it also sets the basic terms and conditions under which services are offered to the public.

The first attribute is arguably sector policy and the second is more clearly regulation. Consequently, one possible model is to have the determination of the services to be permitted through license and the number of market participants, i.e. the number of licensees, to be granted entry to be a policy function of the Ministry. The issuance of actual licenses, and the terms and conditions to be contained therein, could then be the responsibility of the regulatory agency. The following table provides an overview of the split of functions between the Ministry (MIN) and the Regulator (REG) in some countries from the European Union.

Division of Regulatory responsi-bilities Countries	Licensing public; telecommu-nications networks and services	General Authoriza-tions/class licenses	Operators with Significant Market Power	Inter-connection	USO	Frequency allocation and assignment	Consumer protection	Tariff control	Number manage-ment and allocation
Austria	NRA	NRA	NRA	NRA	NRA	MIN	NRA	NRA	NRA
Belgium	MIN	NRA	NRA	NRA	NRA	MIN	NRA	NRA	NRA
Denmark	NRA	N/A	NRA	NRA	NRA	NRA	NRA	NRA	NRA
Finland	MIN	MIN	MIN	NRA	MIN	NRA	MIN	N/A	NRA
France	MIN	NRA	NRA	NRA	NRA	ANF		COMP. DIR.	NRA
Ireland	NRA	NRA	NRA	NRA	NRA	NRA	NRA	NRA	NRA
Portugal	NRA/Min	NRA	NRA	NRA	NRA	NRA	NRA	NRA/Dir. Gen Comp.	NRA
Spain	MIN	NRA	NRA	NRA	NRA	Min.Dev.	NRA	NRA	NRA
Sweden	NRA	NRA	NRA	NRA	NRA	NRA	NRA	NRA	NRA
Italy	MIN	NRA	NRA	NRA	NRA	MIN	NRA	NRA	NRA

It is important to recognize, however, that the concept of an independent regulator is not to be confused with being independent of government. The regulator is appointed by government and is dependent upon government for the way in which it raises resources. Therefore it can never be independent of government in the same way as being independent of industry. Nevertheless, being quasi-autonomous of government is an important step towards cost effective and equitable regulation that can win the confidence of the operators and investors.

Regulators cannot forget that they are a stakeholder amongst stakeholders and that transparent and fair practices are critical to the success of licensing regimes. All stakeholders involved benefit in multiple ways. Regulators use transparency to safeguard their legitimacy and efficiency. Regulators also obtain information from the regulated industry and other interested parties that they need in order to base their decisions on all relevant facts and diverse views. Operators, service suppliers, consumers and other stakeholders depend on transparency to ensure that their concerns are heard and that they play a role in shaping important decisions.

This was confirmed in *"Feedback to Regulators from the Private Sector"*, a study presented to the ITU Global Symposium for Regulators held in Hong Kong in December 2002, which stated categorically that companies look at the big picture of the regulatory environment, not just specific regulations. Transparency and responsiveness matter. Companies varied in their methods for assessing markets, with some looking first to the overall environment and others to more specific regulations. Despite varied responses on the ways in which the markets are analyzed, all companies in the survey said that *"transparency of regulatory processes and responsiveness of regulators are extremely important factors in their willingness to enter and stay in markets"*.

In most African countries, including in Western Africa, licenses may be issued by a regulator with the approval of the sector Ministry. In markets where the regulatory environment is less developed, the issue of licenses is the responsibility of the Ministry for the Sector, which is normally an extension of its traditional telecommunication role. This is the case in countries like Senegal and Ghana. In environments where the regulatory sector is well developed the Ministry has to approve and issue licenses recommended by the regulator. Such practices can be found in regulatory environments like South Africa.

The Botswana Telecommunications Authority (BTA) is one of the rare regulatory bodies that has been given almost complete freedom to decide which services are to be licensed, how many licenses should be granted for each service and which operators are to be awarded a license, this in contrast with many countries where the regulatory body may conduct the licensing process, but only after key issues such as the number of licenses to be awarded or the types of services to be licensed have been taken by the Ministry or some other governmental body. All the operators believe that BTA has exercised complete independence in each of its licensing awards. BTA's licensing power has removed licensing decisions from the political arena. This has been an essential element in making Botswana an example of effective regulation and a success story in telecommunications in Africa.

Uganda's regulatory and legal environment has also been relatively stable and easy to navigate: local operators agree that telecommunications regulation is "much more progressive than anywhere else in Africa", that the Uganda Communications Commission is "fair and equitable", and that contracts and agreements are generally honored. This, most analysts confirm, has been a key factor in the success of the Ugandan telecommunications market.

The awarding of the second GSM license in Morocco[41] represented an enormous success in terms of the regulator-ANRT-'s credibility and legitimacy. Moreover, part of the money taken in is being used by the government to pursue its strategy of universal Internet access. All the people from the private sector that were interviewed as part of the ITU's case study acknowledged and praised the work done by ANRT in preparation for this sale, and said that they would be willing to consider taking part in future competitions for licenses if they were conducted according to procedures that were as clear and transparent as the last one (which earned Morocco more than US$1 billion). ANRT became more active, more confident and surer of the role that it can play in the developing the telecommunication sector, and more broadly the country as a whole. This can be interpreted as a sign of the Agency's independence and determination to pursue the government's objectives according to its own best judgment.

The role of national regulators is crucial to the successful operation of a new framework. In the old regime, the regulatory approach was to regulate the delivery of telecommunications services through concessions (usually very detailed long-term contracts) or detailed regulation. As a result, licenses were very service and sector specific and restrictive, and regulators were more focused on specifying who could apply for the license than on promoting competition. Requiring an operator to apply for an individual license for telecommunications services gives the regulator a large degree of control over market entry.

Recently, there has been a trend away from state ownership towards more reliance on private markets to supply telecommunications services. As countries transition into a new competitive environment, following the EC 1999 Communications Review, for example, there has been a move towards a general authorizations system based on the use of general authorizations to authorize all communications networks and services, with specific rights of use granted for spectrum and numbering resources.

With the move towards using general authorizations, it means that licenses are no longer specifically tailored, and licensees are regulated through general regulations issued by the regulator. Instead of regulating through company-specific concessions or licenses, regulatory authorities can adopt broad-ranging regulations and *ex ante* rules that apply to the entire industry or to certain similarly situated groups of operators. This means as well that regulators need to have the regulatory capacity to ensure compliance and enforce *ex post* actions, such as directing operators to

---

41 See ITU Effective Regulation Case Study – Morocco 2001 at : http://www.itu.int/itudoc/itu-d/publicat/ma_ca_st.html

alter their behavior, to engage in remedial activities if they breach existing rules and regulations, and applying sanctions. In order to conduct both *ex ante* and *ex post* actions, it is necessary to constantly monitor the operators' behavior. Consequently, in the transition from the old to the new regime, one of the areas that will require more resources from a regulatory perspective is strengthening the enforcement and sanctioning powers of the regulatory authority.

The successful evolution of the telecommunications market from a monopoly system into a fully competitive market requires appropriate regulatory intervention in order to remove barriers to market entry for new operators. The regulator has to be perceived as authoritative, independent and transparent and in order to inspire confidence, it needs to reassess its regulatory capacity to deal with emerging competition.

The role of regulator in a developing economy in particular is typically very demanding and encompasses far-reaching and multi-disciplinary issues. Regulatory functions cover virtually every aspect of telecommunications network and service provision including tariff, technical standards, allocation of scarce resources, fair competition and inter-operator issues such as interconnectivity and interconnect termination rate. It must be remembered that licenses comprise only one element of the regulatory framework. Other rules that govern operators are included in the telecommunications law, sector policies, regulations, decrees, orders, decisions, guidelines, directions and other such determinations.

Convergence certainly adds to the complexity of the regulatory process. The question is, does convergence of regulatory functions, the merging of agencies dealing with telecommunications, media and IT, help in any substantial way to answer or solve the issues and simplify licensing and regulation? On the one hand, there are dangers that merging the three will extend regulation to areas previously unregulated, such as Information Technology (IT), for no good reason, or bring political and social concerns over media content into the regulation of telecommunications. On the other hand, one benefit could be a 'one-stop' agency for licensing or information and inquiries.

On the whole, most studies agree that heavy-handed regulation is counter-productive to efficient outcomes measured in terms of investment, network construction and prices, and countries. Unless regulation is to be abandoned altogether, the trick is to achieve a transition to lighter regulation as the dominance of incumbents gradually erodes away.

The September 2004 Recommendations from TRAI[42] include the following paragraphs which are indeed applicable to many countries around the World and in the Region:

"In an ideal market situation, one could imagine that there should be no licensing regime. If at all there is a licensing regime, then terms and conditions should be such that ease of entry, lowest possible license fee, etc. are ensured. This ideal situation could have been possible if we were starting from scratch. But we started this process in 1994-95 with the liberalization of cellular mobile services and basic services and then subsequently competition was opened to all other telecommunication services. We have different service areas (city to whole nation), different entry fee (zero to few hundred crores) and different license fee (zero to 15%) for different telecommunication services. With this type of legacy, it may not be possible to reach an ideal situation in one step but we should plan in a manner that it may be achieved in a few years".

While deciding the framework apart from the points mentioned above, one has to keep in mind other objectives like 'no worse off' situation to existing operators and level playing field among operators.

---

42 See: http://www.trai.gov.in

ICASA in South Africa, on the other hand, came under fire from numerous parties for their apparent lack of independence and transparency in the SNO License Award. Investors claimed to be uncertain about the risks of political interference jeopardizing their business opportunities, and about the monopoly power of the incumbent operator (Telkom), with whom a SNO requires interconnection in order to reach most of its customers. A November 2001 survey of local business leaders by Ernst & Young and BMI Techknowledge found that *"the main theme, repeated time and time again…"* as to what *"the biggest inhibitors or challenges to growing a [telecommunications] business in South Africa…was the regulatory environment."*

For transparency to have its full effect there must also be systems and processes in place to allow regulators to gain valuable information, consult all stakeholders, render their decisions, and justify them based on the public interest and the facts provided to them, with evidence of transparency and unbiased decision-making. This is particularly important when determining and implementing issues relating to licensing.

Regulators in the process of transitioning to a fully liberalized and converged market have found the need to conduct a reassessment and regulatory strengthening in the following areas:

- *Internal Procedures of the Regulator*

  As the market becomes liberalized and more competitive, it is expected that more disputes among operators, and between users and operators will arise. The regulator needs to have the power to regulate disputes and to have procedures established to adjudicate them. The dispute resolution procedures should be efficient and transparent. Included in internal procedures are procedures for filing and handling complaints, conducting findings of fact, conducting dispute resolution, and also procedures for appeal to the regulator's decisions.

- *Enforcement and Sanctions*

  The regulator's capacity to monitor compliance and enforce sanctions will also be important in a more competitive environment. Enforcement procedures should be fair and transparent, and ensure that violations are dealt with quickly and effectively according to the law.

In a new convergence era, regulators also have had to reassess how best to enforce newly promulgated laws and regulations on all players. As mentioned in the ITU 2002 Trends in Telecommunication Reform report, experience seems to show that excessive division of regulatory responsibility among different government agencies can result in delayed and inconsistent responses to market and regulatory developments. Therefore, the telecommunications regulatory authorities have had to strengthen their enforcement and sanctions authority. In effect, without the ability to enforce laws and regulations, the regulatory authority loses power and meaning. In the telecommunications sector, effective enforcement is crucial: to protect consumers, ensure service quality and guard against interference, promote efficient use of spectrum, encourage growth, development, competition and investment in the sector.

The first step in developing an enforcement regime it to ensure that appropriate legislation or regulation exists to enable the regulatory authority to exercise its enforcement powers. The enabling legislation or regulation should empower the regulatory authority to: (i) make inquiries; (ii) collect information; (iii) conduct investigations; (iv) determine culpability; and (v) impose penalties.

In order to carry out the powers conferred to it by the enabling act or statute, the regulatory authority may also need to develop and publish additional procedures whereby it implements its laws. These procedures should enable the regulator to quickly and fairly adjudicate violations and complaints and provide for transparency in the process so that it facilitates compliance.

Transparency is also necessary for the regulatory authority to gain public trust in its decisions and for the decisions to withstand possible judicial, ministerial or parliamentary review. In general, whether dealing with industry violators or complaints by consumers, enforcement procedures generally include: (i) providing parties notice of the alleged violation; (ii) providing for an adequate opportunity to respond; (iii) issuing interim decisions or orders; and (iv) imposing sanctions. However, countries should adopt procedures that are commensurate with their economic, judicial, and administrative environment, keeping in mind that practices used by developed countries may not be suitable for developing countries' environment.

Having established the appropriate procedures, the regulatory authority has to determine the appropriate penalty to impose. Some factors to consider in determining the appropriate sanction are the severity of the harm, the cost of enforcement, and the probability of detection.

One of the most common problems that regulators face when implementing an enforcement regime, and especially when first facing a liberalized market with all types of competitors and service offerings, is the lack of resources such as equipment, skilled staff, money, and organization. For example, the regulator may have a legal affairs office, and still lack a separate specialized office responsible for enforcement functions. According to the Uganda Communications Commission (UCC) in 2002, effective enforcement was significantly hindered by inadequate staffing and lack of necessary monitoring equipment. Although there was technical staff doing work related to enforcement, only one person manned the section responsible for enforcement and compliance at the UCC. The regulator at the time also did not yet have a Spectrum Management or Radio Monitoring System. In 2004, however, the UCC had acquired and installed a Spectrum Management System to help manage and monitor spectrum usage. It also hired additional young engineers and professionals who have completed programs in specialized areas to help the UCC build its internal capacity to ensure compliance with relevant laws and regulations.

On the other hand, there are regulators such as Anatel in Brazil who spend almost half of their financial and human resources in monitoring and enforcement. Anatel's enforcement activities are performed by all of the agency's bureaus (except the General Administration Bureau) with each bureau being responsible for investigations and enforcement activities relative to services under its mandate. In addition, the Radio Frequency and Inspection Office, which oversees all enforcement actions, has regional units that conduct enforcement activities and field investigations either directly on site or by remote monitoring. The FCC in the United States has an Enforcement Bureau with four divisions and 25 field offices. Approximately twenty percent of the FCC staff work specifically on enforcement activities.

4.2 Licensing Form and Methodologies

Most countries have retained the three general approaches to authorizing telecommunications networks or services as follows:

1. Granting individual licenses.
2. Granting general authorizations or class licenses, which may include simple authorization or registration procedures and where the regulator will generally have the mandate to determine whether applicants are entitled to start operations or to provide service.
3. Allowing open entry, which may include some kind of declaration, but where the regulator will not determine whether or when operation or service provision may commence.

Examples of grounds to require individual licenses generally include:

1. For the deployment of Telecommunications Networks: the need for access to or to pass through public possessions and/or locations of public use and/or third parties properties.

2. For the provision of Telecommunications Networks or Services: the need for scarce resources (e.g. frequencies and numbering), and

3. Whenever the government of a particular country, due to public policy requirements, determines that the service needs to be provided in certain way.

The choice between the different options will largely be determined by the political and administrative tradition of each country.

Looking at examples around the world, it is clear that there is no one preferred model but rather that there are many solutions to this issue and that each country chooses what fits best into its own market reality as well as political and administrative tradition.

Morocco, for example, provides that:

- The establishment and the operation of all public telecommunications networks occupying the public domain or using the radio frequency spectrum shall be subject to license.
- The establishment and the operation of independent networks, except for internal networks, shall be subject to authorization.
- The following shall be subject to approval:
  - *radio facilities;*
  - *terminal equipment which is intended to be connected to a public telecommunications network;*
  - *laboratories for the testing and measurement of telecommunications equipment.*
- The supply of value added services, fixed by regulation, using the available capacity of telecommunications networks set forth above, shall be subject to declaration.
- Internal networks and radio facilities consisting exclusively of low power and weak range apparatus may be freely established.

This is a model that has been adopted by many countries in Africa.

The Law no. 99-019 of 11 July 1999 of **Mauritania** provides for either license, authorization or free entry and does not make a distinction between facilities or services but requires anyone who makes use of scarce resources or public rights of way to be subject to an individual license regime.

International practice shows that countries usually introduce a regime requiring more regulatory intervention in the initial phase of full competition. Recently, however a number of countries around the world have moved away from a regime requiring more detailed regulatory intervention and have evolved towards simpler licensing regimes which are also aimed at enhancing the scope of applications or services that can be provided under a single license or authorization. Such regimes also generally aim to remove burdensome administrative procedures relating to market entrance.

The **European Union**, for example, has moved towards a simple authorization regime using minimal regulatory intervention and individual licenses only where strictly necessary (for example for the use of radio frequencies and numbers, including short codes, from the national numbering plan). The regime covers authorization of all electronic communications networks and services whether they are provided to the public or not. The objective of the new framework is to create a legal framework to ensure the freedom to provide electronic communications networks and services, subject only to the conditions relating in particular to public policy, public security and public health.

Argentina, too, has introduced a regime whereby any service operator other than those providing mobile service, can commence operations simply by informing the regulator of the service which it intends to provide (for the purpose of interconnection-related matters), paying the applicable fee,

and choosing the service area or customer categories to be covered. The right to use scarce resources such as numbers, rights of ways or spectrum has to be acquired separately.

Jordan's Telecommunications Regulatory Commission, too, has published its proposals for a new licensing structure which applies to all operators providing public telecommunications services in the fixed telecommunications sub-sector. Under this licensing framework, the NRA will issue two types of licenses: individual licenses and class licenses.

Operators using scarce resources (defined as radio spectrum, public rights of way and numbering resources) must acquire an individual license. Such licensees will be subject general conditions applicable to all licensees as well as to specific conditions relating in particular to their use of such scarce resources to provide services.

Class licenses will be issued to the providers of public telecommunications services that do not require the use of scarce resources. Such licensees will be subject to a general set of license conditions that will be identical for each licensee, but which may vary in applicability as they apply to a particular licensee providing a particular service in a particular manner.

4.3 Format of the License

International examples show that many countries have moved away from detailed licenses and towards a regime using generally applicable rules that apply to all market participants and a licensing structure that merely grants the licensee an authorization to provide service and obligates the licensee to abide by the rules issued by the regulator.

Such rules generally include all the relevant terms and conditions formerly included in licenses and which are equally applicable to all relevant licensees. Future terms and conditions included in such rules are then determined and amended, if necessary, through regulation according to a predictable, transparent process, thus creating more transparency, fairness and openness.

There should be a *general set of terms and conditions* that are applicable to all – irrelevant of where they are – be it in the license or as general rules applicable to the operation of a network or the provision of a service. Then there are terms and conditions applicable to certain service providers and terms and conditions linked to the use of scarce resources.

The first issue here is the *gradation of the rights and obligations* according to the category of license being awarded. Class licensees are subject to a more general set of rights and obligations, while individual licensees are, in addition to general rights and obligations, subject to specific rights and obligations linked to their use of scarce resources and the need to ensure that those scarce resources are put to proper use.

The second issue is to determine the *appropriate legal instrument*, under the Law, in which to include all of the rights and obligations of licensees. In the interest of fairness, equal treatment and transparency, international examples show that changes in the market and in technologies are usually more manageable using generally applicable licenses, with guidelines applicable to all licensees being published separately. Such guidelines generally include all the relevant terms and conditions formerly included in licenses and are equally applicable to licensees. Future terms and conditions included in such guidelines are then determined and possibly amended through regulation according to the relevant process, thus creating more transparency, fairness and openness.

In countries that do not have a clear regulatory framework or where there is a perceived high country risk or where there are economic or governance problems, and that intend to license new operators or attract new investors in incumbents, clear, detailed and comprehensive licenses and cahiers de charge as part of the privatization and licensing processes are still seen to be necessary.

Several countries over the past few years have adopted a form of regulation often referred to as "contract regulation." The idea is that (some portion of) regulatory policy and company obligations are documented in contract rather than established over time by a regulatory agency in the context of administrative proceedings. The contractual terms are often agreed to at the time ownership and/or operational control of industry assets are transferred from the Government to a private company. The contract is often administered by a government agency other than an independent industry regulator.

That is the approach that has been taken in Uganda, for example, with a significant amount of policy documented in the license, reflecting a combination of the "contract" and traditional administrative regulation. Licenses for the major operators in the Ugandan telecommunications sector, for example, do more than establish a general foundation for administrative regulation. They have been employed as a mechanism for documenting specific aspects of industry policy, particularly with respect to obligations for investment and system expansion.

Licenses for full telephone service (fixed-line, mobile and international gateway access) have been issued to UTL and MTN. Each license is for a term of twenty years and specifies the following obligations:

- must provide all (basic) telecommunications services.
- must provide full country coverage.
- must meet roll-out targets for rural and urban areas - rollout targets for MTN and UTL have been specified in the licenses as the figures provided in the winning bids.
- must interconnect with other licensed operators on reasonable commercial terms, and
- must comply with price caps - Price caps have been specified in the licenses as the figures provided in the winning bids for the SNO and the majority stake in UTL. There has thus far been no additional regulation of prices.

Along with the obligations, the licenses established "exclusivity" provisions for the two companies (except for services provided before the MTN license became effective – in particular, Celtel's mobile service. – which are grandfathered) for a five year period (beginning July 2000, when UTL was licensed).

This quid pro quo quality of the licensing – where competitive advantage is provided in exchange for service (in particular, expansion) obligations – has recently been extended to Celtel. The firm's license was revised to allow for more options for routing its international cellular traffic in exchange for rollout obligations.

Companies are subject to penalties – up to 10 percent of gross revenues - for failure to meet expansion obligations. The UCC also retains the right to suspend the license or revoke it completely under certain conditions.

4.4 License Conditions and Regulatory Framework

Recommendation

There should be a general set of terms and conditions that are applicable to all – irrelevant of where they are – be it in the license or as general rules applicable to the operation of a network or the provision of a service. Then there are terms and conditions applicable to certain service providers and terms and conditions linked to the use of scarce resources.

The first issue here is the gradation of the rights and obligations according to the category of license being awarded. Class licensees are subject to a more general set of rights and obligations, while individual licensees are, in addition to general rights and obligations, subject to a specific rights and obligations linked to their use of scarce resources and the need to ensure that those scarce resources are put to proper use.

The second issue is to determine the appropriate legal instrument in which to include all of the rights and obligations of licensees. In the interest of fairness, equal treatment and transparency, international examples show that changes in the market and in technologies are usually more manageable using generally applicable licenses, with guidelines applicable to all licensees being published separately. Such guidelines generally include all the relevant terms and conditions formerly included in licenses and are equally applicable to licensees. Future terms and conditions included in such guidelines are then determined and possibly amended through regulation according to the relevant process, thus creating more transparency, fairness and openness.

