ICT Regulation Toolkit

3.8 Licensing for Convergence and Next Generation Networks

Convergence is one of the most important recent trends in the ICT sector. It has changed how services are delivered and has blurred the lines between fixed and mobile services. The move towards Next-Generation Networks (NGN) is the most recent step in the convergence-driven evolution of the ICT sector. The following sections outline authorization issues raised by convergence and NGN and review the practices and procedural approaches currently being developed in response to these issues.

Related Materials

Module 7, "New Technologies and Impacts on Regulation", section 1.4, "Next Generation Networks"

Module 7, "New Technologies and Impacts on Regulation", section 1.5, "Convergence"

3.8.1 CONVERGENCE AND NEXT GENERATION NETWORKS

Recent innovations in technology and ICT services are raising interesting discussions among the ICT community on how to describe these innovations: are they a revolution or an evolution? Moving away from this debate, one can only note that these innovations have significantly changed and continue to change how ICT services are provided, the nature of networks themselves, and the types of services that are available to consumers. From the perspective of authorizations, two developments have had a particular impact on the parameters of the ICT sector: convergence and the move to Next Generation Networks (NGN). As the parameters of the ICT sector change, there is a need for a careful re-consideration of traditional authorization practices and approaches.

Convergence and NGN have eroded traditional market boundaries and have heightened the importance of neutrality and flexibility in authorization regimes. At the same time, as network operators and access providers invest heavily in upgrading equipment and building new infrastructure, service providers seek regulatory certainty. Regulators must balance the need for regulatory certainty with the need for a regulatory framework that is sufficiently flexible to allow stakeholders to enjoy the benefits of technological innovations such as efficiency gains and new services. Regulators must be attuned to new bottlenecks and market dominance that may emerge in the ICT sector.

In light of the regulatory issues that flow from convergence and the transition to an NGN environment, regulators have begun to adapt the traditional, service-specific approach to authorizations. There are now three broad approaches to authorizations in the ICT sector:

- **Service-specific authorizations:** these authorizations allow the licensee to provide a specific type of service. Usually, the licensee is required to use a specific type of network and technological infrastructure. However, some service specific authorization regimes are technology neutral (e.g., the fixed and mobile services authorization regimes in Saudi Arabia and the Canadian basic international telecommunications services licences). These types of authorizations are sometimes issued as individual licences (particularly in developing and transitional economies) and sometimes issued as general authorizations.

- **Unified (or global) authorizations:** these authorizations are technology- and service- neutral. They allow licensees to provide all forms of services under the umbrella of a single authorization, using any type of communications infrastructure and technology capable of delivering the desired service. In most countries, unified authorizations are issued as individual licences. However, in some countries, the process for issuing the unified authorization blends aspects of general authorization processes and competitive licensing regimes. These hybrid processes can best be described as non-competitive individual licensing processes: while applicants do not compete for a limited number of authorizations, they must meet a variety of criteria to qualify for a licence and their applications are subject to close regulatory scrutiny.

- **Multi-service authorizations:** these authorizations allow service providers to offer multiple services under the umbrella of a single authorization, using any type of communications infrastructure and technology capable of delivering the services in question. Like unified authorizations, multi-service authorizations are technology neutral.

However, multi-service authorizations are more limited than unified authorizations; licensees are permitted to provide any of a designated set of services, but not any and all services. Multi-service authorizations are sometimes issued as general authorizations and, in other cases, are issued as individual licences. It is not uncommon for a country to have both general authorization regimes and individual licence regimes for their multi-service authorizations. Individual multi-service authorizations are often issued using a non-competitive individual licensing process.

The following sections examine these types of authorizations in more detail and also review certain trends in authorization practices that have arisen in response to convergence and NGN.

For more information about the revolution in the ICT sector and how technological innovation has impacted the traditional approach to authorizations, see **section 8.1.1**.

3.8.1.1 REGULATORY ISSUES IN A CONVERGED AND NEXT GENERATION NETWORKS ENVIRONMENT

Note: This section is based in large part on Janet Hernandez & Daniel Leza, "Chapter 9: Enabling Environment for NGN" in *Trends in Telecommuncations Reform 2007* (Geneva: International Telecommunications Union, 2007).

This section considers a number of regulatory issues that have arisen as a result of technological innovation, convergence in the ICT sector, and the move to Next Generation Networks (NGN).

Up to very recently, ICT regulatory regimes have been designed for traditional circuit-switched communications. Regulatory regimes have focused on the specific means of telecommunications or on the specific service offered by the operator. Accordingly, authorizations in these regulatory regimes have been largely service-specific and technology-specific for many decades.

Service-specific authorizations were practical and logical given that there was a narrow scope of services available to end users and given the limits of technology at the time. The need for neutrality in licensing was not pressing when it was not yet possible to deliver multiple, diverse services over one platform or to deliver key services such as basic telephony using different kinds of technology.

Technological innovation has changed the parameters of the ICT sector. New developments have given rise to fixed-mobile convergence, eroding what was once an important distinction from the perspective of authorizing services. Internet Protocol (IP)-based networks and services have furthered contributed to convergence in the ICT sector. For example, basic cable television providers have entered into the telephony and Internet segments of the ICT sector, offering "triple play" bundles to customers: the provision of cable television services, basic voice telephony, and Internet access over the single median of cable. At the same time, wireless service providers are seeking more and more bandwidth to meet customer demands for mobile services that include voice telephony, Internet access, and even television.

Next Generation Networks (NGN) represent the next phase of development of convergence in the ICT sector. NGN will essentially enable consumers to receive a wide range of services over a single, IP-based network. The transition to an IP-based environment requires intensive investments as access providers and network operators must upgrade and build new infrastructure.

From a regulatory perspective, convergence in the ICT sector and the move to NGN raise a number of issues. First, traditional market boundaries are increasingly blurred. Moreover, multiple services can now be offered over a single platform. Service-specific authorizations can be troublesome in this environment because they hamper service providers' ability to take advantage of efficiencies engendered by technological innovation and to respond to consumer demand. Service-specific authorizations also represent an increasing regulatory burden as service providers must hold many different authorizations to provide a full range of services to their customers.