A key requirement of any potential entrant to the telecommunications market in any country will be an understanding of their rights and entitlements under the license and the obligations that they must meet.

When an organization is licensed to operate a network or provide a service, it is granted certain rights and in turn must comply with certain obligations. These include compliance with the rights and obligations of their license, as well as with rights and obligations from any relevant legal texts such as the Telecommunications Law and from any guidelines, standards or regulations that the NRA adopts.

Licensed organizations will be entitled to, for example: interconnection, rights of way, etc. and would, in turn, be required to pay an annual fee, provide access to their network, provide periodic reports as required, respond to the NRA when asked for information, etc.

Any conditions attached to licenses for the establishment and operation of communications infrastructure or for the provision of services must be proportionate to the objective sought, transparent and nondiscriminatory. The requirement of transparency means that licenses should be published. The requirement of nondiscrimination means that the same license conditions should in principle apply to publicly and privately owned infrastructure operators and service providers. At the same time differential licensing conditions may be appropriate between infrastructure supporting public telecommunications services and infrastructure supporting corporate networks, or between public infrastructure providers facing different market conditions (for example, a significant difference in the date on which each is allowed to enter the market).

International examples show that many countries have moved away from detailed licenses towards a regime using generally applicable rules that apply to all market participants and a licensing structure that merely grants the licensee an authorization to provide service and obligates the licensee to abide by the rules issued by the regulator.

The rules generally include all the relevant terms and conditions formerly included in licenses and are equally applicable to all relevant licensees. Future terms and conditions included in such rules are then determined and amended, if necessary, through regulation according to a predictable, transparent process, thus creating more transparency, fairness and openness.

It is usually only countries that do not have a clear regulatory framework or where there is a perceived high country risk or where there are economic or governance problems, and that intend to license new operators or attract new investors in incumbents, that clear, detailed and comprehensive licenses and cahiers de charge as part of the privatization and licensing processes are still advisable.

Rights and obligations in the European Union New Regulatory Framework

The European Union's New Regulatory Framework[43] (see Annex for full details) provides an interesting example of the gradation of rights and obligations applicable to the various categories of communications service providers. Private networks (such as networks for closed user groups) are subject to general conditions of authorizations that are extremely limited (e.g. ensuring that equipment does not interfere with other networks).

Public service providers (such as broadband internet access) are subject to a greater level but still very general conditions of authorization, most of which are effectively linked to consumer protection.

The "more important" subset of the public service providers, namely those offering a service comparable to the PSTN, are subject to additional national general conditions over and above those of the public Electronic Communications Service providers as defined under the Universal Service Directive[44].

The conditions applicable to the PSTN-like operators are quite significant and include consumer measures such as the right for end users to have an entry into a publicly available directory, special measures for end users with disabilities, limits to measures on non-payment of bills, transparency and publication of prices, all necessary steps to maintain proper and effective functioning of network and access to service (provided at "fixed" locations only), the obligation to provide operator assistance and directory enquiries, national and single European emergency number access, EU access to non-geographic numbers, itemized bills, obligation to provide number portability, code of practice/dispute resolution, as well as additional requirements such as the requirement to have metering and billing systems accredited.

4.5 Procedural Issues

4.5.1 Licensing Methods

Issues and recommendation

The decision to adopt an individual licensing mechanism for more than just those activities which use scarce resources effectively establishes a nation's regulatory authority as the country's "gatekeeper" to the market. If the regulator adopts requirements for certain types of networks and/or services that are unduly burdensome, restrictive or opaque, these procedures may slow or prevent the entrance of, for example, ISPs into a nation's market. The licensing process thus can become a means for regulators to restrict, intentionally or not, the market access of certain types of networks and/or services, which will keep costs high and limit the overall growth of the country's communications and information services. To avoid such results, the U.S. and the European Community advocate that countries not adopt licensing requirements in mature and competitive markets.

Although this deregulatory approach has many advantages, it may not be appropriate in every market. To the contrary, there may be legitimate reasons for countries to require individual licenses where the telecommunications market is not fully competitive or where the business regulatory and consumer protection framework has not yet been established. In some markets, including in our opinion most countries in West Africa, therefore, it is beneficial to provide most licensable activities with some type of licensing mechanism.

---

43 The European Union's New Regulatory Framework introduced a series of measures aimed to provide a harmonized framework for the regulation of electronic communications services, electronic communications networks, associated facilities and associated services. The terms are specific to the EU and are defined in Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 (The Framework Directive) – the official text of the Directive can be found on http://www.europa.eu.int

44 The text of the Universal Service Directive can also be found on http://www.europa.eu.int

As stated repeatedly in this report, a key issue facing regulators and investors in a number of countries still looking to develop their ICT sector concerns the licensing of new entrants and the definition of a new licensing regime against the background of liberalization of the market and indeed of privatization of the incumbent. The new licensing regime generally deals with the question of whether networks and services may require individual or class licenses or simple registration or authorizations.

In more recently adopted regimes, there is generally no limitation on the number of licenses that will be issued to future providers of (non-mobile) telecommunications services, or on the types of associated networks used and services provided authorized except as required by considerations relating to normal safeguards, security, use of scarce resources and technical limitations.

Such regimes also generally determine that licensees will face no regulatory impediments on the use of any available technology, subject to the need to ensure appropriate management of spectrum, security and other legitimate safeguards.

The choice of licensing method often gives rise to significant discussion amongst stakeholders, including the government, the regulator, existing licensee(s)/operator(s) and other stakeholders such as potential investors and consumers.

The use of extensive procedures are usually only useful in the case of individual licenses (specially when there is a need for scarce resources) and/or the regulator has a specific interest in ensuring that the service is provided in a specific manner (e.g. where the operator has significant market power). Examples typically include the basic public telephony services in a monopoly market, or one with a dominant incumbent operator.

For instance in the case of Botswana:

Licensing in Botswana

The Botswana Telecommunications Authority issues the following licenses in accordance with the Telecommunication Act, 1996 (No.15 of 1996):

- Telecommunication Service License issued under section 27 for providing telecommunication service (including cellular telephony, packet switched data services and paging services).
- Telecommunication System License issued under section 28 for establishing telecommunication system.
- Type approval certificate issued under section 21. All telecommunication equipment has to be type approved by the Authority.
- Radio License issued under section 42. All radio transmitters have to be licensed whether operating or not.
- Radio Dealer License issued under section 27 for all suppliers of radio equipment.

Telecommunication Service Licensing Procedure

The telecommunication market is segmented into various sub-categories such as Fixed, Cellular, Internet Service Providers (ISP), Satellite and Data etc. Other segments of the market are competitive while the others are still non-competitive. In non-competitive market the number of players is restricted. In the competitive market there is no limit on the number of players. The competitive markets are Internet Service Providers, Data service providers and paging services. The Fixed telephone services and cellular service are currently non-competitive, the Authority will determine the licensing procedure on a case by case in future.

Licensing in Botswana *(cont.)*

Licensing Procedure for competitive market such as ISP, Data and Paging

For example for ISP licensing the applicant is required to submit the following:

- Basic description of service to be provided
- Complete ownership profile of the company, listing all directors, their addresses and their equity holdings.
- Contact details
- Business plan
- Network configuration details
- Proposed management structure
- Curriculum vitae for key personnel
- Equipment details

Type Approval Procedure

All telecommunication equipment has to be type approved by the Authority. The Authority may also type approve by reference to a type approval certificate issued by another country. For compatibility the Authority prefers type approval certificate from ITU region 1.

Radio Licensing Procedure

All radio transmitters require a radio license according to the Telecommunication Act. For all new applications for radio license, applicants firstly have to apply for frequency before submitting the equipment details for licensing. All radio licenses are annual.

For frequency application for land mobile the Applicant must submit the following information:

- Contact details, including contact details, telephones, facsimile
- Intended area of operation
- Preferred frequency band (HF, VHF or UHF)
- Number of radios, which will the frequency
- Equipment location - geographical coordinates, plot number and street names.
- Transmit power of the repeaters and base stations
- Types of antennae

After the applicant has been issued with the frequency, he will be required to complete radio license application form

Radio Dealer Licensing Procedure

All radio suppliers have to apply for license. The application should include the following information:

- Particulars of the applicant
- Technical information - to prove that the applicant has sufficient technical experience and capability
- Financial information - to prove applicant has the financial capacity to be a dealer.

Source: www.**bta**.org.bw

The choice of licensing method becomes even more important in the case of the exclusive use of scarce resources, such as spectrum. Different approaches have been adopted to assign spectrum where demand exceeds availability. No consensus exists as to which approach is best in which case. Traditionally, government often allocated spectrum to particular applications and then assigned parts of spectrums to entities to use for specific purposes on a "first come, first serve" basis. The

approach is fast, practical and inexpensive, but not appropriate in today's competitive market. Today, the preferred approaches include lotteries, comparative evaluation approaches and auctions. Various combinations of these approaches have also been used. For example, applicants may be short-listed using a *comparative evaluation* approach and participate in an *auction* or *lottery* for the final assignment of spectrum.

Policy makers and regulators weighing choices among beauty contests, auctions, hybrid methods and direct negotiations for licensing have to consider a range of issues including the maximum overall sustainable investment in the sector and specific new services, optimizing the speed with which infrastructure can be rolled out and services can be commenced, ensuring that investors are sufficiently qualified in terms of experience and know-how, as well as potential revenue to the government. During the 3G 9third generation mobile) licensing process, for example, Germany and the UK chose for an auction of the spectrum and got significant income for their respective treasuries – it must be taken into consideration though that the environment in the financial markets was positive towards cellular operators and that the hype around the technology created high expectations about the leading operators needing to ensure their future viability through obtaining 3G licenses. The following text summarizes the pros and cons of different licensing methodologies.

Spectrum Auctions, Lotteries and Comparative Evaluations

The radio spectrum is universally acknowledged to be a valuable limited public resource and thus subject to government regulations. Technological developments have expanded the usable portions of the spectrum and enabled the transmission of more and more information in the same amount of bandwidth. Despite these developments, an increasing number of telecommunications services and applications rely on spectrum, and thus demand for spectrum often exceeds availability. Hence here is a need to develop policies and approaches to assign spectrum.

First-come, First-served

Countries around the world generally have a policy of allocating spectrum on a "first-come first-served" basis in those markets where there is sufficient spectrum resources. Where insufficient resources exist then a competitive process is used.

Pros:

- *speed*
- *inexpensive*

Cons:

- *may not end up in hands of an entity that values it the most;*
- *value of license not taken into account;*
- *resellers instead of public may profit*

Lotteries

Lotteries provide a fast, inexpensive and transparent approach for selecting from substantially similar or equally qualified applicants. *Lotteries should generally be preceded by a form qualification process to select lottery participants*

Pros:

- *quick process*
- *provides rules for "tie"*

Spectrum Auctions, Lotteries and Comparative Evaluations *(cont)*

Cons:

- *unqualified party can win,*
- *resellers instead of public may profit*

Comparative Evaluation Processes

Comparative evaluation provides an approach for choosing among multiple applications that are substantially equal. It also allows regulator to match specific sectoral objectives with the operator in charge of achieving them.

There are many forms of comparative evaluation schemes. In some cases, licenses are awarded to applicants expected to make the best use of spectrum to serve the public.

Comparative evaluation processes may involve the application of a variety of qualification and selection criteria. In most cases, these criteria will be published in advance and applicants will strive to demonstrate how their applications meet the criteria better than the other applications.

Minimum qualification requirements generally include evidence of financial resource, technical capability and commercial feasibility of relevant spectrum applications. Selection criteria may include proposed tariffs, coverage (geographical and in terms of users), network rollout targets, quality and range of service commitments, and the efficient use of frequencies. Some of the above criteria are applied in some cases as qualification criteria and in others as selection criteria, depending on the country and even on categories of service within a country.

Pros:

- *awards license to contender who would best service public interest,*
- *allows for equity considerations,*
- *can require licensees to serve isolated areas*

Cons:

- *time consuming,*
- *expensive,*
- *no rules for a "tie",*
- *less transparent than other techniques,*
- *Allows government to determine what the market wants*

Auctions

Auctions provide an efficient and transparent and objective means of awarding spectrum licenses to the bidders who value them most highly. A proper pre-qualification process can ensure that successful bidders have the technical and financial capabilities to implement service quickly and efficiently. The high investment requirement to win an auction can be viewed as incentives for rapid rollout of infrastructure and services since that is the only way the successful bidder can recoup its investment in the license fee. Another argument in favor of spectrum auction is that they provide the means to provide public resource. Government can use the proceeds of the auctions for deficit reduction and other public priorities.

There are also arguments against spectrum auctions. First, it is argued that the high costs paid by the successful bidders are usually passed on to customers. The result can be excessive rates for consumers of wireless services, and reduced penetration, particularly among lower income consumers. Some argue that capital used to pay high auction fees will not be available to invest in network infrastructure.

Spectrum Auctions, Lotteries and Comparative Evaluations *(end)*

Pros:

- *speed*
- *may be less expensive than beauty contest,*
- *entity who places highest value on license wins,*
- *Spectrum is public resource so revenues benefit*
- *citizens,*
- *provide information about economic value of spectrum*

Cons:

- *could lead to increased concentration in industry,*
- *may ignore non-financial public interest objectives*
- *(equity),*
- *revenue potential may create incentive for government to restrict output and raise prices*

General authorizations are usually issued without competitive process: the company wishing to offer the service is simply obliged to comply with the terms and conditions defined for operating a particular type of service. An administrative procedure, which essentially requires the submission of a basic set of information to the Regulator (see for example most EU countries prior to the new regulatory framework (NRF) – there was a need for the submission of a short technical plan, some financial details aimed at showing that the applicant had secured means and some legal info), may also be defined for such class licenses.

In more mature markets, service providers are usually not required to register for a General Authorization. They simply have to ensure that they are operating within the general framework of communications and other appropriate legislation as well as complying with rules and regulation issued by the regulator.

However, because the telecommunications/ICT sector is still in the developing stages in most African countries, registering service providers that fall under the General Authorization scheme could prove beneficial. For example, a registration process would help keep the Authority up to date on the number of service providers and the types of services offered to consumers. It could also provide a certain level of legitimacy for service providers and thereby assist them in negotiating contracts with external parties.

This was the case in many European countries prior to the New Regulatory Framework. In **Portugal**, for example, Decree-Law no. 381-A/97, of 30 December 1997 (now revoked) regulated the access regime to the business of operator of public telecommunications networks and of public use telecommunications services provider. The Decree established that the provision of some telecommunications services was subject to mere registration. Individuals had to show that they were registered as single businessmen. Commercial partnerships, however, had to show by means of a statement accompanied by a certificate from the relevant commercial registration office that they were legally established and that their contract of partnership included the business of providing telecommunications services. Individuals or partnerships whose registration or license was suspended or had been revoked were not allowed to register.

The entities were also required to previously inform ICP of the services they intended to commence and to provide the information that showed that they could fulfill the applicable conditions and modes referred to in the Decree.

This included:

a) Detailed description of the service they propose to provide.

b) Technical project stating the equipment's to be used.

c) Indication of the entity in whose network the service is based.

ICP had the right to request further clarification. The applicant could not start activity before ICP completed the process.

Finally, there are those services that may be **provided without a licensing process or qualification requirements**. Some form of declaration or registration with the regulator is imposed in some countries but, such a declaration is usually not linked to any terms or conditions for operating the service nor to the authorization to operate some form of network or to provide service.

4.5.2 Application Procedures

Regarding application procedures for licenses and authorizations, there are a number of questions which must be addressed, namely:

1. type of information and documentation to be submitted and distinction between categories.
2. where, and how to obtain application form.
3. timeframe for submission and decision.
4. time limits for requests for information/clarification from the Telecommunication Authority (normally the NRA).

Where applicable, NRAs must be careful to stay within the limits of their WTO commitment, which prohibits the use of economic needs test as a barrier to entry.

Type of information and documentation to be submitted and distinction between categories

The WTO Regulation Reference Paper stipulates that Licensing Criteria must be publicly available, meaning:

1. All the licensing criteria and the period of time normally required to reach a decision concerning and application for a license, and
2. The terms and conditions of individual licenses

The reasons for the denial of a license will be made known to the applicant upon request.

Practical realities (in terms of staffing and workload) warn against NRAs being overburdened with the need to analyze too much information from those who have a lesser impact on the development of the market and of the sector (e.g. non-facilities-based resellers). There is also no need to impose equal information and qualification requirements on all new market entrants.

As the simpler regimes have demonstrated, there is no objective justification for splitting up authorizations in ever so many service categories and this approach should therefore be abandoned. While some countries have shown that light regimes are feasible, workable and successful, other countries have developed rather heavy handed procedures which often are based upon the perceived need to control who enters into the market. This is not in line with the policy objective of stimulating the development of a competitive and dynamic market in communications services nor does it take account of convergence between services, networks and technologies.

With reference to the different categories of authorization of telecommunications activities (individual license, class license or simple declaration), and the level of regulatory intervention for each of these categories, NRA should also request different levels of information for each category of applicant. The following paragraphs show examples of the types of information that could be requested for each category of application.

In the case of Individual Licenses, for example, public telecommunications network operators, where more assurance is needed regarding the financial and operational capability of such operators, the type of information that may be required includes:

- legal information, including a description of the applicant (for example: name, legal form and contact details of the applicant as well as proof of corporate registration, etc.), articles of incorporation and bylaws.
- financial information, including audited financial statements, and a list and description of existing licenses in which the applicant has, for example, at least 10% ownership as well as confirmation that an operators' existing licenses are in good standing.
- economic information, including financing resources and proof of the applicant's telecommunications operating expertise.
- technical information, including coverage plans and indicators, planning and development of the system including interconnection, numbering and addressing plans and issues, and proposed quality of service levels.

This is generally justifiable on the grounds that these telecommunications networks will require access to or pass through public possessions, and/or locations of public use and/or third parties properties, may require scarce resources (i.e.; frequencies, numbering), or where such networks are seen to contribute to the realization of public policy goals.

This does not necessarily mean that market access is restricted; but is mainly aimed at giving licensees the opportunity to describe how they intend to establish their operations in the time and manner required and meet any obligations imposed on the applicant for individual licenses in an appropriate and timely manner.

In the case of licenses for service providers, the NRA's regulatory objectives can be achieved by establishing general conditions, and it is proposed that the licensing procedure be lighter than the one outlined above.

In the case of class licenses, where the main concerns are consumer protection and competition, the type of information that may be required includes:

- legal and financial information, including a description of the applicant, the legal form of the company, proof of corporate registration by the competent commercial jurisdiction (e.g. commercial registry, articles of incorporation and bylaws), a model of service contract/declaration of compliance with model service contract to be drafted and published by the regulator as well as annual reports and a description of financial backing.
- technical information, including a list and proof of type approval of own equipment to be used to provide the service, a description of the proposed service's dependencies on the network infrastructure of other operators.
- for non-facilities-based resellers, there may need to be a description of the services and/or traffic (i.e. minutes) to be resold, as well as a description of the ways it will be sold, (distribution channels) and geographic area where the services will be resold in order to ensure consumer protection. Pre-paid calling card resellers may be required to post a bond – guarantee to minimize fraudulent provision of pre-paid cards by card providers.

In Botswana, for example, for ISP licensing, the applicant is required to submit the following:

- Basic description of service to be provided.
- Complete ownership profile of the company, listing all directors, their addresses and their equity holdings.
- Contact details.

- Business plan.
- Network configuration details.
- Proposed management structure.
- Curriculum vitae for key personnel.
- Equipment details.

Where, and how to obtain application form

Recently, most countries make application forms and guidelines available on their web-sites together with the address of where paper copies of the relevant information can be obtained. We recommend that this is the most practical and transparent way of organizing the submission of applications.

Timeframe for submission and decision

Again, it is essential that the NRA clearly establish and publish timeframes for submission and decision.

Time limits for requests for information/clarification

International best practices illustrate that such time limits also need to be clear and publicly available.

International Best Practices

A good example of clear application procedures can be found in Singapore. Interested parties, who wish to apply to IDA for an SBO License under the Individual category or register as an SBO Class Licensee, must complete the relevant application or registration form, for submission to the Info-communications Development Authority of Singapore.

The application and registration forms are available on IDA's website at http://www.ida.gov.sg, or from IDA. The names of all licensees will also be posted on IDA's website.

IDA may seek clarification and additional information from any party arising from their application. Each application should include an address, contact telephone and facsimile numbers, and the name and designation of the contact person(s) for communication with IDA.

Successful applicants for the SBO (Individual) License will be awarded their license within four weeks of application submission, provided that the applicants have submitted all the necessary information requested by IDA for evaluation purposes and that IDA has completed all the clarifications with the applicants. Similarly, applicants registering for the SBO (Class) License will be notified within two weeks if the registration is recorded, provided that the applicants have submitted all the necessary information.

Applicants must use their best efforts to ensure that the information and representations submitted in their applications are accurate in all aspects. Any change in the information contained in the application form, and subsequent information provided to IDA, must be immediately notified to IDA.

IDA reserves the right not to consider any applicant that includes any company related and/or associated with any FBO, and/or any of its subsidiary companies. A company is deemed to be related and/or associated with such an FBO, and/or its subsidiaries, if the FBO and/or its subsidiaries have influence on the company's policies and/or management.

The new regulatory regime for instance in Portugal establishes:

Notification under the 2004 REGICOM Law (Portugal)

The new Portuguese Regicom Law of 2004 specifies the details of the notification procedures in Portugal for Electronic Communications Networks and Services.

Legal persons that wish to provide **publicly available electronic communications networks and services** shall submit the following particulars to ICP- ANACOM:

a) As regards registered legal persons, a certificate of the registration contents and enrolments in force, issued by the competent Trade Register Office, must be submitted, and, in the case of commercial companies, the respective object of the company must include the provision of electronic communications networks or services;

b) As regards legal persons with pending commercial register, certified copies of the legal person card and of the public document of the respective setting up must be submitted.

Entities that wish to provide **publicly available electronic communications networks** shall submit the following particulars in addition to those pointed out in the preceding paragraph:

i) Type(s) of network(s) those entities wish to establish, operate, control or make available.

ii) Description of the nature, characteristics and functioning of the network(s), including the following information:

- Purpose of the network: establishment, operation, control or provision (namely, if the network aims solely at supporting services provided by the undertaking itself to end-users or if it aims also at the provision to other operators/providers for the establishment of network or support of their services).
- Geographic coverage scope.
- Technology to be used.
- Short description of the network architecture and diagram that facilitates the description.
- Short description of the plans concerning the information system and network management.
- Short description of the measures to be adopted in order to ensure the network security.
- Indication whether the network is owned or belongs to another entity, fully or in part;
- Indication whether the network installation requires the occupation of public domain or of private property.
- Indication whether the network provision involves the use of radio spectrum.
- Indication whether the network provision involves the use of numbering facilities.
- Indication whether the network supports the provision of radio and television broadcasting services.

iii) Indication of the date set for the beginning of the network provision. In case the purpose of the network is to support services to be made available to the end-user by the undertaking itself or to provide such services to other operators/ providers for the establishment of the network or the support of their services, the date for the beginning of each of these activities must be discriminated, where such activities do not commence at the same time.

iv) Indication of the address of the entity and of the contact person for the purpose of notifications and other communications to be carried out by ICP- ANACOM, as well as of the responsible person in situations of disaster or within the scope of the National Emergency Plan.

v) Indication of the shareholding composition at 1st and 2nd level.

Notification under the 2004 Regicom Law (Portugal) ***(cont.)***

Entities that wish to provide **publicly available electronic communications services** shall submit the following particulars:

i) Indication of the service(s) the provision of which they wish to initiate, including the description of the respective nature, characteristics and functioning, referring whether they concern retail or wholesale services and the respective geographical scope.

ii) Diagram that facilitates the description of the service(s), including the indication of the technology (technologies) to be used.

iii) Indication, for each service to be made available, whether it is to be supported, fully or in part, over an owned network or a network belonging to another entity.

iv) Indication of the date set for the beginning of the provision of service(s).

v) Indication whether the service provision involves the use of radio spectrum.

vi) Indication whether the service provision involves the use of numbering facilities, in which case the correspondent request must be submitted, attaching the particulars provided for in point b) of paragraph 4.

vii) Indication of the address of the entity and of the contact person for the purpose of notifications and other communications to be carried out by ICP- ANACOM, as well as of the responsible person in situations of disaster or within the scope of the National Emergency Plan.

viii) Indication of the shareholding composition at 1st and 2nd level.

Natural or legal persons that wish to provide non-public electronic communications networks and services shall submit the following particulars to ICP- ANACOM:

i) As regards legal persons, the same information must be submitted as is the case for public electronic communications networks and services.

ii) As regards natural persons, a simple copy of the identity card and of the taxpayer identification card must be submitted.

iii) Particulars regarding the nature, type, characteristics and functioning of the electronic communications networks or services (as specified above).

iv) Indication of the date set for the beginning of the provision of the network(s) and/or the service(s).

The notification regarding the beginning of the provision of electronic communications networks or services is deemed accomplished following the submission of the request for a radio license made to ICP- ANACOM, pursuant to Decree-Law no. 151-A/2000, of 20 July. Entities that use the spectrum for the provision of non-public electronic communications networks or services in frequency bands exempt from radio licensing and under the conditions established in the notice of ICP- ANACOM, published for the implementation of Decree-Law no. 151-A/2000, of 20 July and available at its website, are exempted from requesting frequency allocation, but must submit the notification concerning the beginning of provision of electronic communications networks or services.

Interested parties in the provision of electronic communications networks or services, publicly available or non-public, shall fill in the model in annex to the present document and send it by post to the headquarters of ICP- ANACOM. The notification model may also be electronically filled in and sent to the email address info@anacom.pt. The electronic submission of documents does not exempt from the submission of a paper copy, which must take place at the most 48 hours from the date of the email sending.

Interested parties must obtain evidence of the notification, via any legal means of acknowledgement of receipt, namely postal or electronic.

Source: www.anacom.pt

4.5.3 Qualification Requirements

Generally, qualification criteria are limited to ensuring that applicants have the minimum financial and technical resources and experience to successfully operate the licensed service and meet its license obligations. Otherwise, licensees may fail to meet important license conditions such as those related to network roll-out, service coverage and quality.

Examples of such possible qualification criteria include:

- Applicant has a minimum number of fixed lines in service in other countries or an international PTO as partner.
- Relevant experience in similar markets.
- Financial comfort letter from recognized bank.
- Business plan, including a marketing plan.
- Technical Plan, including roll-out and description of technology to be used.

In a fully competitive market, competition will generally discipline the market, with consumers, for example, switching between operators if these operators fail to provide adequate service. The aim of any differentiation in qualifications for different categories of licensable telecommunications activities should be to ensure that there are no unnecessary regulatory barriers to market entry or on the choices operators may make concerning available technologies, except where the latter is justifiable for reasons of scarcity or within the limits of normal safeguards, security and technical limitation considerations. Within this context, the objective of licensing procedures should not become a subjective evaluation of applications, but rather a way to verify that applicants in an open market demonstrate that they are able to comply with legal obligations.

Recent examples have shown, however, that qualification requirements remain of particular importance in the case of the use of scarce resources so that the regulator can ensure that spectrum and other scarce resources are awarded to applicants who are financially and technically capable of providing the public with services using such resources. In the case of auctions, the market ultimately determines who will hold the spectrum licenses. However, in many auction schemes, bidders are pre-qualified using criteria similar to those used in comparative evaluation processes. As a result, participation in some auction is limited to bidders with proven financial and technical capabilities. In the case of class licenses, the process is usually just a mere check by the regulator to verify that applicants in an open market demonstrate that they are able to comply with legal obligations. An example is:

Qualification requirements: The Australian example

The ACMA (Australian Communications and Media Authority) may grant a carrier license if it is satisfied that the applicant has met the following requirements:

The person applying is a constitutional corporation, an eligible partnership or a public body.

To assist the ACMA in its determination, the applicant must provide a copy of the certificate of registration in the case of an applicant company and, in the case of an eligible partnership, a copy of the certificate of registration of each company that is party to the partnership and a copy of the partnership deed. Where the applicant is a 'public body', it must provide as applicable, a statement as to the legislation that established the body or a copy of the certification of registration of the relevant corporation together with a statutory declaration by a director of the corporation.

The applicant has prepared a current industry development plan, which has been approved by the Minister.

Part 2 of Schedule 1 to the Act provides that the ACMA must not grant a carrier license unless the applicant has a current industry development plan (IDP) that is approved by the Minister. Accordingly, a letter from the Minister approving the applicant's industry development plan, or evidence of exemption from these requirements, must accompany the application as evidence of compliance with this condition.

The applicant has paid the carrier license application charge to the ACMA

The charge imposed on an application for a carrier license is due and payable when the application is made to the ACMA. The amount of the application charge is $10,000, representing the charge determined by the ACMA in the *Telecommunications (Carrier License Application Charge) Determination 2002* made under section 9 of the *Telecommunications (Carrier License Charges) Act 1997*.

The ACMA may make a nominated carrier declaration if it is satisfied that:

- ***the applicant would be in a position to comply with all of the obligations imposed on the applicant in its capacity as the nominated carrier in relation to the network units and***
- ***the making of the declaration would not impede the efficient administration of the Act (section 81).***

Applicants are required to attach a submission to the application detailing matters that would assist the ACMA to form a view regarding the issues outlined above. For example, the submission should provide details of any arrangements between the owner(s) of the network units and the nominated carrier which provide that the nominated carrier will not be precluded from meeting its carrier-related obligations in relation to the network units concerned. The applicant should also provide details of its approach to complying with the relevant provisions.

The holder of a carrier license must inform the ACMA if it no longer meets the eligibility requirements or if it has failed to pay an annual charge or universal service levy in the period specified for payment. These requirements are a condition of a carrier license granted by the ACMA and are intended to provide the ACMA with information that will enable it to determine whether the holder of a carrier license should be/is qualified and whether the carrier license should be cancelled.

Source: www.**aca**.gov.au

4.6 License Fees

Recommendation

In the case of mobile wireless licenses, which involve the exclusive use of a scarce resource (i.e., spectrum), license fees should reflect the economic value of the spectrum being allocated.

With other licenses, and in particular, individual licenses in the fixed telecommunications sub-sector, countries should veer away from large, up front license fees and towards recurring annual fees set at a level that enables recovery of the administrative costs of the regulator.

As countries have transitioned from a monopoly environment to an open and competitive, there has been an accompanying trend to reduce license fees. High license fees are understood to function as an implicit tax on service providers and competitors, thereby off-setting the principal benefits of competition. License fees in an open market should promote wider access, more choice and affordability, and as such should be based mainly on covering the costs of issuing telecommunications licenses and administering and regulating the sector.

A licensing regime that seeks "maximum entry" should not allow incumbents or large providers to become complacent. Nonetheless, the higher the upfront fees the larger the addressable market has to be to make addressing such a market attractive and viable. Higher upfront license fees mean fewer niche markets addressed. The most disadvantaged will be those with innovative new services that do not have a proven market in the respective countries. If such new services happen to compete with existing services then they probably wouldn't be launched.

According to the WTO commitments and good practice in general, licensing (including the fees) should be objective and should not act as a barrier to entry.

COMESA has clearly defined a number of regulatory principles related to licensing fees as follows:

1) The license fees could include initial fees, administrative fees, and annual fees; and fees for rights of use and rights of way.

2) Initial fees and annual renewal fees will be payable to cover the administrative costs incurred by the regulator for management, control and enforcement of the applicable individual license provisions.

3) License fees may vary according to the type of the license and its application. i.e. Licensing a mobile network operator and management of associated tasks would require more work than a data service provider and thus fees applied would vary accordingly.

4) Annual renewal fees may be adjusted in line with market development and the evolution of regulatory requirements

5) For all applicable license fees, the following principles should apply:

- Any fees associated with a license should be proportionate to the level of effort involved in administering the licensing process, and not constitute a discriminatory levy on expected profits or revenues.
- Notwithstanding the previous principle, fees may, in the case of licensing of radio frequency, be set at a level which encourages the efficient use of allocated resources.
- Promotion as far as applicable of auction or tendering in the licensing process.
- Small ICT operators should be exempted of payment of annual renewable fees. The regulatory authority should determine a reasonable applicable registration fee.
- The regulatory authority should publish annually an overview of administrative costs and collections so that necessary adjustments could be made in case of a deficit or surplus.
- The fees for rights of use of frequency spectrum and or rights of way may be determined by the regulatory authority objectively, transparently, on a non-discriminatory basis and with respect to the intended use.
- Information relating to all applicable fees or clear criteria for determining fees should be published and updated regularly.

Source: http://www.comesa.int/ict/guidelines/telecomms/licensing_regulations/view

High upfront fees are also not in line with global trends, To the extent that taxation by government is involved, it is best done directly and not as an indirect result of telecommunications licensing. In any event the total amount that can be levied to the treasury from high upfront fees will be relatively small. Telecom providers today want to provide converged services (data, voice and video). World practice shows that comparable license fees are low. Bahrain charges about US$2650 for an ISP or VAS license, Singapore charges US$120 every three years with no upfront fees. The European Union charges NO license fees. Other countries are similar.

Selected countries	Initial License Fees	License Types
Afghanistan	$20,000	**ISP and other fixed**
Argentina	5,000/- Pesos	**Single License**
Australia	(Aus$) $2,200 (decreased from $10,000)	**Carrier License**
Bhutan	None	**All fixed licenses**
Canada	None	**All fixed licenses**
Croatia	8M Kuna (approx $1.4M)	**Local exchange carrier**
Most EU	None	**All fixed licenses**
Jordan	JD 100,000 JD 25,000-30,000	**Individual** **Class**
Kenya	None – recent decision to abolish as no one would agree to pay fees	**Local exchange carrier**
Malaysia	RM 10,000 (application) RM 50,000 (approval)	**Individual License**
New Zealand	None	**All fixed licenses**
Singapore	None	**Facilities Based Operators** **Service Based Operators**
Slovak Republic	None	**All fixed licenses**
Switzerland	CHF 260	**All fixed – same fee is also applied for a change or cancellation**
USA	**Fees range from:** **US$55** **US$230** **US$340** **US$895** **US$1505** **US$2,240** **US$14,895** **US$353,690**	**Services vary:** **Land mobile/** **MMDS** **Receive only earth station (per station) cellular per call sign** **Int'l service** **Cable landing license (non-common carrier)** **Fixed Satellite Transmit/Receive Earth Station** **Cable landing license (non-common carrier)** **Space station**
Sources: Adapted from ITU survey data, various regulator web sites.		

The changes in license fee regimes from a monopolistic environment to a liberalized one are based on increasing reliance on market forces for the provision of telecommunications services. The concerns in the new regime are therefore no longer to limit market entry, but rather to encourage the offer of a wider variety of and to facilitate the entry of new operators and allow them to compete with the incumbents on a level playing field.

Over the last few years, countries around the world have taken different approaches towards the level and method of determination of fees for licenses, with the greater difference being related to the type of licence awarded and the need for licenses to have an exclusive use of a scarce resource.

As shown above, in the fixed telecommunications sub-sector, countries have generally veered away from high up-front fees and more towards annual recurring fees calculated on the basis of reimbursing regulators for the administrative cost of managing licenses and indeed of regulating the sector.

Licence fees for entities operating under class licences or general authorizations have generally been set at a low level (usually that which is required for the regulator to recover its costs of administering the licensing regime) in order to lower barriers to entry and stimulate competition. Increasingly, these fees are based on financial metrics such as gross revenues, instead of being fixed in advance. This lowers barriers to entry by reducing the costs of new entrants during the early stages of their operations.

For individual licences, specific government objectives will typically determine how licence fee mechanisms are established.

The minimum annual carrier license charge and the carrier license application charge were set in Australia by the ACMA at AUS$10,000 in 1997 in accordance with advice from the Minister. It was envisaged that the carrier license application fee of AUS$10,000 would not prove prohibitive for credible new entrants but would provide a small disincentive to less financially sound and frivolous applicants.

It was also envisaged that the minimum annual carrier license charge of AUS$10,000 would provide an incentive for a person who is no longer exercising his or her carrier rights to surrender the license under section 71 of the *Telecommunications Act 1997* without representing a barrier to entry for credible new entrants.

In the case of spectrum in particular, countries generally follow the direction of having license fees reflect the economic value of the spectrum being allocated. Here, license fees have been higher, with the fees for UMTS license in Europe in particular being the example of the most extreme license fees.

The principal reasons why a fee is generally applicable for the right to use radio spectrum, include:

- promoting efficient use of scarce spectrum resources, where this is seen to be able to ensure that those using the spectrum do not acquire more than they need to provide a service;
- recovering the costs associated with managing the spectrum;
- a method of reflecting the scarcity value of the spectrum – this method can be used as a selection criterion;

Other means that are used to reflect the scarcity value of spectrum include:

- the application of licence obligations such as requirements to provide a minimum level of coverage;
- linking the award of additional spectrum to the achievement of certain milestones such as network traffic or number of subscribers, or
- simply restricting the maximum amount of spectrum that one service provider can hold.

In practice, a combination of these approaches is usually the case.

It is important to decide upon the objectives that the pricing policy should achieve. These objectives are generally a combination of following principles:

- promote spectrum efficiency;
- simplicity and transparency;
- cost recovery;

- reflecting market value of spectrum;
- promoting competition;
- increasing rural roll out;
- raising government revenue.

If the objective is to promote availability of services in rural areas where the volume of subscribers is insufficient to justify the incremental cost of network rollout, applying a fee structure that increases these incremental costs will be counter-productive.

On the other hand, if an objective is to maximise the degree of competition in areas where demand is high, it is desirable to accommodate a number of competing Service Providers within the available spectrum and to encourage each Service Provider to use as little spectrum as possible.

There are also situations where one–time fees is introduced either to eliminate non-serious player or to serve as a selection methodology.

Spectrum Usage Fees

Selected Countries	Type of Spectrum	Recurring Annual Spectrum Fees
Austria	GSM	**242 000 USD* (based on formulas)**
Belgium	GSM	**900 000 USD* (based on formulas)**
Canada	2G and 3G	**Fee of approximately $6.95 CDN per subscriber per month**
Denmark	GSM	**Set annually under Finance Act using a pre-set calculation model**
France	GSM	**5 969 000 USD* (formula based on frequency band, bandwidth and geographic area)**
Ireland	3G	**2.2 M Euros per annum**
Italy	All mobile licenses	**1.5% of operator's annual turnover**
Japan	2G and 3G	**5 USD per subscriber per annum**
Jordan	Mobile – technology neutral	**Annual tariff formula based on geography and spectrum band utilized**
Netherlands	GSM	**95 000 USD***
South Korea	3G	**Approximately 1% of operators' sales revenues**
Venezuela	**Mobile**	**0.5% of operator's gross revenues**
* Current rates which are subject to adjustment *Sources:* Adapted from ITU survey data, various regulator web sites.		

There are currently a number of methods that are used to charge Service Providers for their use of the radio spectrum and the main ones include

- Auctions
- Administrative Incentive Pricing (AIP)
- Recovery of operating costs of the frequency management / regulatory bodies ("cost recovery")

- Payment related to Service Provider's revenue arising from the licensed service and/or use of the radio spectrum (generally referred to as a "levy").
- Price determined on the basis of a study of Market Indicators.

Each method has advantages as well as disadvantages but where the aim is to ensure efficient use of the radio spectrum then one of the first two methods are generally used. In the case of auctions the charges payable by the winning Service Providers are set directly by the market, except where there are insufficient bidders. In such cases only the reserve price be paid. Administrative Incentive Pricing (AIP) requires the charges to be set by the Regulator. This has been a common approach in many countries.

4.7 Transitioning mechanisms for Existing Licensees

Recommendation

A transitioning mechanism must be developed for existing licensees and the necessary legal and regulatory measures defined to allow incumbents to transition to the new reality of full competition in as smooth and fair a way as possible while, at the same time opening the path for new entrants in both the provision of networks and services. Such a process must be fully transparent and balance previous payments and obligations with the objectives sought under a new framework.

One question is whether existing licensees will be grandfathered into the new regime without the review of the necessary qualifications or whether they will need to re-apply.

Again, this is a question where there is no single preferred model. Australia, for example, decided that all existing carriers were deemed to have been granted a carrier license on 1 July 1997, and this is foreseen in Section 49 of the Telecommunications Act 1997. The Minister, however, retained the right to impose conditions on the individual carrier licenses held by those carriers.

The 2002 ECTEL/Cable and Wireless MoU [45]on Licensing Principles, on the other hand, included the provision that: if a licensee has not violated the terms of their license, then renewal of that license could occur without having to reapply for a full license process or an agreed period could be used.

Anguilla determined that existing licenses in force at the commencement of the Act were to remain in force for one year but no more than two years thereafter, as the Commission would determine, provided that any provision of any license that expressly or indirectly granted or purported to grant any exclusive right to operate or provide any telecommunications network or telecommunications service is null and void as of the day the Act came into force.

Issues which NRAs will need to address include: fees and the position the NRA will adopt as to the fees already paid, rights and obligations related to the new categories as opposed to the existing ones, the duration of the grace period for existing licensees re-apply; the duration of the new license, qualifications to be submitted by existing licensees, etc.

One option is to adapt the existing licenses to the new framework by amending the licenses.

Another option is to decide on what category the existing licensees would fall into and to grant such licenses to the organizations without requiring application for such license or any additional

[45] Agreement between ECTEL member states and Cable & Wireless. http://www.ectel.int/about/Agreement.pdf

payment. Specific guidelines could be attached to such licenses to take account of the specific nature of such.

A third option is to make all licensees re-apply for new licenses, thereby granting all existing licensees, for example, a six-month grace period to file for the new licenses.

This is an issue that will need to be addressed carefully and where the input from the stakeholders is essential. For example in the Caribbean:

MOU with Cable and Wireless[46] regarding future Licensing Principles

- There is strong regulatory support for phasing.
- The parties shall consider the extent to which the Act and the Regulations need to provide for the Transition Period as in the Agreement. Licenses to be issued in terms consistent with that transition plan. Once the Transition Period has ended, any restrictions in licenses relating to the Transition Period could fall away.
- Failure to comply with a requirement of a license derived from the Transition Plan should be grounds for suspension or revocation of license, subject to the processes set out in the Act.
- Licenses to be issued on transparent and non-discriminatory terms:
  - *Providers of the same types of networks or services will be treated the same (or distinguished on grounds that do not affect competitive neutrality). For example, all ISPs should pay the same license fee (if any) or a fee calculated in the same way. This does not exclude any non-discriminatory conditions expressed to apply where the licensee is dominant.*
  - *ECTEL's decision whether or not to recommend that a license be issued shall be transparently made (including, if appropriate, consultation with the public)*
- If a licensee has not violated the terms of their license, then renewal of that license could occur without having to reapply for a full license process or an agreed period could be used.
- The following policy principles should apply to the proposed terms of a new license to be issued under the Telecommunications Act to a person who held a license ("old license") as at the date that the Act came into effect (Cable & Wireless or Marpin Telecommunications) in order to provide for a fair transition and ensure continuity of services and networks during the creation of the new licenses:
  - *that the licensee be allowed to provide at least those services, and establish and operate at least those networks, as in the old license;*
  - *all fees imposed will be non-discriminatory, transparent, not distort competition and apply fairly across all providers;*
  - *that the licensee be allowed to use at least that spectrum currently in use under the old license following the submission of a spectrum use and inventory and subject to the ECTEL Spectrum Management Plan. The licensee will not be required to pay a one-off fee (i.e. to bid at auction) for spectrum which is already being used to provide services to customers and in respect of which network investment has already been made. Any other fees will be imposed in a non-discriminatory fashion. In the case of new or unallocated spectrum, old licensees will have no special treatment and will be required to bid for that spectrum (or participate in the allocation process) like any other operator.*

46 Agreement between ECTEL member states and Cable & Wireless.: http://www.ectel.int/about/Agreement.pdf

MOU with Cable and Wireless regarding future Licensing Principles *(cont.)*

- If the old license contains a non-exclusive right (for example, to access public land for the purpose of installing a facility) then that right shall be preserved in the new license, unless it would be unreasonable to do so. If it is necessary to modify these rights, that modification shall apply in a non-discriminatory manner. The general principle shall be to ensure that all similarly situated providers enjoy similar rights, thereby removing any special status attaching to those rights. For the avoidance of doubt, none of these rights shall be exclusive in any way.
- With respect to markets where the old licensee is determined by the Commission or ECTEL (as the regulations may provide) to be dominant then there will be specific provisions relating that licensee's conduct in that market; and
- the process for inquiring into whether to grant the license may be streamlined, if services are already being provided to the public, or a telecommunications network already being operated, by that provider.

4.8 Special Cases

One of the aims of a future licensing program must be to put in place a simple and effective licensing regime that encompasses only those activities that are considered necessary as being subject to regulatory controls.