Additionally, service-specific authorizations may create competitive advantages for one type of service provider over another if the terms and conditions attached to the authorizations are not identical. For example, given that fixed PSTN services, mobile services, and VoIP may all be employed to provide consumers with basic voice telephony, the imposition of a large authorization fee on fixed service providers, but not on mobile and VoIP providers, puts fixed service providers at a competitive disadvantage. Arguably, this disadvantage is not fair given that all three types of service providers offer essentially the same service from the perspective of the end user. This disadvantage also creates artificial market incentives to provide mobile and VoIP services. These incentives thus discourage entry into the fixed voice market and from investing in related infrastructure. This ultimately could undermine efficiencies in the ICT sector that would otherwise have been enjoyed had more service providers entered into the fixed voice market.

Second, there is a significant gap between the market conditions that traditional regulatory frameworks were designed to

address and the market conditions emerging in a converged, IP-based environment. Regulatory approaches to authorizations that made sense in a circuit-switched environment are no longer practical in converged, IP-based networks where multiple services can be offered using a single platform. Today, there is a much greater need for neutrality and flexibility in the approach taken to authorizations than there was in the era when services were exclusively offered using circuit-switched communications networks. Regulatory frameworks in general and approaches to authorization in particular must adapt in order to respond effectively to the current characteristics of the ICT sector.

Third, service providers are looking for regulatory certainty in light of the significant investments they must make to upgrade their equipment and to build new infrastructure. As changes are made to the regulatory framework in response to convergence and NGN, regulators must be sensitive to the concerns of service providers. Transition to a regulatory framework designed to respond to an IP-based environment must be carefully managed in order to avoid discouraging service providers from investing in NGN. Regulators should also take the high cost of rolling out IP-based networks into consideration when setting the terms and conditions for authorizations.

Finally, new bottlenecks and market dominance may emerge in the ICT sector as countries transition to NGN. As the regulatory framework is adapted for a converged, IP-based environment, regulators must carefully consider how to respond to potential bottlenecks and market dominance.

Section 8.1.2 outlines four regulatory trends relevant to authorizations that have emerged in response to these issues.

3.8.1.2 ADAPTING AUTHORIZATION REGIMES FOR CONVERGENCE AND NEXT GENERATION NETWORKS

Note: This section is based in part on *Regulatory Trends for Adapting Licensing Frameworks to a Converged Environment* (Geneva: International Telecommunications Union, 2007), prepared by Telecommunications Management Group, Inc.

This section introduces four trends in licensing service providers that have become increasingly important in light of the regulatory issues raised by technological innovation, convergence, and Next Generation Networks (NGN). These four trends can broadly be described as neutrality; simplification; flexibility; and reduction of the administrative burden.

Neutrality – Many countries are moving towards authorization regimes that are service- and technology-neutral. Rather than issuing service-specific authorizations, as was the most common practice when services were primarily delivered using traditional, circuit-switched networks, many countries now issue neutral authorizations. Neutral authorizations do not designate a single, specific service that the licensee can offer under the authorization, nor do they prescribe the technological infrastructure that must be used to deliver the service. Licensees are not restricted by narrow, service-specific and technology-specific authorizations. Instead, these authorizations permit the licensee to offer any of a range of services, using any technological infrastructure that is capable of delivering the desired services. Neutrality in licensing has been complemented by simplification of the authorization regime.

Simplification – Simplification involves the consolidation of different types of service-specific authorizations into a broad, generic category of authorization or even the unification of all authorizations into a single, unified authorization.

Simplification is a move away from traditional authorization regimes that tended to feature service-specific authorizations. In a traditional authorization regime, service providers would be required to hold separate authorizations for every kind of service they offered. Each separate authorization could be subject to a unique licensing process, different terms and conditions, and separate fees and reporting obligations. Regulators would be required to administer any number of different authorization processes and procedures and to oversee adherence to a broad range of different terms and conditions and reporting obligations. Simplification reduces the complexities that flow from service-specific authorization frameworks by consolidating the many authorizations that service providers are required to hold into a few or even one single authorization.

Neutrality and simplification in licensing have become increasingly important in a converged and NGN environment. Neutral and simplified authorization frameworks allow regulators to respond to the dynamism of a sector in which the range of services continues to expand and where multiple services can be delivered using a single, IP-based platform. Simplified, service- and technology-neutral authorization frameworks accommodate convergence and the blurring of traditional market boundaries in the ICT sector. Neutrality and simplification in licensing give service providers the ability to respond to market demand for services using the most efficient technology and infrastructure available. Neutrality and simplification also ensure that service providers are treated equally and are not subject to any competitive disadvantages by virtue of the service provided or technology used to deliver the service.

Flexibility – Many regulators have responded to the dynamism in the ICT sector by adding greater flexibility to the authorization regime. Regulators from Costa Rica, Jordan, Pakistan, Thailand, and Tunisia have all noted that flexibility in licensing, for example, enabling service providers to offer multiple services, is an important step in attracting investment in

NGN.[*]

The adoption of service- and technology-neutral licensing practices is one example of how regulators have sought to make the authorization regime more flexible. Neutrality gives service providers the flexibility to respond to market demand and to take advantage of technological advances without having to seek new authorizations for each new service offered or for changes in their technological infrastructure.

A number of regulators have taken measures to add some flexibility to the authorization regime for spectrum usage. For example, some regulators have allowed licensees to refarm allocated spectrum: that is, regulators have allowed licensees to use spectrum initially allocated for 2G services to be used to provide 3G services. In Hong Kong China, mobile service providers have been given the right to choose to use 2G or 3G technology in the spectrum assigned to them in their 2G authorizations. France and Switzerland have also begun to allow operators to refarm spectrum in the 900 MHz range. Regulators have also allowed greater flexibility for spectrum licensees to resell all or some of their allocated spectrum on commercially negotiated terms. Countries that now permit such spectrum trading include: Australia, Canada, Guatemala, New Zealand, Norway, the USA, and the UK. Austria, France, Germany, the Netherlands, and Sweden have permitted spectrum trading on a more restricted basis. Spectrum re-allocation and re-farming is discussed in greater detail in **Module 5, section 2.3.8, "Re-allocating and Re-farming Spectrum"**.