4.8.1 How will services like Radio Paging, PMRTS, Internet Services, etc. (which are much lower in terms of their competitiveness with, for example, mobile voice service in so far as their application and revenue potential is concerned) be treated in a competitive and convergent framework?

Some countries require Internet Service Providers ("ISPs") to obtain government- issued licenses before commencing operations. Other countries impose less burdensome regulatory requirements, permitting ISP operations pursuant to general authorizations. A third category of countries imposes neither licensing nor general authorization requirements on ISPs.

The decision to adopt an individual licensing mechanism for ISPs effectively establishes a nation's regulatory authority as the country's "gatekeeper" to the Internet market. If the regulator adopts requirements for ISPs that are unduly burdensome, restrictive or opaque, these procedures may slow or prevent the entrance of ISPs into a nation's market. The licensing process thus can become a means for regulators to restrict, intentionally or not, the market access of ISPs, which will keep costs high and limit the overall growth of the country's communications and information services. To avoid such results, the U.S. and the European Union advocate that countries not adopt licensing requirements in mature and competitive markets.

Although this deregulatory approach has many advantages, it may not be appropriate in every market. To the contrary, there may be legitimate reasons for countries to require individual licenses where the telecommunications market is not fully competitive or where the business regulatory and consumer protection framework has not yet been established. In some markets, therefore, it may be beneficial to provide ISPs with some type of licensing mechanism.

Where ISPs are unlicensed, it does not mean that unlicensed operations are unregulated; they are still subject, for example, to laws governing businesses in general. Further, operational requirements can be imposed through legislation or a general regulation or order. The open entry approach means that no license or authorization is needed to commence business. This open entry approach has been adopted in some countries for ISP operations and for the provision of "value-added services." The U.S., for example, does not license or authorize ISPs. Instead, e-mail, data and Internet services are treated as unregulated "information services," and ISPs are permitted to operate unfettered in a

competitive and free market, subject only, with a few limited exceptions, to general business laws. The decision not to license Internet service providers or regulate these services has played an important role in the expansion of the Internet in the U.S. Likewise, under the approach favored by the European Union, ISPs and other information services should require no license or general authorization to operate.

In **Guernsey**[47], for example, the Director General set out her position in OUR 04/04 on the licensing regime that will apply for ISPs. In particular she determined that she would be prepared to consider a request from ISPs applying for a license for certain specific license conditions in the Telecommunications License to be dis-applied subject to the applicant making out its case for such a modification.

The Director General also decided that a number of other activities are exempted from the requirement to hold a license. These include:

a) Telecommunications services provided by a person or class of persons, which are not provided for commercial gain or are not provided to third parties for provision by them for commercial gain.

b) Telecommunications services that consist wholly of the reception of telecommunications messages.

c) The establishment of a telecommunications network, where there is no requirement to have access to either, or both of, public or private third party land.

d) The establishment, operation or maintenance by a person of a telecommunications network which is connected to any other telecommunications network and in the case of which all telecommunications apparatus comprised in the network is situated either:

   i) on a single set of premises occupied by that person, or

   ii) in a vehicle, vessel, aircraft or hovercraft or in two or more vehicles, vessels, aircraft or hovercraft mechanically coupled together, and which is not:

   iii) operated for or provided to any third party for commercial gain, or

   iv) provided to any third party for the provision by that third party of telecommunications services for commercial gain.

e) The establishment and maintenance of payphones for use by third parties.

However, not all countries have adopted this regulatory approach towards ISPs or related information services. To the contrary, a number of countries require ISPs to obtain a license or a general authorization prior to commencing operations. These two regulatory systems are briefly described below.

General authorizations are used to permit an entity to provide a service without obtaining a prior explicit grant or approval by the national regulatory authority. Many countries use this authorization method for data transmission services, resale services or for private networks.

India's, for example, generally requires an individual license for all public networks, capable of offering voice and/or non-voice (data services), and a class license for all "niche operators" (included to promote growth of telecom services in rural / remote / backward areas from a teledensity point of view) and services (including satellite services which do not have both way connectivity with the public network). In its August 2004 Notice, TRAI[48] recommended to

---

47 See: http://www.regutil.gg

48 See: http://www.trai.gov.in

government in its new licensing regime that Radio Paging and PMRTS Services not be included in the class licensing regime. Thus, under the new scheme, a simple authorization will be required to cover services for the provision of passive infrastructure and bandwidth services to service provider(s), radio paging, PMRTS and Internet services, including existing restricted Internet telephony (PC to PC, SIP device to SIP devise using lease line only and PC to phones-phones outside India only) but not Internet telephony in general.

In contrast to entities operating pursuant to general authorizations, service providers that are subject to a licensing regime are not entitled to commence their service operations until the regulatory authority has granted explicit permission and issued a license.

The European Union has concluded that the use of an individual licensing mechanism is not justified for ISPs. Individually, many countries have determined that ISPs should be permitted to operate under a lesser regulatory burden than that imposed by an individual licensing scheme. Some countries, however, have opted to impose a licensing requirement on ISPs.

This latter approach can have its advantages and especially where regulators detail, in the license itself, the rights as well as the obligations of communications service providers or where the license constitutes an actual contract between the regulator and the operator. Consumer protection conditions (those related, e.g., to price regulation; billing practices; consumer complaint mechanisms; dispute resolution; limitations on liability for service defaults; and mandatory services due to consumers, such as directory services, operator assistance and emergency services) and conditions related to interconnection are frequently described in telecommunications licenses that are issued to carriers in such countries.

In Mexico, for example, quality of service standards and targets for the telecommunications carrier are explicitly included in the carrier's license.

By specifying the rights and obligations of an ISP, a license may provide the relevant stakeholders - including the ISP, its investors, the government, and even consumers - with a clear understanding of what the ISP is, and is not, permitted or required to do during the term of its license. This clear definition of a communications provider's rights is often critical to enable the business to raise the financing needed to fund its operations and otherwise to operate its business.

ISPs in Botswana, for example, requested that the Botswana Telecommunications Authority (BTA), the country's independent regulatory body, create a licensing mechanism in order to give the ISPs legal standing in negotiations with the Botswana Telecommunications Corporation (BTC), the country's monopoly line telephony provider. In Botswana, the telecommunication market has therefore been segmented into various sub-categories such as Fixed, Cellular, Internet Service Providers (ISP), Satellite and Data etc. The competitive markets are Internet Service Providers, Data service providers and paging services.

In the event that a licensing mechanism is adopted in an effort to protect ISP rights, regulators must ensure that any general authorization or individual licensing system is structured to provide for the lightest possible regulation of ISPs.

4.8.2 What to with specific issues relating to satellite services?

Satellite based services, for example, may either require an individual or class license as required by the licensing framework or they may be considered an exception.

In **Australia**, commercial VSAT service providers require a carrier license. Captive VSAT networks do not require a carrier license.

In **India**, VSAT services are treated differently from other services as they are presently of CUG nature and are not permitted interconnectivity with the PSTN.

Additional terms and conditions pertaining to issues such as security etc. could be linked with the licensing of satellite services since the area of coverage, the type of infrastructure used and the security considerations are quite different from other services. Satellite services can also be governed by other regulations pertaining to Space /Security considerations / International Co-ordination. Bringing GMPCS under the ambit of a unified licensing regime could necessitate special authorizations which would be specific to satellite based services. One option, similar to Malaysia, is that a Class License sub-category be introduced for such a case, with niche operators being considered under such a Class License regime. Another is that regulatory forbearance may be exercised according to well-defined procedures for certain networks and/or services.

4.8.3 How will the ownership of certain facilities such as switches, which are necessary for the provision of carriage services be treated. How to treat, for example, an organization that resells time on a carrier network for phone calls but that owns some basic facility such as a switch?

In **Australia**, for example, an owner of a telecommunications network unit used to supply a carriage service to the public must, in principle, hold a carrier license. Ownership of other facilities necessary for the provision of carriage services such as switches and which the Minister does not consider to be network units, does not require a carriage license.

4.8.4 How will new technologies and/or services such as WiFi or VoIP or those which require little investment or infrastructure or which fall outside of the scope of present definitions or categories will be treated?

4.8.4.1 VOIP

Recommendation

Technologies that use the Internet and Internet protocol ("IP") networks to deliver voice communications have the potential to reduce costs, support innovation, and improve access to communications services within developing countries and around the world. On balance, removing regulatory barriers to the use of IP technologies for voice can (a) advance the goal of affordable service and (b) support the deployment of the broadband networks and services that represent the future of communications in the era of digital convergence. Countries in the region should recognize the benefits of permitting IP technologies to be used for voice communications and should remove any barriers to the use of them by seeking to license them as liberally as possible.

Recently, these new technologies pose challenges for regulators, because they do not fit neatly within the regulatory model of the recent past, which in many countries has traditionally treated voice and data services differently. Especially in end-to-end applications, the introduction of voice over IP poses issues regarding: collection of universal service funds and obligations to provide universal service; payment of access or other settlement charges among local and long distance carriers and international carriers; quality of service; and the impact on the revenue of still-existing monopolies for long distance and international voice service.

The term "Voice over Internet Protocol (VoIP)" is used to refer to the practice of conveying live voice communication (including fax) via packet-switching technology utilizing Internet Protocol and transmitted over public or private data networks. This term thus includes the transmission of voice calls over the interconnected "public Internet" as well as the use of IP technology to convey voice calls over private leased point-to-point data networks. VoIP technology has the technological advantage that it is an easy to deploy technology, that, when coupled with readily available Internet connections, allows easy and cost effective carriage of voice communication over the Internet. In

addition, VoIP technologies make use of packet-switching technology, which is more efficient in its use of network capacity than circuit switched technology. The result is that with VoIP voice traffic is carried more efficiently over data networks, which generally cost users much less to use than circuit switched networks.

These new providers can offer service cheaper than conventional telephone companies. The phone conversations account for only a small part of the traffic on their lines, sharing space with video-on-demand, high-speed Internet connections, e-mails and online games. Companies talk about offering video conferencing and allowing people playing online games against each other to discuss their moves as they play. "Voice is just another application that rides on our broadband platform," said John Billock, chief operating officer of Time Warner Cable.

Prior to full liberalization of the telecommunications sector, the main issue in the debate on the licensing and regulation of new technologies such as VoIP and WiFi relates to the exclusivity of the incumbent.

Many countries in Africa, for example, have legislated to restrict the provision of VoIP to the (usually state owned monopoly) PTT[49]. The purpose of this is presumably to protect the revenue base of the PTT. The following table summarizes the situation in some African countries.

Country	VoIP restricted	Used by PTT	Used by others
Botswana	Yes		
Chad		Yes	
Cote d'Ivoire	Yes		
Egypt	Yes	Yes	
Gambia		Yes	
Ghana	Yes, PTT only	Yes	
Kenya	Yes, PTT only	No	Yes, internally
Madagascar	Yes	No	
Malawi			Limited private use
Mauritania	Yes		
Namibia	Yes, PTT only		
Nigeria		Yes	
Rwanda	No	No	Yes, private users
Senegal		Yes	
South Africa	Yes, (future use by PTTs & SMMEs to be allowed)	Yes	Yes

49 At the ACT 2004 Conference in Mauritius, Mawuli Tse of iBasis identified three countries where VoIP is open to private operators: Mauritius, DRC and Nigeria. He put a question mark over Nigeria but as one player in that market told us, there are now over 60 international, pre-paid calling operations and the majority are using VoIP. His next category was countries where operators must connect to the incumbent to use VoIP: these include Mali, Senegal (where operators must pay Sonatel 2 cents a minute more than if you bought directly from iBasis), Guinea and Côte d'Ivoire. Finally there were those countries where the incumbents are using VoIP: Zimbabwe, Gambia, Chad, South Africa and Angola (signed but not yet in operation). Kenya, Zambia, Uganda, Congo-Brazzaville and Gabon are all doing trials. There is a total ban in Ethiopia and Sudan. The rest are "undecided".

Country	VoIP restricted	Used by PTT	Used by others
Tanzania	Yes, PTT only		
Togo			Yes, Call Centre
Uganda	Yes, Licensed		
Zimbabwe	Yes, PTT only. ISPs future	Yes	
Source: AfrISPA			

Within the region, voice over IP (VOIP) is illegal in several countries, with incumbents still having the sole and exclusive right to operate a public switched voice service. And further "public switched voice service" is defined as "the provision of fixed voice telephone service to the public regardless of the technology used."

A major issue in this context is that the large difference between the prices charged by the incumbent monopolies and the far cheaper cost at which they buy that call on the international market has stimulated the grey market in many of these countries. Rein Zwolsman, CEO of Nigeria's Nitel, claims that before his company put in place cuts in international calling rates, 90% of international calls were made via the grey market.

"In 2003, the value of the grey market in Ghana was somewhere between $15 million and $25 million a year, although these are ballpark figures. It depends on the rates you apply and the volumes," says Oystein Bjorge, CEO of Ghana Telecom. In other African countries, the grey market is estimated to be somewhere between 10% and 20% of the overall market.

Grey markets in international VOIP calling have grown up almost everywhere in Africa, because operators in this market – such as ISPs and cyber-cafes – can offer the calls more cheaply and still make a profit."

The process of properly compensating local, long distance and international carriers for transporting and completing calls across multiple networks is a complex issue, of which VoIP is only one aspect. These complex issues need to be resolved equitably, in a way that benefits the end user while protecting the investment of carriers. But the importance and complexity of the issue should not stand in the way of the prompt introduction of new technologies.

Liberalization has already come to various countries in West Africa and the majority will follow in the next three years.

"Without the need to protect the incumbent telephone company, VOIP can be seen as a technology for gaining competitive advantage in liberalized national and international markets," says Russell Southwood in a 2004 Report on African Internet Market Country Profiles [50] .

The exclusivity conditions contained in concession contracts or licenses should not be allowed to stifle innovation or otherwise slow the advancement of technology in the region though. NRAs should therefore strive to allow the maximum use of innovative technologies within the confines of existing licenses and/or concession contracts. Long distance and/or international voice monopolies, albeit that they may have been granted for what seemed to be legitimate reasons, are in almost all cases turning out to be a drag on the development of the affordable, globally-linked

---

[50] **Balancing Act's African Internet Country Market Profiles** is published in four parts. Part 1: West Africa. Part 2: East Africa (to be published in early 2005) Part 3: Southern and Central Africa (to be published in mid-2005) Part 4: North Africa (to be published at the end of 2005.) See: http://www.balancingact-africa.com/publications.html

communications services that are necessary to support economic development in the information age. Thus, governments addressing Internet telephony issues must ask the question: is it appropriate to revise the terms of the monopoly concession? Some governments have "bought out" long distance monopolies, concluding that it was worth the expenditure of public funds to shorten the monopoly and introduce competition.

Some countries have seen that a liberal approach to VOIP can meet various goals. With a small loan from the World Bank and a progressive initiative, a Togolese company established the first Voice Over IP (VOIP) call center in Africa. Most African countries either outright ban the practice of making phone calls via the Internet or impose strict regulations on VOIP service. ISPs face closure or stiff fines for providing this service. The implied fear by governments in restricting VOIP is that consumers may discover it as an inexpensive and convenient alternative to mobile or land based phones. Also, regulating and taxing VOIP service has proven difficult. Togo's innovative call center is allowing its practitioners to tap into a rapidly growing and lucrative trend of call center outsourcing.

Some NRAs, like Jordan's Telecommunications Regulatory Authority (see detail below) have found innovative regulatory solutions to accommodate this novelty within its existing legal framework.

Jordan

In its statement on VoIP, the TRC determined that "It is of the opinion that the exclusivity conditions contained in Jordan Telecom's license should not be allowed to stifle innovation or otherwise slow the advancement of technology in Jordan. The TRC will therefore strive to allow the maximum use of innovative technologies within the confines of Jordan Telecom's existing license."
The Statement made by the TRC on VoIP is based on the view that Jordan Telecom's exclusive right to provide "public switched voice service" should be read in a way that ensures that Jordan Telecom is allowed to operate free of competition in the commercial provision of voice service until its exclusivity period expires. The TRC views VoIP as a transmission technology that allows the conveyance of voice calls over data networks. As such, it is the functional equivalent of circuit switched voice technology, and the Statement clarifies that any entity that operates a commercially available voice service utilizing VoIP in competition with Jordan Telecom is in violation of the Jordan Telecom's exclusivity. It therefore follows that any operator of so-called "phone-to-phone"[51] VoIP service would clearly be in breach of Jordan Telecom's exclusivity, as would any commercial entity that offered voice service to the public, including, for example the operator of an Internet Café, that advertised the ability to make low cost calls overseas using the computers in his or her café.

51 "Phone-to-phone" VoIP is that whereby a user originates a call using a telephone connected to the public switched telephone network, and a VoIP service provider carries the call using a "gateway" that connects the call to its data networks (or the public Internet), to another "gateway" connected to the public switched telephone network on the other end of the call that routes the call to another person on a telephone.

Jordan

Jordan Telecom's exclusivity rights[52], however, pertain only to competing providers of voice service. Jordan Telecom's exclusive right to provide voice service does not in any way constrain the activity of users making use of data communication networks for their own use. Thus, the Statement clarifies that a user is free to use a computer or other device attached to the Internet or another data communication network to make voice calls as long as there is no involvement with a service provider in Jordan. Under the TRC's reading of Jordan Telecom's license there is no restriction on the private use of so-called PC-to-PC[53] VoIP or PC-to-phone[54] VoIP, as long as there is no service provider in Jordan competing with Jordan Telecom in offering voice service.

Source: http://www.trc.gov.jo

The main issue facing many regulators in a liberalized market environment in particular is the actual definition of a VoIP provider as providing "information services" or "telecommunication services" and how to regulate and license VoIP providers within such an open environment - if at all.

In the **United States**, for example, the District Court of Minnesota has said that Vonage is a provider of "information services" and that Vonage does not provide "telecommunication services." While the District Court agrees that Vonage provides VoIP voice communication via broadband Internet connections, it does not agree that Vonage should be regulated as a traditional telephone company because it uses VoIP technology. The Minnesota Public Utility Commission (MPUC) disagrees. FCC Chairman Powell has publicly said that he continues to believe most VOIP services should be lightly regulated. VOIP offers enormous potential for consumers and should be very lightly economically regulated. VOIP is clearly not the telephone service of the past. It represents a uniquely new form of communication that promises to offer dramatic advances in the consumer experience.

In April 2004, on the other hand, the FCC announced its decision that traditional telephone calls that start and end on the public switched telephone network (PSTN), but are carried part of the time on AT&T's Internet backbone, are classified as "telecommunications service" and that those calls that are exchanged when a telephone call is made through one carrier ends on another carrier's network are subject to the access charges.

AT&T had asked the FCC for clarification on whether these phone calls should be classified as information services, like most other Internet-based traffic, and free from most FCC regulation. In February, the FCC decided that another voice over IP (VOIP) service, Free World Dialup, was exempt from most telecommunications regulations. Free World Dialup, a free service, allows

---

52 In accordance with its commitment in document GATS/SC/128 dated 15 December 2000, Jordan can be seen as one of the more advanced and forward-looking countries in terms of the commitments it undertook opting for full competition in both Basic Telecommunications Services and Value Added Services after 31 December 2004.

53 "PC-to-PC" VoIP is that whereby a user uses a personal computer or other device to connect to the Internet or other data network, generally using a microphone or headset and which transmits voice calls to another computer or other device connected to the Internet where the other participant is located.

54 "PC-to-phone" VoIP is that whereby a user uses a PC or other device connected to the Internet to transmit voice calls to a "gateway", which switches the call on to the traditional circuit switched network, usually close to where the terminating caller is located.

members to talk to each other through software installed on their computers. The service does not allow members to place voice calls to non members.

But the FCC said AT&T's service fit squarely into the definitions of a telecommunications service because the phone calls start and end on the PSTN. "Today's decision is correctly decided on very narrow grounds," FCC Chairman Michael Powell said in a statement "A straightforward application of existing law places the long distance telephone service, as it is factually described by AT&T, squarely in the category of a telecommunications service."

In countries where there is little distinction between the two services in terms of regulatory environment, the two forms of IP Telephony (using managed IP and Public Internet) are interchangeable. Many countries recognize though that IP Telephony services are increasingly becoming a part of normal voice telephony and may perhaps be regulated similarly.

Arguing against regulation, high-tech companies point out that while a handful of telephone companies have a near-monopoly control over the local networks, and therefore government controls are needed, no companies exercise dominance of Internet phone service.

ICT Regulations 2003 of **Mauritius**[55] allows a Network Applications Service Provider to secure a license to provide Internet Telephony Service as follows: “To provide Internet telephony services to the public. The service providers shall use the Internet as the medium for voice conversation using (i) computers, (ii) a computer to a telephone abroad (iii) a telephone in Mauritius to a telephone abroad. No call shall be terminated on a PSTN/PLMN telephone in Mauritius or, any media gateway be established between the Internet and a PSTN/PLMN network of Mauritius.”

In **Malaysia**[56], there are currently two ways of how VoIP service can be provided:

a) PC to PC- based or what is known as Internet telephony, and

b) Phone to phone based through Public Switched Telephone Network (PSTN), which involves multistage access dialing known as VoIP.

The Ministry of Energy Communications and Multimedia had issued a policy position that the provision of PC to PC base Internet telephony is not subject to licensing. However, in the case of VoIP, provision of the service requires an Applications Service Provider (ASP) Individual license as stipulated in the Communications and Multimedia (Licensing) Regulations 2000.

The existing telecommunications operators are allowed to provide the services under the license issued under the repealed Telecommunications Act 1950.

---

55 For further information see: http://www.icta.mu

56 For further info see: http://www.cmc.gov.my

4.8.4.2 WiFi/RLAN

Recommendation

New entrepreneurial business models, relying on these radio technologies, have shown that relatively permissive spectrum regulations can encourage innovation and increase access. Moreover, it has been shown that many of these business models can be "win – win" where even incumbent operators enjoy increased revenues as they interconnect and transit data off of a local entrepreneur's wireless network

The recommendation is therefore that there should be a liberal attitude and an unlicensing of this spectrum and that countries in the region should be relatively permissive in restrictions on use of these technologies.

As countries and businesses see more and more that new technologies, and their related business models, are providing previously unseen opportunities, countries are also beginning to address many of the concerns raised from license-exempt transmission.

Despite considerable variation in regulation, licensing, and transmission requirements, there is a trend in the Region of countries having a wide variety of users transmitting on 2.4 or 5 GHz for the provision of Internet hotspots or backhaul infrastructure. Interesting to note is that countries with more relaxed licensing requirements have a tendency to have more restrictive requirements on the transmitter in terms of power output and range.

Regulation in the 2.4 and especially in the 5GHz band is relatively recent[57]. In some countries (e.g. Mali, Somalia, Liberia) regulation is not clearly defined, and several countries are implementing new regulation, or changing the existing regulation. Such are the cases of Guinea, Egypt, Nigeria, and Uganda. In Zimbabwe, the regulator banned the use of these bands in 2004. Until then the 2.4 GHz band had been uncontrolled and used extensively for data links to ISPs and within commercial organizations.

The tendency in most countries in Africa is to over regulate, either by requiring licenses to transmit in these bands or through severe use restrictions, despite the fact that such policies are generally seen to increase barriers to entry and discourage entrepreneurs and innovation.

Some countries impose special regimes, such as setting different conditions for incumbents, requiring companies to register in the country, etc.

For example:

- In Eritrea, the monopoly operator can use the 2.4 and 5GHz bands freely, while companies like ISPs have to pay a fee.
- In Botswana, despite the fact that license attribution is said to be automatic, some minimum conditions apply: in order to receive a license ISP operators are required to be a registered company in Botswana and also have to prove their financial sustainability by providing their business plan.
- In Namibia the bands are unlicensed, but 'any use beyond the boundaries of one's property, it's illegal'.
- South Africa and Mauritius have a tiered regime, having different licensing requirements or fees for different transmitter ranges. In South Africa, specifically, use is unlicensed in more

57 Neto, I, Best, M., and Gillett S. 2004. "LICENSE-EXEMPT WIRELESS POLICY: RESULTS OF AN AFRICAN SURVEY" MIT, Cambridge, Mass at: http://itc.mit.edu/itel/docs/2004/ITS_paper_neto_best_gillett.pdf

restrictive range conditions (within single premises, or indoors) while it is licensed beyond those limits (i.e., between premises or outdoors).

- In Mozambique the use of the 2.4 GHz band is not allowed for commercial purposes.

The regulatory treatment of 2.4 and 5GHz bands (as used for WiFi) in Africa in particular is generally uncertain and confused associated with the regulatory regimes of countries across Africa. These regimes are uncertain within each country, because of low enforcement, and relatively complicated, with diverse associated restrictions.

For example:

- In the Democratic Republic of Congo, although licensing is said to be granted automatically upon payment of a fee, it is difficult to obtain a license, since the taxes vary and there is no specific policy in terms of Telecommunication. In addition, there are differences between the Telecommunication and the Media Ministry about regulation and licenses.
- Service restrictions in Benin are defined case by case.
- In Mozambique the regulator tried to block use of the 2.4GHz band saying it was illegal, but later on it was found that there were in fact no regulations for this area of the communications services.

Globally, more and more countries are seeing the importance of these technologies and recognizing that they should be treated in the least onerous way possible in terms of licensing.

In Europe, the European Commission adopted a Recommendation in March 2003 which called upon EU Member States to facilitate the use of Radio Local Area Networks (R-LAN) for accessing public services. The Recommendation encouraged Member States to allow the deployment of public R-LAN access networks without sector specific conditions and subject only to general authorizations.

The Recommendation recognized that, given the importance of R-LAN as an alternative platform for broadband access to Information Society services, a majority of Member States already allow R-LAN access to public electronic communications networks and services on a commercial or non-commercial basis. The Recommendation also suggested that it was now desirable to promote a harmonized approach for the provision of such public R-LAN access throughout the Community. The Recommendation also recognizes that while a distinction is to be drawn between the provision of services and the use of radio spectrum; the provision of R-LAN access to public electronic communications networks and services on a commercial basis should be allowed under the least onerous system, i.e. to the extent possible without any sector specific conditions.

The Recommendation recognizes that since the risk of interference between the various different users who may share the 2,4 GHz band and between coexisting R-LAN systems is accepted by the parties involved, and as long as R-LAN users do not create harmful interference to possible protected users in the same bands, the use of the 2,4 and 5 GHz bands should not be subject to individual rights nor, to the extent possible, to general authorization conditions other than as allowed under the EU Authorization Directive.

In order to minimize the risk of harmful interference, general authorization conditions might be imposed where justified and in a proportionate manner.

In Australia[58], The ACMA has defined WLANs as being commonly used by:

- companies in work places to connect devices in a local area network.

---

58 See: http://www.aca.gov.au/consumer_info/fact_sheets/consumer_fact_sheets/fsc80.pdf

- hotels and airports to provide wireless Internet connections to their customers.
- Internet service providers to deliver the Internet to customers, often in a rural or regional area, and
- community groups to connect members to the Internet.

Anyone using a WLAN in Australia needs to comply with licensing requirements under the Radiocommunications Act, which covers the use of radiocommunications equipment within the radiofrequency spectrum. and the Telecommunications Act, which defines carrier licenses as those which authorize the use of network units for the supply of telecommunications services to the public. To encourage innovation, and in accordance with a light touch approach to regulation, the ACMA will consider WLAN applications individually.

Under the Telecommunications Act, an owner of a network unit must have a carrier license or a nominated carrier declaration if the network unit is used to supply a carriage service to the public, unless an exemption applies.

Supplying a carriage service to the public means supply to people outside the immediate circle of the network unit owner, as defined in section 23 of the *Telecommunications Act 1997*.

Under the Telecommunications Act, a WLAN may be a base station that is a part of terrestrial radiocommunications customer access network if:

(a) the base station is part of a telecommunications network, and

(b) the base station is not an exempt base station, and

(c) the base station is used, or for use, in connection with the supply of carriage services, and

(d) customer equipment used for the supply of the service is not in physical contact with any part of the telecommunications network by means of which the service is supplied, and

(e) the service is wholly or principally used, or wholly or principally for use, by each end user at premises occupied or used by the end-user; or in the immediate vicinity of these premises, and

(f) the network does not have intercellular handover functions; and

(g) the network is not an exempt network.

A terrestrial radiocommunications customer access network is an exempt network under (g) if the network is used or intended for use for the sole purpose of supplying carriage services on a noncommercial basis.

If it is used on a commercial basis, then a carrier license is expected to be requested.

There are WLAN uses, in addition to exempt networks, where a carrier license is not required.

These include:

- company LANS used by company employees where supply to the public is not involved;
- wireless networks in airport lounges, hotels, shopping centers and Internet cafes where the service is provided in a single place.

Under a determination announced by the Minister for Communications, Information Technology and the Arts on 20 September 2002, these wireless networks do not constitute network units.

5 Conclusions and Recommendations

When opening the telecommunications sector to competition, countries in West Africa must recognize that, apart from a period in which there will be more detailed regulatory intervention to

accompany the process, there will be a natural transitional period in which the market evolves towards a liberal environment.

Some countries had the advantage of gradually evolving towards full liberalization of the telecommunications market, including fixed voice telephony. This gradual shift gave them time to introduce regulatory measures to prepare the market for competition and to allow for some infrastructure build-out of potential future infrastructure competitors. Other countries face stricter transition timetables, and are left with little or no time to provide incentives for future competitors to prepare to enter the fixed market.

The reality in the latter case is that in the initial phase of liberalization, the incumbent(s) **will** be dominant and **will** have significant market power. **Regulatory** measures will, in the short term need to focus mainly on incentives aiming at encouraging competition in the shortest timeframe possible and on intervening where appropriate to encourage competition.

Examples of the type of required regulatory intervention include measures relating to pricing policies, resale of facilities and services, and competition safeguards. However, national regulatory authorities (NRAs) must ensure that the measures designed to promote service-based competition do not act as a roadblock to infrastructure-based competition and to infrastructure investment overall.

In the longer term, the market should naturally evolve to a more competitive environment, in which the long-term view, – to promote the development of the sector and of the country – must especially be kept in mind. Whilst accommodating the need for immediate regulatory measures, the legal framework should keep the long-term view as a priority, and NRAs around the world have the difficult task of achieving and maintaining the balance between infrastructure-based and service-based competition. Policy objectives are only realized in the long term through policy choices such as those relating to Universal Service Policy and through a consistent legal framework for a task as important as the licensing of telecommunications infrastructure and services.

It is in the best interests of both the development of the country and of the sector to provide a legal framework which facilitates quick market entry through an investor-friendly licensing regime which at the same time also promotes the development of competing infrastructure.

Annex 1

International practices

1 European Union[59]

The European Union's New Regulatory Framework of 2002 is seen by many countries as an example for a licensing framework**.** Until 2003, the provision of electronic communications services or networks would in most EU Member States be subject to an individual license. Member States felt though that the need to require prior permission and to provide proof of having fulfilled numerous conditions created an unnecessary bureaucratic bottleneck for the free provision of electronic communication services, and therefore looked for ways to make procedures more simple and, at the same time looked to define a flexible regulatory framework which would accommodate different circumstances between Member States and convergence in the best way possible.

Under the 2002 Authorization Directive, Member States can no longer use the instrument of individual licenses to regulate the sector. They are required to establish a general authorization for all types of electronic communication services and networks, including fixed and mobile networks and services, data and voice services, broadcasting transmission networks and services etc. This general authorization may include one or more general legislative acts, but it can no longer impose on a service provider the need to obtain an explicit administrative decision before starting his business. Authorities may ask for notification in order to keep a register, but the service provider does not have to wait for the reply to this notification, nor should he be asked to provide more information than necessary for the identification of the company.

For three types of rights and two types of obligations, individual regulatory decisions will generally remain necessary, namely rights of way, rights to use radio spectrum, rights to use numbers, obligations related to significant market power (SMP) and obligations relating to universal service provision.

The general authorization must guarantee at least the following basic rights

1. the right to **provide electronic communications networks and services**, whether public or non-public, subject to a number of conditions. However, while undertakings must comply with the conditions of the general authorization, non-compliance with one or more conditions can generally not be used by the national regulatory authority to stop an undertaking from providing a service or network.(see below under 'compliance with conditions').
2. the right to apply for rights to **install facilities** and to have such applications treated by the relevant authority in an objective, non-discriminatory way.
3. the right to negotiate **interconnection** with other providers and to obtain support from the national regulatory authority when such negotiations with operators with significant market power fail. (this right is only guaranteed for providers of public services and networks).
4. the right to be considered for designation as **universal service** provider of to provide elements of the universal service. (this right is only guaranteed for providers of public services and networks).

---

59 Source: http://www.europa.eu.int

In general, the Authorization Directive ensures that undertakings providing electronic communications networks and services have **the right to be treated in a non-discriminatory, objective, transparent and proportionate fashion** by the national regulatory authorities.

To ensure a level playing field for all providers and users of communication networks and services, it is important to **guarantee non-discriminatory access to a range of resources that are essential for the provision of these networks and services**, namely telephone numbers, short codes, IP addresses, Internet domain names, protocol parameter and port numbers, radio frequencies and rights of way. While these resources may be in theory adequate, technological and organizational restrictions may create temporary scarcity. Efficient management is necessary to prevent or solve temporary scarcity, to ensure efficient use and to organize the assignment of the resources to individual users, service or network providers.

The general authorization must also include applicable obligations

All conditions that apply to all or certain types of network or service providers must be included in the general authorization and cannot be duplicated in the individual regulatory decisions that cover rights of way, right to use spectrum or numbers and obligations related to significant market power and universal service. Moreover, these general conditions must be limited to those included in the catalogue of conditions in part A of the Annex to the Authorization Directive. Member States cannot impose conditions that are not in the Annex, except in very special cases where this is necessary to guarantee national security. Such exceptions are subject to strict criteria of necessity, proportionality and effectiveness.

The exhaustive list of part A of the Annex includes 18 categories of conditions concerning : contributions to the funding of universal service, administrative charges, interoperability of services and interconnection of networks, accessibility of numbers, environmental and town planning requirements, must carry obligations, personal data and privacy protection, consumer protection, restrictions on the transmission of illegal content, information to be provided as part of a notification procedure, legal interception facilities, terms of use during major disasters, limitation on exposure of the public to electromagnetic fields, access obligations, network integrity, network security, usage of unlicensed radio frequencies, technical standards. In addition, there are obligations relating to significant market power and obligations relating to universal service provision, as provided under the respective Directives.

Sector specific conditions not falling in any of these categories are not allowed. Member States may impose two types of levies on providers of electronic communication networks or services, namely administrative charges and usage fees.

Administrative charges

Administrative charges are intended to cover the costs of the national regulatory authorities for managing the general authorization system, assigning of rights of use, policing competition in the market and ensuring the provision of universal service. Article 12 of the Authorization Directive allows, but does not require Member States to impose administrative charges. They may also finance the regulator’s expenses from the general budget. To allow undertakings to verify that costs and charges are in balance, the regulator is required to publish a yearly overview of administrative costs and of the charges collected. If no balance is achieved, adjustments need to be made.

How exactly the charges are distributed over the undertakings concerned, is not prescribed by the Authorization Directive. Nevertheless, the Directive states that systems for administrative charges should not distort competition or create barriers to entry in the market. An example of a fair and simple distribution criterion would be a turnover related key. If administrative charges are very low, a flat rate or flat rate plus turnover related element could also be appropriate.

Usage fees

In addition to administrative charges, Member States may impose fees for rights to use radio frequencies, numbers and for rights of way. Such usage fees are intended to ensure the optimal use of these resources and should be proportionate to that purpose. The Authorization Directive also requires that fees are objectively justified, transparent and non-discriminatory. Subject to these conditions, usage fees can be set at a fixed level or determined by auctions such as in the case of scarce radio spectrum. Usage fees may consist of a periodic or one-off payment or of both.

Compliance with conditions

Under the new Authorization Directive it will no longer be possible for regulators to require operators to provide proof of compliance with the conditions under the general authorization before they can start their business. Furthermore, following Article 11 of the Directive, regulators cannot request systematic (e.g. annual) proof of compliance with the majority of conditions that may be attached to the general authorization or to rights of use or rights of way. The only exceptions are for conditions related to the payment of administrative charges, usage fees and contributions to the universal service fund. For all other conditions, regulators may only require proof of compliance on a case-by-case basis when they have received a complaint or have other reasons to believe that conditions are not complied with. These new rules are intended to have a significant deregulatory effect.

Breach of conditions

When a national regulatory authority considers that a service or network provider is in breach of a condition, he must notify this to the provider concerned and allow one month for the provider to solve the problem or to explain why he does not agree with the national regulatory authority's assessment. If the national regulatory authority does not find the provider's response satisfactory, a financial or other penalty may be imposed.

Penalties must always be proportionate with the gravity of the breach. Only in cases of serious and repeated breaches may the national regulatory authority prevent an undertaking from continuing to provide services or networks.

National regulatory authorities may always take urgent action in case of a breach of conditions that causes an immediate and serious threat to public safety, public security or public health or will create serious economic or operational problems for other providers or users of electronic communications networks and services.

Appeal

Undertakings have a right to appeal to an independent body against all decisions taken by the national regulatory authority that affect them. However, during the appeal the measure taken by the national regulatory authority will remain in force.

Clarity of structure

It is very important for service and network providers to be able to obtain a complete overview of any sector specific rules that may apply to them. The replacement of individual licenses by a general authorization will significantly improve the transparency of the regulatory regime applied to the electronic communications services and networks sector. The requirement not to duplicate in the general authorization any conditions that are not specific to the electronic communications sector will reinforce this effect. In addition, the individual rights of use for numbers or radio spectrum should not duplicate conditions that are already included in the general authorization.

Publication

The Authorization Directive also requires that all relevant information on rights, conditions, procedures, charges, fees and decisions relating to the general authorization and to rights of use is published in a way that makes it easily accessible for all interested parties (a website would be the most obvious instrument to achieve this). Member States must also ensure that all this information is kept up to date.

Local levels of government

In some areas that are not regulated at a central level, it may be particularly difficult for undertakings to find their way to applicable rules and procedures. This is likely to be the case for rights to install facilities as they are mostly managed at the local level of government. To facilitate the task of undertakings who need to install cables, masts or antennas, national regulatory authorities must make reasonable efforts to ensure that all relevant information (rules, procedures, fees etc.) is available through a user friendly overview, for instance by creating a website with links to information held at local levels.

Consultation

Transparency also means that any change of rules should not come as a surprise to those to whom the rules apply. When a Member State intends to make changes in rights, obligations or procedures that are applicable to providers of electronic communications networks and services, they are obliged to consult interested parties before they adopt any changes. Such public consultations should allow interested parties at least four weeks to express their opinions except in exceptional circumstances.

2 Malaysia

In 1994, Malaysia adopted the National Telecommunications Policy (NTP) aimed at encouraging competition in the telecommunications sector and setting the scene for liberalization of the telecommunications sector in Malaysia. One important aspect of the NTP was related to how the industry structure was perceived within the regulatory framework. The industry structure was described in the NTP as comprising two major components:

- Network infrastructure, made up of:
    1) basic network infrastructure.
    2) value added network infrastructure.
- Telecommunications Services, made up of:
    1) basic telecommunications services.
    2) value-added telecommunications services.

The view was consistent with then prevailing licensing practices where licenses were service-specific and technology-specific.

However, with the passage of the Communications and Multimedia Act of 1998 (CMA), the licensing structure was changed and licenses are now issued for four major categories of activities:

Network Facilities Providers are the owners of facilities. They are the fundamental building block of the convergence model upon which network, applications and content services are provided, and include:

Network Service Provider	Earth Stations Fixed links and cables Public payphone facilities Radio communications transmitters and links Satellite hubs Satellite control station Space station Submarine cable landing center Switching center Towers, poles, ducts and pits used in conjunction with other network facilities Broadcasting and production studios Incidental network facilities Private network facilities Internet cross-connect equipment Networks of broadband access switches or multiplexers and fixed links and cables offered Limited purpose network facilities, including for the sole purpose of end users in buildings or a single clustered building complex Radio communications transmitters for public mobile radio network services Radio communications transmitters for public radio paging network services Radio communications transmitters and links for broadband point to point and point to multipoint wireless internet network service Radio communications transmitters and links for public wireless video communications network Radio communications transmitters and links for public wireless data network services

Network Services Providers provide the basic connectivity and bandwidth to support a variety of applications. Network services enable connectivity or transport between different networks. A network service provider is typically also the owner of the network facilities. However, a connectivity service may be provided by a person using network facilities owned by another.

	Individual license	**Class license**	**General authorisation**
Network Service Provider	Bandwidth services Broadcasting distribution services Cellular mobile services Access applications service Space service	Niche customer access Niche connection service	Incidental network services LAN services Private network services Router Internetworking

Applications Service Providers provide particular functions such as voice services, data services, content-based services, electronic commerce and other transmission services. Applications services are essentially the functions or capabilities that are delivered to end-users.

	Individual license	Class license	General authorisation
Applications Service Provider	PSTN Public cellular services IP telephony Public payphone service Public switched data service	Audiotext hosting services provided on an opt-in basis Directory services Internet access services Messaging services	Electronic transaction service Interactive transaction service Networked advertising boards and Cineplex Web hosting or client server

Content Applications Service Providers are a special subset of applications service providers including traditional broadcast services and newer services such as online publishing and information services.[60]

	Individual license	Class license	General authorisation
Content Applications Service Provider	Satellite broadcasting subscription Broadcasting Terrestrial free to air TV Terrestrial radio broadcasting	Not issued	Internet content applications services

3 Argentina

In August 2000, Decree 764/2000[61] marked the beginning of the liberalization of the telecommunications market in Argentina. The main points of the Decree are:

– License regime - The Decree foresees a single category of license to provide the different kind of services (either fixed or mobile, wire line or wireless, national or international, with or without own infrastructure). There are no special requirements with regard to foreign investment and coverage.

– Interconnection regulation - The Decree establishes the obligation for the all operators to interconnect their networks and foresees the interconnection fee as well as the obligation of the number portability. The general objectives are to protect the user and client, promote new services and improve service quality, attract new investments, promote competition, reduce communications prices and promote regional integration.

60 See http://www.mcmc.gov.my/mcmc/what_we_do/licensing/cma/framework.asp

61 The Decree 764/2000 was signed in Sunday 4th August and took into force November 8th 2000.

– The assignment of the radio spectrum resources may be carried out through competitive biddings, public auctions or on demand.

– Universal service - A universal service fund will be created to finance the provision of services in non-profitable geographical areas and marginal sectors and all telecommunications services providers must contribute with 1% of their revenues.

The Licensing Regulations for telecommunications services annexed to the Decree n. 764/2000, establish the principle of single telecommunications license for the provision to the public of any type of telecommunications service, fixed or mobile, wired or wireless, national or international, with or without own infrastructure. When the applicant's business requires the use of the radio frequencies, an additional (to the telecommunications license) permission must be obtained[62].

According to the definitions of the Licensing Regulations, a National Public Telecommunications Network is the whole of the networks through which the telecommunications public correspondence is transported, and allows the communication between users and from or towards any other service or public telecommunications network, national or international. The telecommunications licenses are granted without a specific time limit and are valid throughout the Argentina's territory.

The lease of telecommunications infrastructure to service providers and the resale of telecommunications services require the possessing of the telecommunications license[63].

According to the Licensing Regulations, the telecommunications license authorizes its holder to provide telecommunications services as specified in the license. A licensed operator can apply for the radio frequencies permission, and can negotiate and establish interconnection agreements with other operators.

The licensee has three types of obligations: general obligations, obligations towards other operators and obligations towards end-users or customers.

The general obligations include (among others) the requirement to start operating within 18 month from the date of the license's issuing; the annual provision to the Communications secretariat of the relevant information about the provision of its services and about the implementation of the Technical and Investment Plans (those plans have to be submitted by the operator, when it applies for the telecommunications license). In addition, the operator shall make the investment for the development of the Universal service and pay a control, supervision and verification rate of 0.5% of its income.[64].

The obligations towards other operators consist of the obligation to establish interconnection with both national public telecommunications network and private operator's networks and obligations of access to and sharing of specific network facilities[65].

Finally, the obligations towards users/customers include the requirements of the pricing and contractual information transparency, the confidentiality of communications, and when the voice telephony is concerned, the free access to emergency calls[66].

In order to launch the procedure, applicants must pay a free 5,000 Pesos (1,328 Euros).

---

62 The Section 4 of the Annex I (Licensing Regulations for telecommunications services), of the Decree 764.

63 The Sections 7 and 8 of the Annex I (Licensing Regulations for telecommunications services), of the Decree 764.

64 Section 10.1.of the Licensing Regulations.

65 Section 10.2. of the Licensing Regulations.

66 Section 10.3. of the Licensing Regulations.

The telecommunications license application dossier shall consist of documents providing information about (1) the applicant itself and the corporation, and (2) the business the undertaking is willing to carry out.

The documents related to the applicant or the corporation must provide with the applicant's identification information. In addition, the applicant shall present three specific statements:

the statement accepting the jurisdiction of the Courts of Administrative Proceedings, located in Buenos Aires in case of disputes involving the operator and the Communications Secretary or the National Communications Commission.