Reduction of the administrative burden – Many regulators have adopted measures designed to reduce the administrative and formal requirements necessary to enter the ICT market and to provide a service. One of the key characteristics of the NGN environment is the separation of the provision of services and applications and the operation of the underlying network. It is expected that NGN will increase competition in the service and applications layers of the network since service providers will not have to operate network infrastructure to enter the market. The reduction of the administrative burden associated with licensing supports the development of competition by making it easier for service providers to enter the market.

The move to general authorization regimes and the adoption of open entry policies are two key measures that regulators around the world have used to reduce the administrative burden. Many services that were once subject to individual authorization requirements are now subject to general authorizations or a simple notification process.

[*] See the regulators' contributions to the 2007 Global Symposium for Regulators, available at **www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR07/consultation.htm**.

Practice Notes

- **Institutional and Organization Changes in the Era of Convergence**
- **Reducing the Administrative Burden in Licensing**
- **Refarming of Spectrum Resources**
- **Refarming Tools**
- **Simplification of Authorizations**

3.8.2 CONVERGENCE & AUTHORIZATION POLICIES

The word 'convergence' refers to the notion of moving together or the joining of things. Convergence has become a popular concept in ICT policy debates for a variety of different reasons. For one, ICT technologies have gradually permitted previously different types of services to be offered over the same networks. This is particularly true of IP-based networks, which can provide data, voice and video services – services that were previously offered over separate circuit-switched voice telephone networks, packet switched data networks such at the Internet, and broadband video networks such as cable television and satellite networks.

In general, convergence-based authorization policies promote equal treatment of services or technologies that had previously been licensed or regulated in different ways. Many observers have promoted such 'regulatory convergence' as being more technologically and competitively neutral – and therefore involving less regulatory intervention or determinism in communications markets.

Around the world, the implementation of convergence-based policies has very different implications, depending on the local environment and national policies. It has been a particularly 'hot' policy concept in countries that had maintained licensing distinctions between different types of technologies or services.

A prime example is India, where two types of service providers, which were licensed under very different licensing regimes,

had started to compete with each other in the mobile wireless market. On the one hand, cellular mobile operators held licences that required them to pay very substantial licence fees and to use GSM technology. On the other hand, a subsequently licensed class of service providers called 'Basic Service Operators' were permitted to use copper wireline technologies or CDMA wireless technologies. They were charged much lower licence fees than the original cellular licensees. Yet their licence conditions allowed them to provide 'limited mobility", effectively allowing them to compete with the cellular licensees. This led to an obvious need for convergence – since two types of service providers competed in the same market, but had very different licence conditions.

In other countries, the term 'convergence' is used to refer to different types of policy issues than those that arose in India. For example, in Canada and some other countries, the convergence debate has centred on the different regulatory treatment of traditional telecommunications (i.e. transmission) services and broadcasting (i.e. content) services. New policies in some countries have 'converged' the regulatory treatment of transmission services, whether they transmit 'broadcasting' content or other information. Examples include the European Union's regulatory framework which uses the term 'electronic communications services' rather than 'telecommunications', to signal a converged regulatory approach to a broader range of communications services. Following the introduction of the new EU framework, the United Kingdom responded to the increasing convergence of its communications industries by creating a single communications regulator, OFCOM, to carry out the functions previously carried out by five separate regulators responsible for telecommunications, radio spectrum and broadcasting.

The practice notes set out below provide a detailed review of convergence-based approaches to licensing and regulation that have been adopted in a range of different countries.

Practice Notes

- Botswana: Multi-service Authorization Regime
- Brazil- Multimedia Communications Services
- Convergence in the EU Regulatory Framework
- India – Transition to the Unified Authorization Regime Chronology
- India's Communications Convergence Bill
- India- 'Unified' Access Service Licensing
- ITU Case Study: India's Unified Authorization Regime
- Malaysia- Licensing for Convergence
- Nigeria – Unified Access Service Licence
- Regulation and Convergence in Ireland
- Tanzania – The Converged Licensing Framework
- The UK's OFCOM- A Converged Regulatory Authority
- Uganda's Multi-Service Authorization Regime

Reference Documents

- Botswana -- Press Release, "Botswana Telecommunications Authority Introduces a New Licensing Framework"
- Botswana -- Service Neutral Licensing Framework in the Era of Convergence
- EU Authorisation Directive
- Hong Kong China -- Executive Summary of the Licensing Framework for Unified Carrier Licence
- Hong Kong China: Licensing Framework for Unified Carrier Licence
- India- DOT Guidelines for the Unified Licensing Regime (Phase I) (November 2003)
- South Africa -- Electronic Communications Act, 2006
- Tanzania -- Guidelines and Procedures For Licensing Electronic and Postal Services in Tanzania
- Tanzania -- The Communications (Licensing) Regulations, 2005
- Uganda -- Communications Licensing Application Guidelines

- **Uganda Case Study: Licensing in the Era of Liberalization and Convergence**

3.8.2.1 LIFTING RESTRICTIONS ON LICENSEES

The dynamic nature of the ICT sector and the significant investments that operators must make to transition to a converged, Next Generation Networks (NGN) environment has prompted some regulators to ease some of the restrictions previously placed on licensees.

A key example relates to spectrum refarming. As noted in section 7.1.2, refarming refers to using spectrum initially allocated for 2G services to provide 3G services instead. In response to consumer demand and in light of technological advancements that have made it possible to use frequency bands allocated for 2G services to provide 3G services, a number of regulators now permit licensees to refarm allocated spectrum. In Hong Kong, China, mobile service providers have been given the right to choose to use 2G or 3G technology in the spectrum assigned to them in their 2G authorizations. France and Switzerland have also begun to allow operators to refarm spectrum in the 900 MHz range.