- the statement declaring the applicant's knowledge and obligation to comply with the telecommunications framework rules, and,
- the statement by which the applicant undertakes to adopt security systems and procedures, tending to safeguard the confidentiality of communications.

The documents related to the services that the applicant intends to offer must consist of:

- the technical description of the services
- the technical and investment plans for the first three years of the operation and the description of the geographical coverage that the operator intends to have during the said period. The Investment Plan shall be consistent with the Technical Plan and with the economic information concerning the coverage and the future incomes expected from the services provision[67]

Before the Communications Secretary announces its decision, the National Communications Commission can ask the applicant to provide any additional information it considers necessary[68].

The Provider shall be able to assign or transfer the license, prior authorization from the Communications Secretariat, which authorization can not be denied to it if the provider who is transferring or assigning its license:

- does not have any debt whatsoever with the Argentine State;
- has made the investments provided for in subsection f) of paragraph 10.1. of the Licensing regulation;
- has fulfilled the commitments made with the Argentine State related to the provision of the telecommunications service;
- has fulfilled the requirements and/or conditions that its original license imposes for the assignment or transfer of its license, where appropriate; and
- has obtained, where appropriate, the authorization for the transfer of the authorization and/or permit for the use of the radio frequencies under the terms of the corresponding regulations; and
- as long as the Provider who is receiving the license:
  - has submitted the information required by paragraph 9.1 of Licensing Regulation
  - states and accepts under sworn statement that it is informed on and obliges itself to fulfill every obligation assumed by the provider who is assigning its license, as regards the license being assigned.

---

67 Section 9 of the Licensing Regulations.

68 Section 9.3 of the Licensing Regulations.

4 India

Following an extensive consultation process, TRAI [69] recommended to the government that there shall be three categories of licenses:

– *Licensing through Authorization* - This category will cover the services for the provision of passive infrastructure and bandwidth services to service provider(s) and Internet Services including existing restricted Internet telephony (PC to PC, SIP device to SIP devise using lease line only and PC to phones-phones outside India only) but not internet telephony in general. In the existing licensing regime these services have nil/very low entry and license fee. Though the license fee for IP-II services in the existing regime is 6%, TRAI is of the opinion that no license fee should be charged on IP-II service providers. The service providers of these services may only notify themselves with DoT before starting the services. At the time of Notification, these service providers may submit a compliance certification to Authorization conditions, like security, etc.

– *Class License* - All services including satellite services which do not have both way connectivity with Public network shall be covered under Class license. There shall, however, be certain exceptions as follows:

  - Radio Paging and PMRTS Services; and
  - Niche Operators.

These exceptions have mainly been defined so as to provide easy terms and conditions for Radio Paging and PMRTS services. These services are loosing their competitive edge and their number of subscribers are either falling or in some areas growing at a very slow rate. Of course, while considering this, TRAI kept in mind that an attempt to revive these services should not become a competitive threat to other telecommunication services. Keeping this in mind, TRAI included Radio Paging and PMRTS services in the category of 'Licensing through Authorization' wherein service providers are not required to pay any entry fee or annual license fee. Regarding niche operators, as explained later, they are part of class license category as far as entry fee and annual license fee is concerned but unlike class licensees, niche operator may offer fixed telecommunication services including multimedia services within the areas specified for their operations.

– *Unified License* – All Public networks including switched networks, irrespective of media (wireline including cable & fiber, wireless, etc.) and technology including IP based technology, capable of offering voice and/or non-voice (data services) including internet telephony shall be covered under this category.

This licensing framework shall be hierarchical in nature with Unified license being at the highest hierarchical level. This is to say that the Unified Licensees shall be able to offer the services that Class licensees and licensee licensed through authorization offer, but not vice versa. Such a licensing regime would enable a licensee to provide any or all telecommunication services by acquiring a single license. Similarly a Class licensee shall be able to offer the services that licensee licensed through authorization offer, but not vice versa. In case a Class licensee or licensee licensed through Authorization wishes to offer services covered under Unified License they shall apply for a Unified license.

69 See: http://www.trai.gov.in

Indian Unified Licensing Regime

Licensing Category	Types of service	Registration Charge (Entry Fee)	License Fee	Bank Guarantees	Service Area	Roll-out obligations
Licensing through Authorization	IP-I, IP-II, Radio Paging, PMRTS Services and Internet services (along with existing restricted internet telephony)	Nil	Nil	Nil	National level or circle level (same as in UAS regime).	Nil
Class License	Services covered under 'Licensing through Authorization' , VSAT Services, Niche operators*	Nil	6% of Adjusted Gross revenue (AGR) i.e. Contribution to USF(5%) + Administrative cost (1%).. As the sector revenues grow, the percentages will be reviewed for downward revision.	Nil	National level or circle level (same as in UAS regime). For niche operators service area would be at SDCA level.	Nil
Unified License	All telecommunication services including Basic, Cellular, Unified Access Service, NLD, ILD, GMPCS, Broadcasting Services, Internet Telephony, etc. and all services covered under class license and 'Licensing through Authorization'.	Registration charge# shall be Rs. 107 crores plus a function of BSO's (entered in/after 2001) entry fee depending on the Service area(s)/Circle(s) where the Unified Licensee wishes to offer access services. Rs. 107 crores is the discounted value of NLD +ILD entry fee. The total registration charge shall be gradually reduced from the recommended level to Rs. 30 lakhs after 5 yrs.	Same as Class license	Performance Bank Guarantee (PBG) for Unified License will be as per UASL. For NLD/ILD operators and UALs who do not migrate to Unified Licensing Regime, the existing PBG shall continue.	National level or circle level (same as in UAS regime).	For access services: UASL rollout obligations For National long distance services, the licensee shall make an arrangement to pick up/handover long distance traffic of his subscribers in all service areas. Inter-service area traffic could be handed over/picked up at the choice of Unified Licensee/NLDO either at a central location or LDCA. The traffic could also be handed over/picked up at SDCA level with the mutual consent of interconnecting service providers. For ILD services existing roll-out obligations would continue.

* Niche operators would be allowed in SDCAs where fixed rural teledensity is below 1%. Niche operators shall be permitted to offer fixed telecommunication services including multimedia services only in these SDCAs. These operators, shall however, be permitted to use fixed wireless networks.

\# Integrated operators will not pay any registration charge (entry fee) for migration to Unified License.

5 Mauritius

The 1988 Telecommunications Act established a legal and regulatory framework that was well suited to the provision of core telecommunications services by a Government-owned monopoly. This was subsequently replaced by the Telecommunications Act in 1998, which later on, due to the convergence of Information and Communications Technologies, was further restructured into the Information and Communications Technologies Act of 2001. As an outcome of this new legislation, the Information and Communications Technologies Authority was set up to replace the former regulatory body (Mauritius Telecommunications Authority).

A new licensing framework was introduced in July 2003 to provide full and open competition in the telecommunications sector. In order to encourage new entrants, the regulatory authority shall accordingly adopt simple, open, non-discriminatory and transparent evaluation criteria and procedures in granting licenses. Each licensee shall be a company incorporated under the Mauritius Companies Act.

The regulatory authority will monitor the status of various market segments and issue licenses to operators and service providers to ensure that an effectively competitive market is emerging. The number of licenses to be issued will depend on radio frequency availability, market and other physical considerations.

The regulatory authority shall adopt a technology-neutral approach regarding the licensing of operators and service providers to ensure that licensees continue to innovate and respond competitively to meet the needs of users.

The new licensing regime allows a licensee to undertake activities that are market specific. This creates opportunities for expansion into the industry and provides for a more effective utilization of network infrastructure.

Under the new regulations effective from July 2003, there are four categories of licensable activities:

(i) Category A: Network Infrastructure Provider.

(ii) Category B: Networking Services Provider.

(iii) Category C: Network Application Services Provider, and

(iv) Category PVT: Private Networks

Within the first three categories listed, there are two types of authorizations as provided for:

– **Class licenses** granted for networks and services which do not require access to scarce resources and carry a limited number of rights or obligations; and

– **Individual licenses** granted for networks and services which require access to scarce resources and where strict regulatory control is required.

6 Australia

The Australian telecommunications industry is regulated by the Telecommunications Act 1997 (Telecommunications Act), which allows full and open competition. Entry to all telecommunications markets is open and subject to minimal entry and ongoing operational requirements. The regime is technology neutral. The main entities regulated by the Telecommunications Act 1997 are carriers and service providers. Carriers are persons who own telecommunications facilities. Service providers use carriers to provide phone or Internet services, and/or content, such as Pay TV, to the public.

Carrier licensing

A license permits a carrier to own infrastructure used to supply telecommunications services to the public. It also requires carriers to meet specific obligations, such as contributing to the Universal Service Obligation (USO) and compliance with the telecommunications access regime. Carriers must be licensed by the Australian Communications and Media Authority (ACMA). There are no restrictions on who can apply for a license or the number of licenses issued by the ACMA. As part of the application for a carrier license, an industry development plan must also be submitted to the ACMA.

Licensing fees consist of a $10 000 application fee, an annual $10 000 fee, and a variable percentage of the annual revenue calculated in relation to the cost of maintaining the regulatory regime.

The owner of certain telecommunications facilities (known as 'network units') which are used to supply carriage services (services for carrying communications) to the public must either:

- hold a carrier license; or
- make arrangements to ensure that another licensed carrier accepts carrier-related responsibilities for those network units.

There are four types of network units:

- line links connecting distinct places in Australia, where the line link/s meets certain minimum distance requirements
- satellite-based facilities used to supply carriage services between two or more points in Australia
- base stations used for mobile services or wireless local loop (customer access network) services
- certain fixed radiocommunications links.

The Minister for Communications, Information Technology and the Arts has the power to determine other facilities as 'network units' if regulation of those facilities becomes necessary. The Minister can also impose further license conditions on individual carriers, classes of carriers, or all carriers.

While applicant requirements - including the submission of an application fee - are relatively low, a license cannot be issued until the applicant's industry development plan is approved by the Minister for Industry, Science and Resources.

Carriers are obliged to comply with license conditions. These include obligations to comply with:

- the Telecommunications Act 1997.
- certain commitments made in their industry development plan
- the telecommunications access regime (under Part XIC of the Trade Practices Act 1974).
- related facilities access obligations (under Schedule 1 of the Telecommunications Act).

Service providers

There are two types of service providers--carriage service providers and content service providers. While service providers do not require individual licenses they must comply with relevant telecommunications regulation, including service provider rules set out in Schedule 2 of the Telecommunications Act.

A carriage service provider generally uses a carrier service to supply telecommunications services to the public using network units owned by a carrier. Internet service providers (ISPs) are carriage service providers.

A content service provider is a person who supplies, or proposes to supply, content services to the public (for example, a Pay TV service). Where a carrier is engaged in these activities, they are also considered to be a service provider.

All service providers must comply with legislated service provider rules. These rules include obligations to:

- comply with the Telecommunications Act 1997 (including, for example, an obligation on carriage service providers supplying the standard telephone service, mobile services or Internet access services to join the Telecommunications Industry Ombudsman scheme).
- provide directory assistance, operator services and itemized billing to customers using the standard telephone service, and
- in the case of carriage service providers, comply with access obligations imposed by the telecommunications access regime.

The ACMA may impose additional service provider rules, when authorized by regulations to do so.

Exemptions

A number of carrier licensing exemptions apply for defense and intelligence operations, transport authorities, broadcasters and electricity supply bodies.

The Minister for Communications, Information Technology and the Arts also has the power to make a determination, exempting specified network units, persons or use of a network unit from carrier licensing obligations. This can occur in situations where the regulation is deemed to be inappropriate or against the objectives of the Telecommunications Act.

The Minister can also make a determination exempting carriage service providers from certain regulatory provisions if it is considered appropriate to address any anomalies, which emerge during the operation of the Telecommunications Act.

Carrier Obligations

The Act re-enacts and strengthens existing, and introduces new, obligations on carriers and to some extent, the industry at large. The key regulatory obligations that apply to all carriers are summarized below.

Consumer and Community Obligations Industry Codes and Standards (Part 6 of the Act)

The industry and consumer codes regime is intended to provide a framework for industry self-regulation through industry developed codes that may be registered with the ACMA. Compliance with an industry code is voluntary unless the ACMA directs a particular participant in the telecommunications industry to comply with the Code. The ACMA has a reserve power to make an industry standard if there is no industry code in a particular area or if an industry code is deficient. Compliance with such standards is mandatory.

Universal Service Regime (Part 2 of the TCPSS Act)

At the core of the community obligations is the universal service obligation (the USO). The general object is to ensure that all people in Australia have reasonable access to:

- the standard telephone service (including customer equipment relevant to the standard telephone service)
- payphones

- prescribed additional carriage services and
- digital data services

on an equitable basis, wherever they live or work and a supporting obligation to supply those services on request.

Carriers that are declared universal service providers are required to submit plans on how they will progressively fulfill the USO, with approved plans being publicly available. All carriers must contribute to funding losses incurred in fulfilling the USO in direct proportion to their share of total 'eligible revenue' or by a system determined by the Minister and agreed to by the carriers.

Customer Service Guarantee (Part 5 of the TCPSS Act)

Carriers that supply the standard telephone services are required to comply with the Telecommunications (Customer Service Guarantee) Standard 2000 (No. 2) (CSG Standard). The CSG Standard specifies minimum performance that carriage service providers are required to meet in relation to the connection of a standard telephone service, fault rectification and attending appointments with customers. If a carrier contravenes the CSG Standard, it may be liable to pay compensation to the customer. The compensation will vary according to the type of service and length of delay in meeting the service requirements.

Telecommunications Industry Ombudsman Scheme (Part 6 of the TCPSS Act)

(28) This Part requires the majority of carriers and carriage service providers to enter into the Telecommunications Industry Ombudsman (the TIO) Scheme. Members of the scheme must register with the TIO and comply with the scheme. The ACMA has the power to declare that a specified carrier or carriage service provider is exempt from the requirement to join the scheme, or if necessary, direct specified carriers or carriage service providers to enter the scheme.

Emergency Service Arrangements (Part 8 of the TCPSS Act)

Under the Act the ACMA can determine arrangements for the provision of direct access by end-users, free of charge, to emergency call services and ancillary arrangements for emergency call handling. This was done through the *Telecommunications (Emergency Call Service) Determination 1999* which came into effect on 15 October 1999. The major impact on carriers is the obligation to provide access to the emergency call service for end-users.

Protection of Communications (Part 13 of the Act)

Carriers and other specified persons are required to protect the confidentiality of information that relates to:

- the content of communications they carry
- the carriage services they supply and
- the affairs or personal particulars of other persons.

This Part also places record-keeping and reporting requirements on carriers regarding the disclosure of certain information.

National Interest (Part 14 of the Act)

Carriers are required to:

- do their best to prevent telecommunications networks from being used to commit offences and
- give Commonwealth, State and Territory authorities such help as is reasonably necessary for the purposes of:

i) enforcing the criminal law and laws imposing pecuniary penalties

ii) protecting the public revenue and

iii) safeguarding national security.

Law Enforcement (Part 15 of the Act)

There is an obligation on carriers to ensure that it is possible to execute a warrant issued under the *Telecommunications (Interception) Act 1979*, unless an exemption has been granted by the Minister, the ACMA or the Attorney-Generals' Department. In addition, before the introduction of any new technology, carriers must consult with law enforcement agencies. (This can be done through the ACMA or the Attorney- Generals' Department).

Carriers are required to submit annual Interception Capability Plans to the ACMA.

Defense Requirements and Disaster Plans (Part 16 of the Act)

A carrier may be required to supply a carriage service for defense purposes or for the management of natural disasters. A carrier may also be required to enter into an agreement with the Commonwealth about planning for network survivability or operational requirements in times of crisis. Compliance with designated disaster plans may be the subject of a carrier license condition to be declared by the Minister.

Obligations to Promote Competition

While competition regulation is for the most part dealt with in the *Trade Practices Act 1974*, the Act imposes a number of conditions on carriers in order to promote competition in carriage services, as outlined in the following paragraphs.

Pre-selection in Favor of Carriage Service Providers (Part 17 of the Act)

Carriers and carriage service providers must comply with any ACMA pre-selection determinations. The ACMA has made the *Telecommunications (Provision of Pre-selection for a Standard Telephone Service) Determination 1998* and the *Telecommunications (Provision of Pre-selection for Specified Carriage Services) Determination 1998*. The Determinations require telecommunications networks and facilities operated by a carrier or carriage service provider to permit an end-user to:

i) pre-select another carriage service provider as the end-user's preferred carriage service provider for specified national and international calls, operator assisted services and calls to mobile telephones and

ii) change the selection from time to time by written request.

Such networks and facilities must also provide over-ride dial codes for selecting alternative carriage service providers for pre-selectable calls on a call-by-call basis.

Calling Line Identification (CLI) (Part 18 of the Act)

Carriers are required to take all reasonable steps to ensure that a facility they control when consisting of:

- a switching system used in connection with the supply of a standard telephone service or
- a switching system of a kind specified in an ACMA determination

is capable of providing CLI. Carriers who control such systems must comply with an ACMA determination.

International Issues (Part 20 of the Act)

The Act recognizes the potential for telecommunications businesses based in other countries to take unfair advantage of Australia's liberal market. This Part also recognizes access to INTELSAT and Inmarsat via their Australian signatories and compliance with international conventions as matters that are subject to Ministerial direction. Under this Part the Minister can declare that a specified international convention is binding on certain carriers and make Rules of Conduct about carriers' dealings with international telecommunications operators. A carrier must comply with the Minister's declaration or Rules of Conduct where they apply.

Technical Regulation

Technical standards (Part 21 of the Act)

Part 21 of the Act establishes the scheme for technical regulation of telecommunications in Australia. The scheme relies primarily on industry self-regulation with the ACMA having the power to make technical standards about customer equipment and customer cabling that is connected to telecommunications networks or facilities.

It is an offence to connect customer equipment or customer cabling to a telecommunications network or facility where the equipment or cabling is required to be labeled and either there is no label or the label indicates non-compliance with the applicable technical standards.

Numbering (Part 22 of the Act)

Carriers, in their capacity as carriage service providers, must comply with the *Telecommunications Numbering Plan 1997* (the Numbering Plan) made by the ACMA. The Numbering Plan includes rules regarding the numbering of carriage services in Australia, the use of numbers in connection with the supply of such services and number portability. A carrier, in its capacity as a carriage service provider, may apply to the ACMA for the allocation of numbers and must also provide number portability in accordance with the Numbering Plan.

Compliance with Service Provider Obligations

Carriers who supply carriage or content services to the public are also considered to be service providers and, therefore, are subject to relevant service provider regulation under the Act, the TCPSS Act and the *Trade Practices Act 1974*. There may be circumstances, however, where a carrier owns infrastructure but does not itself supply carriage or content services to the public. Obligations under the Act are specifically and separately imposed on both carriers and carriage service providers to avoid any such potential regulatory gaps.

Legislative obligations on service providers

The key regulatory obligations that apply to service providers are summarized below. Under sections 102 and 103 of the Act, the ACMA may issue respectively a direction to ensure that a service provider does not breach the Act and a formal warning if a person breaches the Act. A service provider must not contravene a direction issued by the ACMA.

Standard service provider obligations

Service providers are required to comply with the standard service provider rules set out in Schedule 2 of the Act. These rules primarily impose obligations upon carriage service providers as opposed to content service providers. The standard service provider rules set out in Schedule 2 of the Act include the following:

i) *Compliance with the Act*

ii) *Operator services* - A carriage service provider who supplies a *standard telephone service* must make operator services available to each end-user either by providing the services itself or by arranging for a third person to provide the services. A carriage service provider who provides operator services to end-users of its *standard telephone service* must provide operator services to end-users of another carriage service provider if requested by the other provider, on such terms and conditions as are agreed between the parties, or failing agreement, as are determined by an arbitrator appointed by the parties. If the parties fail to agree on the appointment of an arbitrator, then the Australian Competition and Consumer Commission (ACCC) is to be the arbitrator.

iii) *Directory assistance services* - A carriage service provider who supplies a *standard telephone service* must make directory assistance services available to each end-user either by providing the services itself or by arranging for a third person to provide the services. A carriage service provider who providers directory assistance services to end-users of its standard telephone service must provide directory assistance services to end-users of another carriage service provider if requested by the other provider, on such terms and conditions as are agreed between the parties, or failing agreement, as are determined by an arbitrator appointed by the parties. If the parties fail to agree on the appointment of an arbitrator, then the ACCC is to be the arbitrator.

iv) *Integrated public number database* - A carriage service provider who supplies carriage services to end-users with a public number must give any information reasonably required by Telstra for the provision and maintenance of an integrated public number database (IPND). This database will be an industry-wide database containing details of all customers. All carriage service providers will have access to the database for the purpose of providing operator and directory assistance services. Emergency service organizations and law enforcement agencies will also have access to the database for emergency and law enforcement purposes.

v) *Itemized billing* - A carriage service provider who supplies a standard telephone service must provide itemized billing for each of its customers for calls made using the service. This requirement does not apply to untimed local calls. Itemized billing means provision of a bill that contains the date, duration and charge for each call and the number to which the call was made, or details determined by the ACMA. The ACMA may exempt a specified carriage service provider from the requirement to provide itemized billing for particular customers. This is intended to cover carriage service providers who do not have the technical capability to provide itemized billing for certain customers.

vi) In addition to the rules mentioned above, service providers are also required to comply with the rule set out in subsection 152BA (2) of the *Trade Practices Act 1974*, which relates to compliance with any applicable standard access obligations.

Consumer and community obligations

Industry codes and standards (Part 6 of the Act) - The Act specifies a framework for industry self-regulation through industry developed codes that may be registered with the ACMA. Compliance with an industry code is voluntary unless the ACMA directs a particular participant in the telecommunications industry to comply with the code. Industry codes are being developed by working groups of industry representatives under the auspices of the Australian Communications Industry Forum (ACIF). Any organization or individual can become a member of ACIF, including carriers, carriage service providers, equipment vendors, industry associations and user/consumer groups. The ACMA has a reserve power to make an industry standard if there is no industry code in a particular area or if an industry code is deficient. Compliance with an industry standard is mandatory.

Continued access to untimed local calls (Part 4 of the TCPSS Act)

Carriage service providers who charge customers for local calls made using a standard telephone service must provide residential/charity customers with access to untimed local calls for voice and data and other customers with access to untimed local calls for voice where they had access to such calls immediately before 20 September 1996. It does not require carriage service providers who offer other standard telephone services (e.g. long-distance calls) but not local calls to commence offering local calls. However, where a customer is supplied with a standard telephone service by the relevant universal service provider for the customer the obligation to provide untimed local calls may apply. This ensures that customers continue to have access to local calls which are untimed.