Regulators have also allowed greater flexibility for spectrum licensees to resell all or some of their allocated spectrum on commercially negotiated terms. Countries that now permit such spectrum trading include: Australia, Canada, Georgia, Guatemala, New Zealand, Norway, the USA, and the UK. Austria, France, Germany, the Netherlands, and Sweden have permitted spectrum trading on a more restricted basis.

When issuing authorizations that will require the use of spectrum, regulators might consider giving licensees the freedom to determine whether to use 2G or 3G technology to deliver the authorized services. This gives licensees the flexibility to use the most efficient technology available to them. An alternate approach is to specify that a licensee must use 2G (or 3G) technology, but to include a provision that stipulates that a licensee may apply to use a different technology during the term of the authorization. This approach gives the regulator a bit more control and oversight over the type of technology used by licensees, but also adds some flexibility to respond to changing market conditions.

Another important area in which regulators have begun to lift restrictions on licensees in order to facilitate the transition to NGN relates to infrastructure sharing. While some regulators approach infrastructure sharing with caution in light of the need to safeguard competition, they have also recognized the potential benefits of carefully managed infrastructure sharing. An important benefit relates to the reduction of the capital and operating expenditures of operators. Reducing such expenditures helps to facilitate the provision of low cost access to services for end users. Moreover, permitting infrastructure sharing responds to the needs of operators who are incurring high costs as they upgrade existing infrastructure and build new infrastructure in preparation for the transition to NGN.

Infrastructure that has been increasingly opened to sharing includes non-replicable resources such as towers, ducts, and rights of way. Some regulators have also considered spectrum sharing. Spectrum sharing is technologically possible though care must be taken to avoid harmful interference. Such interference can be avoided using spectrum sharing strategies that are implemented on the basis of geography, time, or frequency separation.

One innovative regulatory strategy that was proposed by regulators in the best practice guidelines adopted at the International Telecommunications Union's 2008 Global Symposium for Regulators focusing on six degrees of sharing is to authorise market players who only provide passive network elements and who do not compete for end-users. These authorizations would apply to market players such as mobile tower companies, public utilities companies with rights of way, and fibre backhaul providers. Licensees would be authorized to provide access to key infrastructure to service providers and to manage the usage of such infrastructure.

The best practice guidelines relating to infrastructure sharing adopted at the International Telecommunications Union's 2008 Global Symposium for Regulators can be accessed through this link: **http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR08/PDF/GSRguidelines08_E.pdf** and through the website for the 2008 Global Symposium for Regulators: http://www.itu.int/GSR08.

Practice Notes

- **Reducing the Administrative Burden in Licensing**
- **Simplification of Authorizations**

Reference Documents

- **Best Practice Guidelines on Innovative Infrastructure Sharing Strategies to Promote Affordable Access for All**
- **Extending Open Access to National Fibre Backbones in Developing Countries**

3.8.3 UNIFIED AND MULTI-SERVICE LICENSING

Practice Notes

- Australia and Singapore-Facilities-Based and Service-Based Licensing
- Botswana: Multi-service Authorization Regime
- Brazil- Multimedia Communications Services
- Convergence in the EU Regulatory Framework
- India- 'Unified' Access Service Licensing
- ITU Case Study: India's Unified Authorization Regime
- Nigeria – Unified Access Service Licence
- Tanzania – Authorizations in the Converged Licensing Framework
- Tanzania – The Converged Licensing Framework
- Uganda's Multi-Service Authorization Regime

Reference Documents

- Botswana -- Service Neutral Licensing Framework in the Era of Convergence
- Nigeria- Licensing Procedures
- South Africa -- Electronic Communications Act, 2006
- Tanzania -- Guidelines and Procedures For Licensing Electronic and Postal Services in Tanzania

3.8.3.1 IMPLEMENTING UNIFIED AND MULTI-SERVICE LICENSING REGIMES

The implementation of unified and multi-service authorization regimes requires careful planning. Regulators must address a myriad of issues, including:

§ whether a unified or multi-service authorization regime is appropriate for the local ICT market;

§ whether to adopt a unified or a multi-service authorization regime;

§ the categories of authorizations in a multi-service regime;

§ the licensing procedures for issuing the new authorizations;

§ the terms and conditions attached to these authorizations; and

§ how to transition existing licensees to the new licensing regime.

Depending on the nature and scope of the authorizations, regulators and policy makers may have to grapple with the issue of which regulatory agency should administer the new forms of authorizations. Since many countries have traditionally distinguished between telecommunications (*i.e.*, transmission-based) services and broadcasting, or content-based services, it is not uncommon to have different regulatory agencies administer telecommunications and broadcasting services. In these countries, the inclusion of broadcasting and content-based services within the scope of a unified or a multi-service authorization thus raises the question of which regulatory agency should administer the authorization.

In the UK, for example, the implementation of the EU *Authorization Directive* required the introduction of a unified authorization, namely the electronic communications authorization. Electronic communications authorizations encompass all forms of electronic networks and services, including broadcasting and content-based services. There were five existing regulatory agencies in the UK whose authority touched upon one or more of the services and networks that came within the scope of the electronic communications authorization. Coordinating the activities of these five agencies would have been difficult and inefficient. Accordingly, the UK created a new regulator, the Office of Communications or OFCOM, to regulate the electronic communications sector. OFCOM replaced and assumed the responsibilities of the five regulatory agencies that previously had jurisdiction over various electronic communications networks and services.

In addition to the above substantive issues, regulators must also carefully consider the procedural dimension of implementing a new unified or multi-service authorization regime. In order to promote transparency and confidence in the process, best practices suggest that regulators should consult with industry stakeholders prior to implementing the new

authorization regime. Many regulators have adopted a consultation process involving several stages prior to finalizing the details of unified licensing regimes or multi-service authorization regimes. In Nigeria, the consultation process had three phases, for example. The consultation process in Hong Kong, China also moved through three phases. The Hong Kong, China process involved consultation papers issued by both the regulator and the Ministry responsible for the ICT sector. In Kenya, the consultation process has thus far progressed through two phases.

Regulators may also find it helpful to establish industry forums so that they can collaborate with industry members on developing appropriate terms and conditions for authorizations, especially in the case of the technical aspects of access and interconnection. Given the dynamism in the ICT sector, it is likely that technical standards will continue to evolve. Industry members are often better placed than regulators to know what standards are appropriate.

Practice Notes

- **Convergence in the EU Regulatory Framework**
- **Hong Kong, China – Consultations on the Licensing Framework for Unified Carrier Licences**
- **Hong Kong, China – Transition to the Unified Carrier Licensing Regime**
- **India – Transition to the Unified Authorization Regime Chronology**
- **India – Unified Licensing Regime Consultation Paper**
- **India- 'Unified' Access Service Licensing**
- **Ireland – Transition to the General Authorisation Regime**
- **ITU Case Study: India's Unified Authorization Regime**
- **Kenya -- Consultation on the Implementation of a Unified Licensing Framework**
- **The UK's OFCOM- A Converged Regulatory Authority**

Reference Documents

- **Botswana -- Service Neutral Licensing Framework in the Era of Convergence**
- **Hong Kong China -- Executive Summary of the Licensing Framework for Unified Carrier Licence**
- **Hong Kong China: Licensing Framework for Unified Carrier Licence**
- **Hong Kong, China -- Consultation Paper on Licensing Framework for Unified Carrier Licence**
- **Hong Kong, China -- Consultation Paper on the Creation of a Unified Carrier Licence under the Telecommunications Ordinance**
- **Hong Kong, China -- Executive Summary, Consultation Paper on the Licensing Framework for Unified Carrier Licence**
- **India- Annexures to the Consultation Paper on the Unified Licensing Regime (March 2004)**
- **India- Consultation Paper on the Unified Licensing Regime (March 2004)**
- **India- Consultation Paper on Unified Licensing for Basic and Cellular Services (July 2003)**
- **Ireland- Consultation Paper – Future Regulation of Electronic Communications Networks and Services: Arrangements for General Authorisations**
- **Ireland- E.U. (Electronic Communications Networks and Services) (Authorisation) Regulations 2003**
- **Ireland- Future Regulation of Electronic Communications Networks and Services: Arrangements for General Authorisations**
- **Ireland- Guidelines on the New General Authorisation Regime**
- **Kenya -- Implementation of a Unified Licensing Framework & New Market Strategy**

3.8.3.2 IMPLEMENTING A UNIFIED OR MULTI-SERVICE LICENSING REGIME – SOME CONSIDERATIONS

Implementing a unified or a multi-service authorization regime is a significant undertaking for a regulator. Considerable resources will be necessary to ensure that the new licensing regime is well designed and to ensure a successful transition

from the old, service-specific authorization regime. Moreover, given the centrality of licensing to the development of the ICT sector, decisions about implementing a unified or a multi-service licensing regime must be carefully considered.

Each country raises a unique set of conditions and circumstances that impact the decision about whether to adopt a unified or multi-service authorization regime. There are some issues that are relevant in almost all countries, however. One important consideration is the existing degree of convergence in the ICT sector. In Hong Kong, China, for example, the transition to the unified carrier licence regime began with a set of consultations related to deregulation in light of fixed-mobile convergence.

Another important consideration is the degree of competition in the ICT sector and the ability to prevent anti-competitive behaviour through *ex ante* or *ex post* regulation. A unified or multi-service licensing regime may not be advisable if such a regime would expose vulnerable service providers to unfair competition by dominant service providers. A related consideration pertains to whether maintaining service-specific authorizations creates unfair competitive advantages for certain types of service providers. This consideration may arise where a service that was previously not considered substitutable for another subsequently becomes increasing substitutable and where provision of the two services in question are subject to different regulatory terms and conditions.

In India, for example, the move to the converged licensing framework began after complaints arose when "basic service operators" (BSOs) were permitted to offer "limited-mobility" services over Wireless Local Loop (offerings abbreviated as WLL(M)) using CDMA technology in their coverage areas. This service innovation proved immensely popular since prices were generally lower for this service than for GSM cellular mobile services. BSOs were also able to offer all-India mobility using the CDMA WLL(M) technology, which contributed to the popularity of this service innovation. As the popularity of WLL(M) services offered by BSOs grew, a dispute emerged involving the BSOs and GSM cellular carriers. WLL(M) services were increasingly seen as largely substitutable for GSM services. However, GSM cellular carriers had paid substantial amounts for their licences, and they complained bitterly that when they had made those investments they had not known that they would face competition from WLL(M) providers offering similar services. The competition between BSOs and the cellular carriers spilled over into litigation. Ultimately, the Telecommunications Regulatory Authority of India (TRAI) and the courts had to find a balance between promoting service penetration and ensuring a level playing field among operators. This dispute led to the initiation of a consultation on the possible creation of a unified access services licence (UASL). This consultation set India on the path to adopting a converged licensing framework.

The Nigerian Communications Commission identifies the following as objectives of unified licensing:

- Encouragement of the growth of new applications and services;
- Simplification of existing licensing procedures to ease market entry and operations;
- Regulatory flexibility to address market and technological developments;
- Efficient utilization of network resources, so that individual networks may be used to provide a broad range of ICT services; and
- Encouragement of a full range of operators, including large scale and micro entrepreneurs.

◀ **Box 1 Nigeria – Objectives of the Unified Licensing Framework**

Source: Nigerian Communications Commission, "Licensing Framework for Unified Access Service in Nigeria", online: www.ncc.gov.ng.

Another factor that influences the adoption of a unified or multi-service authorization regime is the regulatory objective of encouraging the innovation of new services and applications. Nigeria identifies this objective as being one of several objectives of its unified licensing framework. (See Box 1.) Given the rapid pace of technological innovation, countries view unified and multi-service authorizations as a means of facilitating the roll-out of new services and of ensuring that the regulatory regime does not constrict the development of the ICT sector.