Customer Service Guarantee (Part 5 of the TCPSS Act)

Carriage service providers that supply the standard telephone services are required to comply with the Telecommunications (Customer Service Guarantee) Standard 2000 (No 2) (CSG Standard). The CSG Standard covers the supply of the standard telephone service and enhanced call handling features, such as call waiting, call forwarding, call barring, calling number display and calling number display blocking. The Standard does not apply to mobile services, customer equipment or Internet services. The CSG Standard specifies minimum performance that carriage service providers are required to meet in relation to the making of arrangements with customers for connection and fault rectification, the period taken to connect or rectify a fault or service difficulty, and the keeping of appointments to make such connections and rectifications. If a carriage service provider contravenes the CSG Standard, it is liable to pay compensation to the customer. The compensation will vary according to the type of service and length of the delay in meeting the service requirements.

Telecommunications Industry Ombudsman scheme (Part6 of the TCPSS Act)

This Part requires entry into and compliance with the Telecommunications Industry Ombudsman (TIO) scheme by carriage service providers which supply or arrange for the supply of:

- the standard telephone service to residential or small business customers
- a public mobile telecommunications service or
- a carriage service which enables end-users to access the Internet.

A public register of all members of the scheme is kept by the TIO. The ACMA has the power to declare that a specified carriage service provider is exempt from the requirement to join the scheme, and if necessary, direct specified carriage service providers to enter the scheme.

Emergency service arrangements (Part 8 of the TCPSS Act)

Under the Act, the ACMA can determine arrangements for the provision of direct access by end-users, free of charge, to emergency call services and ancillary arrangements for emergency call handling. This was done through the Telecommunications (Emergency Call Service) Determination 1999. A carriage service provider must not supply a standard telephone service unless the provider has made arrangements in writing for emergency calls that comply with the Determination. A standard telephone service is any telephone service that an end-user would reasonably expect to use to make an emergency call. A provider who supplies a standard telephone service must give each end-user of the service access to the emergency call service free of charge. To ensure that a person who operates an emergency call service holds correct contact information, carriage service providers are required to supply customer information to the Integrated Public Number Database (IPND). The IPND is presently managed by Telstra.

Protection of communications (Part 13 of the Act)

Under Part 13 carriers and carriage service providers are prohibited from using or disclosing any information which comes into their possession in the course of their business and which relates to:

- the contents of communications that are being or have been carried by carriers or carriage service providers
- carriage services supplied by carriers or carriage service providers or
- the affairs or personal particulars of other persons.

Part 13 sets out a number of exceptions to this prohibition that relate to:

- the performance of a person's duties as an employee
- authorization by or under law
- witnesses, law enforcement, protection of public revenue and ASIO
- assisting the ACMA, ACCC and TIO
- IPND
- a threat to a person's life or health
- knowledge or consent of the person concerned and implicit consent of the sender and recipient and
- business needs of other carriers or service providers.

Carriers and carriage service providers must keep records of disclosures made under an exception other than the exceptions in categories relating to the performance of a person's duties, ASIO, IPND, implicit consent and business needs of other carriers or service providers. Carriers and carriage service providers must also lodge a report with the ACMA within two months of the end of each financial year and which contains details of the number of disclosures made. A copy of the section 308 report form for reporting disclosures is available from the ACMA's website under Business Forms.

National interest (Part 14 of the Act)

Carriage service providers are required to:

i) do their best to prevent telecommunications networks and facilities from being used to commit offences and

ii) give Commonwealth, State and Territory authorities such help as is reasonably necessary for the purposes of law enforcement, protecting the public revenue and safeguarding national security.

Law enforcement (Part 15 of the Act)

Carriage service providers must ensure that telecommunications networks and facilities they operate have the interception capability to enable a communication passing over the networks or facilities to be intercepted in accordance with a warrant issued under the Telecommunications (Interception) Act 1979. Carriage service providers must provide this interception capability at their own cost. The Minister may grant an exemption from compliance with this requirement in certain circumstances. In addition, carriage service providers are required to submit an annual interception capability plan setting out their strategies to provide interception capabilities in relation to telecommunications networks and facilities they operate.

Defense requirements and disaster plans (Part 16 of the Act)

A carriage service provider may be required to supply a carriage service for defense purposes or for the management of natural disasters. A carriage service provider may also be required to enter into an agreement with the Commonwealth about planning for network survivability or operational requirements in times of crisis. Compliance with a disaster plan may be the subject of a service provider rule determined by the ACMA.

Technical standards (Part 21 of the Act)

Part 21 of the Act establishes the scheme for technical regulation of telecommunications in Australia. The scheme relies primarily on industry self-regulation with the ACMA having the power to make technical standards about customer equipment and customer cabling that is connected to telecommunications networks or facilities. The technical standards made by the ACMA are listed on the ACMA's website. Copies of the technical standards are either available from Standards Australia (http://www.standards.com.au) or the Australian Communications Industry Forum (ACIF) (http:// www.acif.org.au).

Numbering (Part 22 of the Act)

Carriage service providers are required to comply with the Telecommunications Numbering Plan 1997 (the Numbering Plan) made by the ACMA under Part 22 of the Act. The Numbering Plan contains rules regarding the numbering of carriage services in Australia, the use of numbers in connection with the supply of such services and number portability. Carriage service providers may apply to the ACMA for the allocation of numbers and must also provide number portability in accordance with the Numbering Plan.

Standard agreements (Part 23)

Part 23 enables carriage service providers to lodge standard forms of agreement with the ACMA and to rely on the terms and conditions contained in these standard forms when supplying the standard telephone service and any other goods or services which are specified in the regulations. Carriage service providers must ensure that copies of their standard forms of agreement are made available for inspection and purchase at each of their business offices and that copies of such standard forms and any variations to them are given to the ACMA as soon as practicable after the agreement or variation comes into force. Carriage service providers must also provide a summary of the terms and conditions of their SFOA to customers in accordance with the Telecommunications (Standard Form of Agreement Information) Determination 1999.

Obligations to promote competition

Competition regulation of the telecommunications industry is largely achieved through the Trade Practices Act 1974. Parts XIB and XIC of the Trade Practices Act set up rules for regulating anti-competitive conduct in the telecommunications industry and facilitating access to carriage services. In addition to the role of the Trade Practices Act 1974 in competition regulation, the Act also imposes the following conditions on carriage service providers in order to promote competition in the supply of carriage services.

Pre-selection in favor of carriage service providers (Part 17 of the Act)

Carriers and carriage service providers must comply with any ACMA pre-selection determinations. The ACMA has made the Telecommunications (Provision of Pre-selection for a Standard Telephone Service) Determination 1998 and the Telecommunications (Provision of Pre-selection for Specified Carriage Services) Determination 1998. The Determinations require telecommunications networks and facilities operated by a carrier or carriage service provider to permit an end-user to:

- pre-select another carriage service provider as the end-user's preferred carriage service provider for specified national and international calls, operator assisted services and calls to mobile telephones and
- change the selection from time to time by written request.

Such networks and facilities must also provide over-ride dial codes for selecting alternative carriage service providers for pre-selectable calls on a call-by-call basis.

Calling line identification (CLI) (Part 18 of the Act)

Carriage service providers are required to take all reasonable steps to ensure that a facility they operate is capable of providing calling line identification where the facility consists of:

- a switching system used in connection with the supply of a standard telephone service or
- a switching system of a kind specified in an ACMA determination which was installed on or after 1 July 1997 or capable of providing CLI immediately before 1 July 1997. The ACMA may declare that a specified person is exempt from this requirement.

Annex 2

Examples of published licenses

The Following links can provide useful examples of licenses:

Australia: www.acma.gov.au

Bahrain: www.tra.org.bh

Brazil: www.anatel.gov.br

Equador: www.conatel.gov.ec

Ireland: www.comreg.ie

Jordan: www.trc.gov.jo

Lesotho: www.lta.org.ls

Macau: www. gdtti.gov.mo

Malaysia: www.mcmc.gov.my

Nicaragua: www.telcor.gob.ni

Nigeria: www.ncc.gov.ng

Panama: www.enteregulador.gob.pa

Singapore: www.ida.gov.sg

Annex 3

Guidelines for licensing

Although licensing methods vary widely among countries, there are some common features that are considered to be among the best licensing practices.

Three general approaches to authorizing telecommunications services can be identified:

1) Granting individual licenses

2) Granting general authorizations, including class licenses

3) Allowing open entry

In recognition of the realities that exist in the market, there are a number of options to license the different types of networks and services. These options essentially relate to the level of regulatory intervention being introduced according to the type of network or service offered. At the same time market players must be treated in a transparent, non-discriminatory and proportional way; no undue burdens must be imposed on them

While more competition is to be introduced in the telecommunications sector, authorizations regimes remain necessary in order to ensure that certain public interest objectives are attained.

Undertakings in an open environment could still have to comply with requirements relating both to predominantly technical issues as well as to certain public service objectives.

The following guidelines have been inspired from international best practices and from renowned publications, text and documents such as the ITU 2002 Report on Effective Regulation, the World Bank Infodev Regulatory Handbook – Module 2 on Licensing, the UEMOA Directives[70], the COMESA Licensing Guidelines, the 1997 EU Licensing Directive, the General Agreement on Trade in Services (GATS) and the 1997 Agreement on Basic Telecommunications of the World Trade Organization (WTO).

1. Basic Principles

1.1 Competition

1.1.1 Considering the need for new developments in the telecommunications market as well as the ECOWAS decision which promoted the process of total liberalization of telecommunications infrastructure and services by 1 January 2006, it is recommended that competition is introduced in all ECOWAS countries as soon as possible, thereby opening the market to new entrants.

1.1.2 Where transition periods are foreseen for certain member states, it is recommended that such be limited such as to permit these countries to follow the regional trend.

1.2 Harmonization of procedures

---

[70] The UEMOA Directives were validated by experts from the eight UEMOA Member States in the presence of traditional UEMOA partners and ECOWAS representatives during a workshop held in Cotonou from 18 to 22 July 2005. These Directives will be presented to Ministers in charge of telecommunications for their approval before the end of 2005.

1.2.1 There is a need to harmonize the categories of telecommunications networks and services as well as licensing procedures.

1.2.2 ECOWAS Member States ("Member States") will strive to define and adopt common classifications of telecommunications networks and services as well as common licensing procedures.

1.3 Provision of Service between ECOWAS Member States

1.3.1 Member States will facilitate the provision of services between Member States or in different Member States of the ECOWAS Region in the formulation and application of their respective licensing regimes.

1.3.2 In order to facilitate the establishment of such regional networks or networks in several Member States, the regulatory authorities of Member States shall coordinate to the extent possible their licensing procedures for companies wishing to establish or exploit a telecommunications network and/or a telecommunications service in more than one ECOWAS Member State so that a company need only to complete one authorisation request which it can subsequently submit in the various Member States.

2. Market Structure

2.1 Competitive Framework

2.1.1 It is recommended that infrastructure-based competition is promoted to the largest extent possible given that this model has the advantage of favorizing a maximum degree of competition while accommodating simultaneously the development of the sector in terms of universal service.

2.1.2 Nevertheless, and especially in the initial phases of competition, service-based competition must also be considered within the licensing approach given that such competition can be considered a mechanism to ensure rapid market access by allowing such entrants to complement the networks of infrastructure-based operators. Under this model, new entrants could, however, be inclined to offer just services on competing networks, and not deploy their own infrastructure.

2.2 Licensing Regime

2.2.1 Given the existing market realities, the proposal is to introduce a licensing framework which accommodates such realities and aiming to achieve the desired market structure.

2.2.2 This framework is aimed at being technology and service neutral so as to be able to accommodate convergence and the introduction of new technologies. Convergence between different telecommunications networks and services and their technologies requires a licensing framework which covers comparable services whatever the technology used.

2.2.3 The recommendation is to promote technology neutrality to the greatest extent possible (e.g., not specify technologies such as GSM, CDMA or UMTS) and/or service (e.g. unified license which does not limit the activities such as fixed or mobile).

2.2.4 Nevertheless, in the interests of transparency and simplicity, Member States may decide that fixed and mobile networks may be licensed separately.

Because of the nature of the mobile market, it is not generally considered appropriate to apply exactly the same conditions to that business. Certain market characteristics that are applicable in the fixed market and require regulation, do not necessarily exist in the mobile

market. The following conditions, which are generally contained in fixed licenses should not be included in mobile licenses. These are:

- Public payphones
- Leased circuits
- Linked Sales

2.3 No Barriers to Entry

2.3.1 Member States should impose no limits which are not in conformity with their respective regulations on the number of operators or service providers in the market.

2.3.2 If a Member State limits the number of licenses, such a limitation must be justified by the Member State taking consideration of the following principles:

- The Member State will give due consideration to the necessity to maximize advantages for users and facilitate the development of competition;
- The Member State shall give interested parties the opportunity to express their opinion by conducting public consultations on planned limits in the number of licenses;
- Member States shall publish their respective decisions to limit number of licenses as well as the justification of such decisions;
- Member States will regularly re-examine such decisions;
- Where the number of licenses is limited, Member States will launch a public tender for such activities.

2.3.3 Where a Member State determines that the number of licenses can be increased, it will take the necessary actions to publish such a decision and launch a call for tender for additional licenses.

2.4 Level of Intervention

2.4.1 The Licensing Framework consists of three levels of intervention, ranging from individual licenses to class license (authorization or declaration) to open entry[71].

2.4.2 Different telecommunications networks and services will be categorized into the different categories according to the adapted market structure.

2.4.3 The decision to require individual licenses in certain cases must take into market realities of individual ECOWAS countries into consideration.

2.4.4 Individual licenses shall be required in the following cases:

---

[71] There is a difference in terminology and legal systems between Anglophone countries, with legal systems based on "Common Law", which distinguish between 3 levels of intervention going from individual license to class license to open entry, and, Francophone and Lusophone countries, with legal systems based on the "Civil Law" system, which tend to opt for four categories: license, authorization, declaration and open entry.

Such terminology should be clarified in the definitions contained in the legal texts to be adopted at ECOWAS level (such as has been done by UEMOA in the draft Directive No. [X+!]/2005/CM/UEMOA on the harmonization of regimes applicable to telecommunications network operators and service providers).

In addition, certain countries in the region have evolved to a system of general authorizations especially as concerns class licensing, where operators are subject to conditions which are included in the general regulatory framework rather than being granted a written document stating their rights and obligations. The fact of having a document at the level of class licenses is an administrative choice which is really linked to the legal and administrative traditions of countries and does not change the legal nature of the rights and obligations of the parties concerned.

- To exploit or offer public telecommunications networks or offer public voice telephony service.
- If the government of a particular country, for reasons of public policy, determines that the service shall be offered in a certain way (e.g., measures concerning public order, public security or public health.)

2.4.5 Nevertheless, in order to promote the development of the sector in the Region and to allow more choice to consumers, ECOWAS Member States may decide to exempt certain activities, networks or services (e.g., ISP) from a particular licensing category or indeed determine that they are included in the open entry category. The aim of such a provision is to give flexibility to regulators.

2.4.6 In the interest of clarity, it must be understood that unauthorized is not unregulated. The activities which fall under the regime of open entry are subject to the general regulatory framework which includes, for example, conditions relating to, for example, terminal equipment approval or principles of non-interference.

2.5 Proposed Market Structure

2.5.1 The proposed licensing structure is as follows:

- Individual License: e.g.,: Network Operators – owning and exploiting any type of communications infrastructure (e.g., satellite, terrestrial, mobile or fixed); Public voice telephony service providers
- Authorization:e.g.,: Private Networks
- Declaration: e.g.,: Value Added Services, Reseller[72]s
- Open Entry: e.g.,: WiFi Networks for private use ; Internal Networks

3. Form of the Licence

3.1 Form of the Licence

3.1.1 The recommendation is that the license text includes the principle without literally copying legal or regulatory texts applicable to the sector. Such an approach will effectively promote transparency and equal treatment of all licensees and give the regulator the flexibility to adapt regulation to changing market conditions. Nevertheless, it is clear that specific conditions of licensees will be an integral part of their license.

3.1.2 The text of the license should not also not include conditions which are already applicable but which are not specific to the telecommunications sector. Nevertheless, national regulatory authorities may inform network operators and service providers of any regulations affecting their operations by referring them to information published on their respective web-sites.

---

[72] The difference between authorization and declaration is linked to the level of intervention of the regulator. In the case of authorization, applicants will be required to submit their applications (generally containing summary legal and technical information) and await the approval of the regulator to commence service. A declaration is more a simple registration with the regulator whereby applicant may be required to submit summary information to register, but will not be required to await approval prior to starting service.

4. Rights and Obligations

4.1 Principles

4.1.1 Conditions imposed upon operators and service providers must be non-discriminatory, proportional and transparent and must be justified in relation to the targeted network or service.

4.1.2 All holders of a telecommunications license will have a basic set of rights and these rights shall be applicable to all licensed operators regardless of whether they are service based or network based operators. However, the ability of a licensee to avail of those rights and entitlements may be conditional upon them being able to meet physical or technical requirements. For example, any incumbent fixed telecommunications operator may be required to set out certain conditions for access and interconnection to its network, including certain technical specifications. Any licensee capable of meeting those requirements should be entitled to enter into arrangements for such access or interconnection.

4.1.3 Certain other conditions which will be contained in all licenses will not be activated unless a specific determination or finding is made by the NRA.

4.1.4 For example there are a range of conditions that should only apply if a licensee is found to be dominant in a relevant market. Where the NRA intends to make a finding of dominance, there is a statutory consultation process that should be followed.

4.1.5 Where operators wish to have access to scarce resources (such as frequency spectrum, numbers or land), NRA's should retain the right to put in place additional regulatory requirements, including (but not limited to) the requirement to participate in specific application procedures or competitive selection processes. In addition, those conditions in the licenses of all licensees that relate to scarce resources should be activated where an operator gains access to such resources. The NRA shall consult separately in relation the allocation of scarce resources where appropriate.

4.1.6 Conditions regarding the regulation of the activities of a dominant operator shall not, in principle, apply to new entrants. Such conditions will in principle only apply where the regulatory authority determines, after appropriate market analysis, that a licensee is in fact in a dominant position.

4.1.7 Other licensees will only be subject to conditions linked to quality of service and consumer protection. Nevertheless, certain conditions relating to the provision of services to the public, and in particular including emergency calls, directory services and public payphones, may be applicable.

4.1.8 In addition, since it is not possible to foresee future market developments, regulatory authorities must have the ability to be able to designate an operator(s), other than the historic operator, as having a universal service obligation in the future.

4.1.9 Any licensee must make appropriate provisions to take into consideration the needs of disabled people.

5. Procedures

5.1 Fees

5.1.1 The fees associated with obtaining a license or authorization should not create a barrier to market entry. Therefore, to the extent that a Member State imposes fees on the issuance of a license or general authorization, the fees should seek to cover only the

administrative costs incurred in the issuance, management, control and enforcement of the applicable authorization scheme and in any case respond to public policy requirements as determined by government by means of Sectoral Policy.

5.1.2 Apart from entry fees, fees may also be imposed for the use of spectrum or numbers, with the aim of ensuring optimal use of resources. Such fees should not prevent the development of innovative services or competition in the market.

5.1.3 Charges must be imposed in a non-discriminatory manner so that one operator is not charged more than another without some objective basis for so doing. Any fees also shall be published in an accessible and appropriately detailed manner.

5.2 Public Consultations

5.2.1 To ensure fairness and transparency in the licensing or authorization process, the Member States should consult with industry, the public and other stakeholders.

5.3 Public Availability of Licensing Criteria

5.3.1 Where a license is required, the following should be published and made publicly available:

- all licensing criteria.
- the period of time normally required to reach a decision concerning an application, and
- the terms and conditions of individual licenses.

5.3.2 The reasons for the denial of any license must be made known to the applicant upon request.

5.4 Licensing Procedures

5.4.1 Member States shall define and apply licensing mechanisms that facilitate market entry and allow the progressive dismantlement of obstacles to competition and to the development of new services.

5.4.2 Any license conditions must be objectively justified, proportionate, non-discriminatory and transparent.

5.4.3 Member States generally should keep license conditions and filing requirements to a minimum. It would be unduly burdensome, for example, to require applicants for general authorizations to submit excessive amounts of business information to the regulator, such as: business plans; extensive technical filings; showings of experience; bank statements; or information detailing the source of funding.

5.4.4 Any entity that fulfills the conditions adopted and published by the Member State shall be entitled to receive an individual license.

5.4.5 Furthermore, all applicants shall be subject to the same procedures, unless there is an objective reason for differentiation.

5.4.6 Member States should adopt and adhere to reasonable time limits for acting upon license requests.

5.4.7 Refusal to issue a license or any decision to amend a license shall be taken in a transparent manner and the reasons should be communicated formally to the applicant.

5.4.8 A procedure also should be initiated to permit an entity to appeal any decision by the regulatory authority to an independent institution.

5.4.9 Licenses should be issued to the applicant personally. Transfer to third parties, if applicable, shall be done only with prior consent of the regulatory authority. However, a license obtained through competition or tender procedures should not be transferable. An exception to this condition is admissible when the applicant has declared in advance his intention to set up a company entirely owned by him to operate the licensed activities.

5.4.10 Member States should prescribe the maximum license period and indicate the conditions of its renewal.

5.4.11 Member States should promote the principle of technology neutrality and refrain from imposing limitations of service offered over a given network except in the case of the protection of public safeguard or moral standards.

5.4.12 Member States should ensure that license targets to further universal service goals do not discourage competition.

5.4.13 Member States should refrain from granting licenses with exclusivity, except when mandated by the legislation or the country's policy, and when dictated by unavailability of necessary resources or other relevant reasons.

5.4.14 The terms of a license should be considered fixed at the time the license is officially delivered. Should the need to change the terms arise, the agreement should require the regulator or licensee to notify the other party in a timely and reasonable fashion of any such changes before they are implemented.

5.4.15 A license agreement should not require the licensee to adhere to unspecified terms in a separate agreement between the Member State and a third party unless the terms are fully reiterated in the current license.

5.5 Reviewing, Terminating and Revoking Licenses

5.5.1 When a licensee fails to comply with a condition attached to the license, the regulatory authority may withdraw, amend, or suspend the individual license or impose, in a proportionate manner, specific measures aimed at ensuring compliance.