Practice Notes

- **Hong Kong, China – Consultations on the Licensing Framework for Unified Carrier Licences**
- **India – Transition to the Unified Authorization Regime Chronology**
- **India – Unified Licensing Regime Consultation Paper**
- **India- 'Unified' Access Service Licensing**

3.8.3.3 CATEGORIES OF MULTI-SERVICE AUTHORIZATIONS

In a multi-service licensing regime, there are typically a small number (three to four) of categories of authorizations. Each authorization category encompasses a broad range of services and is usually technology-neutral. The categories of multi-service authorizations vary from country to country. The following is a summary of the categories of multi-service authorizations that have been adopted by various countries.

Botswana

Botswana's multi-service licensing regime features three categories of authorizations: Public Telecommunications Operator (PTO) Licences, Value-Added Network Services (VANS) Licences, and Private Network Licences. PTO Licences authorise licensees to provide the full range of public telecommunications services, including (but not limited to) local, long distance, and international voice services and network services using any available technology. VANS Licences authorise licensees to provide all forms of value-added telecommunications services such as Internet and data services. Under the authorization framework, VoIP falls within the scope of the VANS Licence. Private Network Licences apply to the operation of private networks, which refers to networks that the licensee maintains for its internal own use and that does not interconnect with any public network.

Tanzania

Tanzania's Converged Licensing Framework (CLF) features four categories of authorizations: Network Facility licence, Network Service Licence, Application Service Licence, and Content Service Licence. The Network Facility Licence authorises licensees to operate and to maintain public electronic communications networks with various technologies (e.g., CDMA, GSM, WCDMA, WLL, and ASDL). Services that may be provided pursuant to a Network Service Licence include fixed lines services bandwidth services, mobile service, and broadcasting distribution services. To view these licenses, follow this link: http://www.tcra.go.tz/licensing/license_categories.php

The Tanzanian Application Service Licence authorises a licensee to provide electronic communications services to end users. Licensees may establish and operate their own private facilities or they may procure and resell services from licensed facility and/or network service providers. Services that fall within the scope of an Application Service Licence include Internet services, virtual mobile services, payphone services, and fixed and mobile services.

Content Service Licences are similar to Application Service Licences except that the licensee is responsible for the provision of content services such as satellite broadcasting, broadcasting terrestrial free to air TV, terrestrial radio broadcasting, subscription television, and other broadcasting services.[i]

Uganda

There are three categories of authorizations in the Ugandan multi-service licensing framework: Public Service Provider

(PSP) Licence, Public Infrastructure Provider (PIP) Licence, and General Licence. There are two sub-categories of PSP Licences. Public Voice and Data Provider Licences allow the licensee to offer telephony and data services of any kind using any technology. However, licensees must use the capacity or infrastructure of a PIP Licensee. If a licensee wishes to offer services over its own infrastructure, it must acquire a PIP Licence. Examples of services that may be provided pursuant to a Public Voice and Data Provider Licence include: fixed voice services; mobile services, and Internet Access services, including VoIP. The second PSP Licence sub-category is Capacity Resale Licence. Capacity Resale Licensees are authorized to resell leased telecommunications services or capacity. Services that fall within the scope of Capacity Resale Service Licences include calling cards (both international and local, re-branded cards) and capacity resale to Public Voice and Data Provider Licensees.

PIP Licences authorise licensees to establish, operate, and maintain infrastructure for the provision of communications services to the public and/or to offer infrastructure commercially for use by PSP Licensees. If a PIP Licensee uses its infrastructure to provide communications services to the public, it must also hold a PSP Licence. PIP licensees that wish to use spectrum resources or other essential resources and access facilities, including international gateways, numbering resources, and VSAT services, must apply for a separate authorization.

General Licences apply to public pay communications networks such as payphone kiosks, fax bureau services, internet cafés, and cyber cafés. Licensees may provide payphone services using VoIP technology. However, licensees are not permitted to provide any prepaid services to the public (e.g., calling cards) unless they obtain the appropriate authorization from the Ugandan regulator.

Uganda also issues authorizations for essential resources and facilities. These authorizations apply to the use of spectrum, numbering resources, international gateways, and VSAT.

Malaysia

Malaysia has moved from a system of 31 different types of service-specific authorizations to four different multi-service authorizations. The four categories of authorizations are: Network Facility Provider (NFP) Licences, Network Service Provider (NSP) Licences, Application Service Provider (ASP) Licences, and Content Application Service Provider (CASP) Licences.

NFP Licences authorise licensees to provide network facilities. NFP licensees include owners of satellite earth stations, fibre optic cables, communications lines and exchanges, radio communication and transmission equipment, mobile communication base stations and broadcasting towers and equipment. NSP licensees are authorised to provide network services such as basic connectivity and bandwidth that support a variety of applications. Under an ASP Licence, a licensee may provide various application services such as voice services, data services, Internet access services, and VoIP. CASP Licences are a special subset of ASP Licences. CASP licensees are authorized to provide traditional broadcast services and other content-based services such as online publishing and information services.

Singapore

The authorization regime in Singapore features two broad categories of authorizations: Facilities-Based Operators (FBO) Licences and Services-Based Operators (SBO) Licences. FBO Licences apply to the deployment and/or operation of any form of telecommunications network, systems, or facilities that is used by any person to provide telecommunications and/or broadcasting services to third parties. These third parties may include other licensed telecommunications operators, business customers, or the general public. All FBO Licences are individual authorizations.

SBO Licences must be held by operators who intend to lease telecommunications network elements (e.g., transmission capacity and switching services) from FBO licensees in order to provide their own telecommunications services or to resell services obtained from FBO licensees to any third person. SBO Licences are further sub-divided into the SBO (Individual) Licence category and the SBO (Class) Licence category. The distinction between these two sub-categories relates to the scope of the operations and the nature of the services being offered.

Trinidad and Tobago

Trinidad and Tobago's authorization regime features five types of authorizations, which are referred to as "concessions":

- Type 1: Network-Only Concession – authorizes a concessionaire to own or operate a public telecommunications network, but without the provision of public telecommunications or broadcasting services. This is a network-based concession.

- Type 2: Network-Service Concession – authorizes a concessionaire to own or operate a public telecommunications network in addition to providing public telecommunications services over that network. This is a network-based concession.

- Type 3: Virtual Network-Service Concession – authorizes a concessionaire to provide public telecommunications services without a related authorization to own and/or operate a physical public telecommunications network, in a manner that is transparent to the end user. Type 3 concessions are thus designed for resellers. A Type 3 concession is necessary in cases where an entity has the capability of providing multiple services (e.g., data, image, voice, video) over a single transmission medium that has been leased. However, a Type 5 Concession is necessary to provide broadcasting services over a telecommunications network. Type 3 concessions are service-based.

- Type 4: Telecommunications Service Concession – authorizes a concessionaire to provide a specific public telecommunications service without requiring an authorization to own and/or operate a telecommunications network. This is a service-based concession.

- Type 5: Broadcasting Service Concession – authorizes the provision of a broadcasting service without a requirement to hold an authorization to operate a telecommunications network. Type 5 concessions are service-based.

Only Type 2 and Type 3 concessions are service-neutral. Both of these types of concessions authorize the provision of any telecommunications service that can be provided over the relevant telecommunications network, except for broadcasting services. While Type 1 concessions are not service-neutral, there are sub-categories of this concession that encompass various services. Thus, Type 1 Concessions are multi-service authorizations.

[i] The description of the Tanzanian authorization categories is adapted from *Tanzania's Experience in Licensing of Communication Operators under the Converged Licensing Framework* (Geneva: International Telecommunications Union, 2007). This document was prepared for an ITU-D Study Group.

Practice Notes

- **Botswana: Multi-service Authorization Regime**
- **Malaysia- Licensing for Convergence**
- **Singapore – Categories of Multi-Service Authorizations**
- **Tanzania – Authorizations in the Converged Licensing Framework**
- **Tanzania – The Converged Licensing Framework**
- **Uganda's Multi-Service Authorization Regime**

Reference Documents

- **Botswana -- Service Neutral Licensing Framework in the Era of Convergence**
- **Malaysia- Class Licence for Applications Services**
- **Malaysia- Class Licence for Network Facilities Provision**
- **Malaysia- Class Licence for Network Services Provision**
- **Tanzania -- Application Service Licence**
- **Tanzania -- Content Service Licence**
- **Tanzania -- Network Facility Licence**
- **Tanzania -- Network Services Licence**
- **Tanzania -- Schedule of Licence Categories and Fees**
- **Uganda Case Study: Licensing in the Era of Liberalization and Convergence**
- **Uganda- Licences Issued in the Sector**

3.8.3.4 THE LICENSING PROCESS FOR UNIFIED AND MULTI-SERVICE AUTHORIZATIONS

Unified and multi-service authorizations often do not fit neatly into the categories of general authorizations or individual authorizations. In some respects, unified and multi-service authorizations resemble general authorizations in so far as they cover broad classes of services. Moreover, the licensing process for unified and multi-service authorizations in several countries is akin to a general authorization licensing process. In the EU, for example, the *Authorization Directive* stipulates that the provision of electronic communications networks and services may only be subject to a general authorization.

Thus, to obtain an electronic communications authorization, regulators may only require service providers to file a notification, along with required information. Regulators cannot require service providers to obtain an explicit decision or any other administrative act by the regulator.

Nevertheless, in many cases, the process for obtaining unified and multi-service authorizations involves more intensive regulatory scrutiny and assessment of applicants, particularly where the authorizations permit the operation of network infrastructure. The application process often requires that applicants demonstrate that they can meet certain basic criteria for licensing. Although these criteria may not be onerous, they necessitate a closer degree of scrutiny than what might otherwise be expected in a straightforward general authorization licensing process.

For example, in Singapore, the Info-communications Development Agency (IDA) undertakes a merit-based evaluation of proposals made by applicants for a Facilities Based Operator (FBO) Licence. This evaluation process generally takes eight weeks. The process for obtaining a Service Based Operator (FBO) (Individual) Licence requires less intensive evaluation of licence applications, however. Provided that applicants have provided all necessary information, they generally receive their FBO (Individual) Licence within fourteen days of submitting their application.

The Tanzanian multi-service licensing process also involves a careful scrutiny of submitted applications. Applicants are required to file an application form, a business plan, a roll out plan, company registration, information on the technical proposal of the service to be provided, information about the applicant's previous experience in the ICT sector, and a company profile. The Tanzanian regulator assesses the materials submitted and conducts a detailed evaluation of how well the applicant meets the specific licensing criteria established for each type of multi-service authorization sought. As information about applicants are published in newspapers, an Evaluation Team also considers any comments received about the applicant by members of the public.

In some cases, the licensing process requires the submission of a range of information and documentation that extends beyond what is typically required in a notification for a general authorization. For example, applicants for a Public Infrastructure Provider (PIP) Licence in Uganda must submit a letter of credit in favour of the Ugandan Communications Commission (UCC) for at least US$25,000 with their application. PIP Licence applicants who propose to use spectrum resources must submit a letter of credit for either US $250,000 or US$2 million, depending on the frequency band.

Unified and multi-service authorizations are not typically subject to the types of licensing processes used to issue individual authorizations, however. Neither comparative evaluations nor competitive licensing processes are generally used to issue unified and multi-service authorizations. Moreover, most countries do not limit the number of unified and multi-service authorizations available for issue. Thus, unified and multi-service licensing processes do not fall neatly into the category of individual authorizations.