5.5.2 The regulatory authority shall, at the same time, give the entity a reasonable opportunity to state its view on the application of the conditions and, except in the case of repeated breaches by the entity, the entity shall have an opportunity, within a defined period of time, to remedy the breach. If the breach is remedied, the regulatory authority shall, within a defined period of time, annul or modify its decision and state the reason for its decision. If the breach is not remedied, the regulatory authority shall, within a defined period of time after its initial intervention, confirm its decision and state the reasons for its actions. The decision shall be communicated to the entity within a defined period of time (i.e., one week).

5.5.3 A license agreement should provide termination rights that are appropriate to each party.

5.6 Authorisation Regime

5.6.1 Service providers may be required to notify the regulator before providing the intended service. Service providers also may be required to provide information to the regulator to ensure compliance with any applicable conditions of operation.

5.6.2 In such instance, the service provider may be required to wait for a reasonable and defined period of time (e.g., up to four weeks) before starting to provide the services covered by the general authorisation.

5.6.3 Information that may be included for general authorizations include:

- "Legal" information: Individuals may be required to show that they are registered as single businessmen. Commercial partnerships, however, can be required to show by means of a statement accompanied by a certificate from the relevant commercial registration office that they are legally established and that their contract of partnership includes the business of providing telecommunications services. Individuals or partnerships whose registration or license has been suspended or has been revoked should not be allowed to register.
- "Technical" information: The entities may also be required to previously inform the NRA of the services they intend to commence and to provide the information that shows that they can fulfill the applicable conditions and modes applicable to the licensable activity, namely:
  - Detailed description of the service they propose to provide.
  - Technical project stating the equipment's to be used.
  - Indication of the entity in whose network the service is based.

5.6.4 NRAs may retain the right to request further clarification.

5.7 Right of Review, Remediation and Appeal for Authorisations

5.7.1 If the regulator finds that a service provider does not comply with the conditions of a general authorization, it may inform the service provider that it is not entitled to use the general authorization and/or impose on the service provider proportionate measures to ensure compliance. The service provider shall have an opportunity to state its views on the application of any such conditions and to remedy any breaches within a defined period of time.

5.7.2 If the service provider is able to correct the breaches or deficiencies within a specified period of time, the regulator shall annul or modify its initial decision and state the reasons for this decision. If the service provider is unable to correct the deficiencies, the regulator shall, within a defined period of time (e.g., two months of its initial decision) confirm its decision and state the reasons for its decision. This subsequent decision shall be communicated to the service provider within a defined period of time (e.g., one week).

5.7.3 A procedure also should be established to permit the regulated entity to appeal the regulator's decisions to an independent institution.

5.8 Enforcement

5.8.1 License conditions should be enforceable and clear on the rights and obligations of the licensee.

5.8.2 The regulatory authority should undertake, when deemed necessary, reasonable and appropriate methods to enforce the terms and conditions of a licensee's operations.

5.8.3 A license agreement should include provisions to facilitate enforcement processes and access, when deemed necessary, to a licensee's documents, provided that privacy and confidentiality are respected.

5.8.4 A license agreement should require the regulatory authority to give the licensee notice of any suspected or alleged license violations that come to the attention of the regulatory authority and allow a reasonable time for the licensee to investigate and take corrective action, if appropriate.

5.8.5 A licensee should be provided with an opportunity to present his views before changes of the terms of the license take effect.

5.9 Sanctions

5.9.1 Where license conditions are not respected, sanctions may be imposed. A range of sanctions may be foreseen, including:

- Fines
- Restriction of the scope and/or the duration of the license
- Suspension
- Withdrawal of Licence

5.9.2 Where one of the sanctions mentioned above is imposed, it will be widely communicated amongst ECOWAS Member States.

5.10 Dispute Resolution

5.10.1 Disputes must be handled according to national legislation.

5.10.2 Parties may, however submit their case to the Judicial entity of ECOWAS or to any other competent judicial authority.

Annex 4

Model licensing framework

Baseline issues

Where there is one incumbent operator with a very strong position for historic reasons and the potential for new entrants to come into the market, it is important to balance the regulatory obligations that such incumbents will need to comply with in order to ensure a competitive market develops, with the need for these operators themselves to be able to operate in a commercial manner. At the same time, there is a need to recognize the rapidly changing nature of the telecoms sector generally and ensure that the licenses contain sufficient flexibility to cope with those changes. The License terms and conditions therefore set out the high level obligations that incumbents will be required to comply with.

A number of options will determine the legal framework required for licensing the different type of networks and services.

1 The first decision is whether to emphasize liberalization through facilities-based competition or whether liberalization is to be introduced primarily through services-based competition

The recommendation is to promote facilities-based competition to the greatest extent possible, as this is in the interest of ensuring maximum competition, whilst simultaneously accommodating the development of the sector and the realization of universal policy objectives. However, service-based competition is also contemplated within the licensing structure as a quick market access mechanism and to complement the networks of facilities-based competitors.

2 The second issue to consider is the licensing regime itself, namely, whether the regime should be 'liberal,' with class license as general rule, except in the case of scarce resources (such as what was introduced by the recent EU legislation) or more 'restrictive,' with more categories of networks and services being subject to individual licenses.

The recommendation is to promote a liberal regime (class license or open entry) as much as possible, except:

1) For the provision of Telecommunications Networks or Services: the need for scarce resources (e.g. frequencies and numbering), and

2) For the deployment of Telecommunications Networks: the need for access to or to pass through public possessions and/or locations of public use and/or third parties properties.

3) Whenever the government of a particular country, due to public policy requirements, determines that the service needs to be provided in certain way.

3 The third relates to the form of the licensing and includes the qualifications required for the different degrees in the licensing regime and relating to rights and obligations of license

The recommendation is that the more "restrictive" regime, requiring more detailed information to be submitted to the regulator, should only be applicable to those cases where an individual license is required.

The more "liberal" regime should be aimed at facilitating market entry and competition and should therefore be proportional to the level of regulatory intervention required. For example, applicants for class licenses will need to submit more detailed information than those submitting only a registration request.

4 The fourth issue relates to the gradation of the rights and obligations of licensees and the legal representation of such rights and obligations

The options are:

a) maintain current license model with consumer protection, tariffing, and regulatory compliance as an integral part of the license

b) convert to short and concise licenses with details in separate regulations

The recommendation is that licenses should be as short and concise as possible, with general rights and duties in separate schedules or regulations. This, we believe will effectively promote transparency and equal treatment of all licensees.

The decisions flowing from these options will determine the licensing structure.

Based on the baseline issues defined above and in recognition of the realities of the market, we propose a licensing framework which accommodates these realities and aims to achieve the desired market structure. This framework aims to be technology-neutral and independent of the access technology (such as, for example FWA) so as to be able to accommodate convergence and new technologies.

The licensing framework and structure proposed has three levels of regulatory intervention, ranging from individual licenses through general licenses to registration. In order to ensure that the market remains investor-friendly, the level of information which applicants must submit will also depend on what is being requested.

The different types of networks, services and technologies defined in the WTO Basic Telecommunications Agreement are included in this categorization of licenses. We have attached a table referencing where each of these different networks, services and technologies fall.

The suggested structure is as follows:

1 Fixed Public Facilities Providers (carrier's carrier)

Definition: This category covers those who own all or part of the necessary network infrastructure such as VSAT, cable infrastructure, submarine cables, leased lines, etc. which they can use themselves (in which case the appropriate application such as, for example the public voice service provider license, is required) or make available in whole or in part to others (e.g. line sharing, wholesale line rental, leased lines, dark fiber).

Recommended Option: Individual licenses due to the potential impact on the development of the sector and the country and the importance of encouraging and ensuring successful facilities-based competition.

Recommended Requirements: Such public facility providers should be entitled to rights such as the use of public facilities, and have right of way. They may in turn, be subject to open network provision (ONP) obligations as well as those obligations which are to be defined in a future universal service policy to be determined by the Ministry (e.g. national, regional or rural coverage requirements, build out requirements, contributions to a possible Universal Service Fund, etc.).

Information Required for Application: Such obligations imply that the NRA will need to ensure that these providers have the necessary qualifications to be able to meet the requirements. It is

recommended that full legal, technical, financial and economic information as proposed be required for such a category of operator.

2 Fixed Public Voice Service Providers

Definition: This category covers public voice telephony service providers who do not necessarily use or own the entire infrastructure themselves. Such service providers would have to at least own their own switching equipment or other essential facility such as an IP gateway (for VoIP).

Recommended Option: Individual License due to the need to ensure that services which are provided to the general public are provided in accordance with the guidelines, terms and conditions as specified by the government and that such service providers also contribute to the development of the country and of the sector.

Recommended Requirements: In view of the objectives set out on the Ministry Policy Statement and in order to ensure that such operators contribute to broader public policy goals (i.e., increase penetration of PSTN voice telephony services, etc), such operators may be subject to certain universal service obligations. The exact detail of such obligations will be subject to the future Universal Service Policy to be defined by the Ministry.

Information Required for Application: Such obligations imply that the NRA will need to ensure that these providers have the necessary qualifications to be able to meet the requirements. It is recommended that detailed legal, technical, financial and economic information as proposed is required for this category of operator.

3 Value Added Services

Definition: Value added services are understood to mean enhanced or value-added telecommunications data and/or voice services (the establishment and management of voice services to closed user groups such as corporate networks would be included, but not public voice telephony services) that act on the format, content, code or protocol of information in order to provide the user with additional or different information or that involves subscriber interaction with stored information. Such services can include, among others, computer and data processing services, data, information and exchange services, and credit card verification services. An indication of present-day services to be covered by this categorization include: Audiotex, voice mail, email, fixed data services, X25, frame relay, Virtual Private Networks, Access and Internet Services, Videotext, Access to databases, facsimile, Telex, Teletext, and EDI. The NRA retains the right to classify any other service as being a Value Added Service.

Recommended Option: Class License, due to the need to ensure that networks are established and deployed with type approved equipment. Service providers should be subject to minimum regulatory rights and requirements, such as the possibility of obtaining facilities from public facilities providers (e.g., international connectivity, leased lines) for the provision of their services, and to payment of regulatory fees based on the earnings of the commercial exploitation of the services, as well as compliance with customer protection rules, etc. This can best be achieved through class licenses.

Information required for application: The rights and obligations stated above justify the need for the requirement of legal, financial and technical information. It should be recognized though that VAS providers have a lesser impact on the market and should therefore not be required to submit as extensive an information as those mentioned above.

4 Switchless Resellers

Definition: Those providers who resell public telecommunication services or traffic.(i.e.; those who purchase minutes from another service provider at wholesale rates to resell to the end-user)

Recommended option: Registration in a special registry of resellers is recommended given that the resale of services will attract new clients through the offering of lower prices, attractive marketing campaigns, etc. This will require mechanisms to ensure that consumers are protected and can lodge any complaints that they may have against such operators with an appropriate organization such as the NRA, and gives the NRA the legal basis to sanction any fraudulent activity by such service providers.

Recommended requirements : Those resellers providing services with their own switch are defined as Fixed Public Voice Service Providers and fall under the Individual Licensing regime.

Information required for registration: These applicants will only need to submit basic legal and financial information.

5 Private Networks

Definition: This classification is applicable to those who establish and maintain networks for their own use.[73] These services should not be provided for commercial use and should exclusively serve the needs of natural and legal entities who install, operate, manage and use their own network. This classification excludes networks set up in a single dwelling or building, which are completely exonerated from regulatory licensing requirements.

Recommended option: The recommended option is registration in order to keep track of private network deployment and their uses, to make sure that only members belonging to the Closed User Group are allowed to use the network, to ensure that the network is not commercialized to third parties and to ensure that such network and services are not used to bypass the PSTN operators.

Recommended requirements: The only limitations that such networks should be subject to relate to type approval of the equipment use and non-interference in case of use of radio equipment (e.g. WiFi)

Information required for registration: There will be a need for legal and technical information for all applicants. The legal and technical information in particular will serve as a basis to check and keep track of the private nature and use of the network.

[73] International Best Practice shows that "Own use" is generally interpreted as including users which are engaged in a common business or activity and operators being in an organization formed by this group of users for the specific purpose of furthering such common business or activity that is the main business or activity.

Licensing Structure – Summary Table

Type of infrastructure and/or service provided	Networks and Services Covered	License Required	Qualifications Required	Transition of Existing Licenses
Public Facilities Providers (carrier's carrier) – local – national – international *This category covers those who own and provide all or part of the necessary network infrastructure to transport communication signals such as VSAT, cable infrastructure, submarine cables, leased lines, etc. which they can use themselves or make available in whole or in part to others (e.g. line sharing, wholesale line rental, leased lines, dark fiber).* *Such public facility providers should be entitled to rights such as the use public goods, have right of way and may in turn, be subject to ONP obligations as well as those obligations defined in a future universal service policy to be determined by the Ministry (e.g. national, regional or rural coverage requirements, build out requirements, contributions to a possible USF, etc.).* *Such obligations imply that the NRA will need to ensure that these providers have the necessary qualifications to be able to meet the requirements.*	Leased Circuit Services (including point to point leased circuit services or point to multipoint as well as cable infrastructure including local, national and international facilities) Gateway Earth Stations VSAT networks FWA networks	Individual	Legal Financial Economic Business plan Technical	Fixed and Mobile Telephony license

Type of infrastructure and/or service provided	Networks and Services Covered	License Required	Qualifications Required	Transition of Existing Licenses
Public Voice Service Providers – local – national – international *This category covers public voice telephony service providers who do not necessarily use or own all of the infrastructure themselves. Such service providers would have to at least own their own switching equipment or some other essential facility such as an IP gateway (for VOIP) and may therefore be subject to universal service obligations such as build out and coverage, etc subject to the future Universal Service Policy to be defined by the Ministry . Such obligations imply that the NRA will need to ensure that these providers have the necessary qualifications to be able to meet the requirements.*	PSTN Voice VOIP	Individual	Legal Financial Economic Business plan Technical	Fixed and Mobile Telephony License
Value Added Services *Value added services are understood to mean enhanced or value-added telecommunications data and/or voice services (the establishment and management of voice services to closed user groups such as corporate networks would be included but not public voice telephony services) that act on the format, content, code or protocol of information in order to provide the user with additional or different information or that involve subscriber interaction with stored information.*	Computer and data processing services, data, information and exchange services, credit card verification services and ISPs *Examples of present-day services include:* Audiotex, voice mail, email, fixed data services, X25, Frame, and others, Virtual Private Networks, Access and Internet Services, Videotext, Access to data bases, facsimile, Telex, Teletext, EDI.	General License	Legal Financial Technical	Data License (some of the new services are included)

Type of infrastructure and/or service provided	Networks and Services Covered	License Required	Qualifications Required	Transition of Existing Licenses
Switchless Resellers: Those providers who resell public telecommunication services or traffic.(i.e.; calling cards providers who purchase minutes from another service provider at wholesale to resell them to the final user) *Note: Those resellers providing services with their own switch are defined as Fixed Public Voice Service Providers and fall under the Individual Licensing regime.*	Calling card providers	Register of resellers	Legal Financial *(Note: NRA may require bonds from pre-paid calling card providers)*	None today
Private Networks *This classification is applicable to those who establish and maintain networks for their own use [74] These services should not be provided for commercial use and should exclusively serve the needs of natural and legal entities, themselves, who install, operate, manage and use that network.* *This classification excludes networks set up in one single dwelling or building, which are is completely exonerated from regulatory licensing requirements. The only limitations that such networks should be subject to relate to type approval of the equipment use and non-interference in case of use of radio equipment (e.g. WIFI)*	All services for non-public commercial use	Register of Private networks (depending on whether the NRA would like to get some "regulatory fees"), *Note: a general license would justify the payment of such fees* *Registration would only entitled a registration fee.*	Legal Technical	Today they are unregulated in many countries

74 International Best Practice shows that "Own use" is generally interpreted as including users which are engaged in a common business or activity and operators being in an organization formed by this group of users for the specific purpose of furthering such common business or activity that is the main business or activity.

Annex 5

Sample license provisions

Recommendation

When drafting individual or class licenses according to the licensing classification selected (facilities based vs. service based, or licensing based on services, or technology-neutral licensing), it should be remembered that there should be a general set of terms and conditions that are applicable to all. Then there are terms and conditions applicable to certain situations (for example to control dominance), service providers (for example GMPCS) and terms and conditions linked to the use of scarce resources (for example linked to the use of spectrum or numbers or rights of way). The following chart gives sample licensing provisions as they appear in best practices around the World.

Sample licensing provisions

Condition No.	Heading	Purpose
Part I – General provisions		
1	Definitions	Sets out the meaning attributed to certain terms used throughout the license document.
2	Scope of the License	Establishes to whom the license is issued, the nature of the license, the requirements with regard to the control of the licensee and obligations with respect to any changes in control of the licensee that may take place.
3	License fee	Requires the licensee to pay a fee for the license.
4	Provision of Information	This condition sets out some detail on how information required by the NRA may be obtained and obliges the licensee to comply with requests and provide all relevant information and assistance to obtain information. This is a crucial condition as the information requested will enable the NRA to make determinations in the best interest of users and the market as a whole.
5	Compliance	States that the licensee must comply with any and all directions issued by the NRA or as set down in law.
6	Fair Competition	Requires all licensees to behave in a fair way and not engage in anti-competitive practices.
7	Misuse of data	Requires the licensee to handle information received in a manner that does not benefit it or any associated companies

Condition No.	Heading	Purpose
8	Exceptions and Limitations	While it is assumed that the licensee will at all times make every endeavor to comply with its license and any directions given to it by the NRA, if such compliance is prevented by force majeure, the licensee must inform the NRA, set out the impact on its duty to comply with the License and set out how it intends to rectify the situation. The NRA will consider such matters on a case by case basis.
9	Integrity of the Network	This condition provides for the Licensee to take steps necessary to ensure the integrity of the network. This is important so as to make sure that services to the public are not interrupted.
10	Interests of the country	Requires the licensee to take all reasonable steps to prevent its network and services from being used to harm the interests of the country.
11	Term and Renewal	Provides for the length of validity of the license and for the licensee to seek renewal of the license.
12	Cessation of Services	Provides for the manner in which a licensee may cease service and the steps required of it in doing so. This is designed to ensure continuity of supply for the licensees customers.
Part II - Specific conditions which are applicable, as required		
13	USO	Requires the licensee to provide the USO specified by States Direction to the NRA and to comply with any direction from the NRA with regard to this condition as may be issued from time to time. It also deals with the establishment of a fund to meet the cost of providing the universal service should that be considered necessary.
14	Emergency Calls	Requires the licensee to provide emergency calls free of charge and to ensure the codes '112' and '999' are used exclusively for such calls.
15	Directory Information	Requires the licensee to provide its customers with access to any Directory Information Service offered by any licensed operator and co-operate in making information available to enable a Directory Information Service be provided. It also requires the licensee to ensure that it does not use information for any purpose other than the Directory Information Service, and comply with data protection legislation.
16	Public Payphones	Requires the licensee to maintain and operate payphones, sets out the services to be available from them and information to be made available to users. It also requires the licensee to give notice of its intention to withdraw a payphone from a specific location.

Condition No.	Heading	Purpose
17	Service Levels	The licensee is required to provide a development plan setting out its targets for the ongoing development of the network and services, and a monitoring plan which measures achievement of those targets. This is designed to ensure the on-going development of the network and to ensure that the country is provided with the highest level of infrastructure and service.
18	Consumer Protection	Requires the licensee to publish certain information with regard to its services and conditions, the manner in which it will deal with customer complaints, the provision of itemized billing and the publication of a consumers code for the resolution of disputes and in relation to the non-payment of bills and disconnections. It also requires licensees to prepare a draft statement on its minimum service levels for customers.
Part III – Conditions linked to the use of scarce resources		
19	Numbering	Requires the licensee to maintain its numbering allocation in an appropriate manner. It is further prohibited from charging customers for any number allocated unless authorized by the NRA.
20	Radio Frequency Spectrum	This condition is designed to ensure that the Licensee operates any radio based infrastructure including its mobile network and services in such a way as to avoid interference to other users and that its systems comply with the international standards with regard to non-ionizing radiation emissions
21	Access to Land	Entitles licensee to the powers and rights set out in the Telecommunications Law, subject to compliance with other relevant laws and codes within the country, e.g. planning laws.
22	Access	Access to the network and services of the incumbent operator may be important to aid the introduction of competition into the telecoms sector. Due to constraints on land and to protect the environment, there may be circumstances where the only feasible means of accessing a customer for an operator may be by sharing or gaining access via another operator's property or network. This condition provides that the incumbent must, if so directed provide such access on equal terms and conditions to the access it provides itself.
Part IV – Specific conditions relevant to certain operators (e.g. where determined to be dominant)		
23	Determination of Dominance	Under this condition the NRA may apply the conditions in Part IV of the License to any licensee that has been found to have a dominant position in a relevant market in accordance with Section 5 of the Telecoms Law.

Condition No.	Heading	Purpose
24	Equal Access	The licensee, where requested by another operator, must grant 'equal access' – allowing the other operator access to its customers over the Licensees network using a selection of access methods as set out in the license. This is designed to facilitate the introduction of competitive service providers whose services can be used by customers by dialing a short code or prefix.
25	Interconnection	This condition is critical. It provides for new entrants being able to piggy-back on the licensee's network to provide service to its customers. It enables faster roll-out of competition in advance of new entrants building such own network as they may require. In addition it is the means by which service competition will develop. The Licensee's charges for interconnection services must be non-discriminatory and cost-oriented.
26	Leased Circuits	A key building block in enabling new entrants to compete will be the ability to offer a full suite of services. The ability to buy wholesale leased lines at terms that are no less favorable than those offered by the Licensee to its own associated companies or business divisions will be an important element in meeting this aim. In addition, larger customers are significant users of leased circuits and this condition requires transparency and non-discrimination in relation to charges to such customers.
27	Separate Accounts	To aid the NRA in ensuring compliance with other conditions, the ability of the licensee to show that there is no below cost and/or cross subsidization of any element of the business will be paramount. Keeping separate accounts for different activities is essential to calculate this.
28	Cross Subsidization	This condition prohibits unfair cross-subsidization and is intended to aid new entrants in assuring them that they are competing on a fair and equitable basis.
29	Undue Preference & Unfair Discrimination	This condition requires the Licensee to treat all classes of customers in a similar manner and provide them with similar terms and conditions.
30	Linked Sales	This condition prevents the Licensee from 'bundling' services or products so that a user or new entrant must purchase products or services which it does not require.
31	Price Regulated Services	This condition requires the Licensee to publish details of new services or prices, discounts on services or special offers and submit information relating to the proposal to the NRA. The purpose of this is to ensure that any such changes/introductions are compliant with the requirement to be transparent, non-discriminatory and cost-justified.