In many cases, the licensing process for unified and multi-service authorizations can best be described as a non-competitive individual licensing process. Such a process is a hybrid of typical general authorization licensing processes and aspects of competitive licensing processes. Applicants must submit an application that requires them to provide a range of information and documentation. The information and documentation that must be provided may be broader in scope than that which is necessary in many general authorization licensing processes, particularly in the case of authorizations that permit the operation of infrastructure. Some of the licensing criteria resemble the qualification and selection criteria common in comparative evaluation licensing processes. There is, however, an important difference: in the licensing processes for unified and multi-service authorizations, applicants typically do not compete with other each for a limited number of authorizations.

Regulators typically will issue a unified or multi-service authorization if the applicant has provided all necessary information and documentation and has met all licensing criteria. In this regard, the process bears a resemblance to general authorization regimes. However, determining whether the applicant has met the licensing criteria may involve a merit-based assessment of the applicant's proposal. This type of intensive regulatory evaluation goes beyond the scrutiny conducted in most general authorization licensing processes.

Practice Notes

- **Licensing Criteria for the Issuance of Unified and Multi-Service Authorizations**

- **Malaysia- Licensing for Convergence**

- **Nigeria – Qualification Criteria for Unified Access Service Licences Applicable to Existing Licensees**

- **Nigeria – Unified Access Service Licence**

- **Singapore – Licensing Process for Issuing Multi-Service Authorizations**

- **Tanzania – Multi-Service Licensing Processes and Procedures**

- **Tanzania – Weighted Evaluation Criteria for Issuance of Multi-Service Licences**
- **Trinidad & Tobago: Evaluation Criteria and Associated Weightings for Concession Applications**
- **Uganda's Multi-Service Authorization Regime**

Reference Documents

- **India -- Licence Agreement for Provision of Unified Access Services**
- **India- DOT Guidelines for the Unified Licensing Regime (Phase I) (November 2003)**
- **Ireland- Guidance Note on Completion of the Notification Related to General Authorisations**
- **Ireland- Guidelines on the New General Authorisation Regime**
- **Ireland- Registration Form for General Authorisations**
- **Malaysia -- Checklist for Individual Licence Applications**
- **Malaysia- Individual Licence Application**
- **Malaysia- Licensing Regulation No. 17**
- **Malaysia- Licensing Regulation No. 19**
- **Malaysia- Registration Notice and Checklist**
- **Nigeria- Licensing Procedures**
- **Singapore- Guidelines for Submission of Application for Facilities-Based Operator Licence**
- **Singapore- Guidelines for Submission of Application for Services-Based Operator Licence**
- **Singapore- SBO Class licence application**
- **Singapore- Web Site for Registering for Licences On-line**
- **Tanzania -- Application Form for the Converged Licensing Framework**
- **Tanzania -- Diagrams of Converged Licensing Processes**
- **Tanzania -- Guidelines and Procedures For Licensing Electronic and Postal Services in Tanzania**
- **Tanzania -- Schedule of Licence Categories and Fees**
- **Trinidad & Tobago -- Application Procedures for Concessions and Licences**
- **Trinidad & Tobago -- Eligibility and Evaluation Criteria for Concessions**
- **Uganda -- Communications Licensing Application Guidelines**
- **Uganda -- Compliance Check List under New Licensing Regime**
- **Uganda- Application Processing Procedure**
- **Uganda- Application Requirements**
- **Uganda- Licence Process Flow Chart**

3.8.3.5 TERMS AND CONDITIONS OF UNIFIED AND MULTI-SERVICE AUTHORIZATIONS

There is no standard set of conditions for unified or multi-service authorizations. The conditions attached to these authorizations vary from one country to another as they are the products of the individual circumstances and the regulatory framework in each country.

Some of the considerations relevant to determining what terms and conditions should be should be attached to a unified or multi-service authorization include:

§ The level of market development and competition in the country.

§ Whether the existing regulatory framework includes sufficiently detailed regulations on key matters such as interconnection and access, universal services, quality of service requirements, prohibitions on anti-competitive conduct, the use of scarce resources, the protection of consumer privacy, and other important aspects of network operation and service provision in the ICT sector.

§ Whether a country has elected to adopt *ex ante* or *ex post* regulation.

Practice Notes

- **Terms and Conditions Permitted Under the EU Authorisation Directive**

Reference Documents

- **India- Licence Agreement for Unified Access Services (November 2003)**

- **Ireland- General Authorization Conditions**

- **Malaysia- Class Licence for Applications Services**

- **Malaysia- Class Licence for Network Facilities Provision**

- **Malaysia- Class Licence for Network Services Provision**

- **Singapore- Facilities-Based Operator Licence issued to Singapore Telecommunications Ltd**

- **Tanzania -- Application Service Licence**

- **Tanzania -- Content Service Licence**

- **Tanzania -- Network Facility Licence**

- **Tanzania -- Network Services Licence**

3.8.3.6 TRANSITIONING EXISTING LICENSEES TO THE NEW LICENSING REGIME

Regulatory reform never occurs in a vacuum. When new forms of authorization are introduced, there will almost certainly be service providers active in the ICT sector that hold authorizations issued under the licensing framework that is being replaced. Regulators and policy makers must consider how to manage these service providers.

The question of how to transition existing licensees to a new, converged licensing framework becomes particularly important if the terms and conditions attached to existing authorizations are more favourable than those attached to the converged authorizations. In such a case, issues of fairness may arise if existing licensees are forced to transition to the new authorization regime. However, the failure to transition existing licensees may create competitive advantages for such licensees that ultimately distort competition and discourage new players from entering the market.

Conversely, existing licensees may be subject to a competitive disadvantage if the terms and conditions of existing authorizations are not as favourable as those attached to the new, converged authorizations. In such a case, if licensees are not permitted to migrate to the new authorization regime prior to the expiration of the term of their existing authorization, these licensees may find themselves subject to less favourable terms and conditions for several years. This situation also raises concerns about unfairness in the regulatory process and the distortion of competition.

Transitioning existing licensees to the new authorization framework is an important matter even when there are no substantial differences between the terms and conditions of existing authorizations and those of the new unified or multi-service authorizations. Maintaining different authorization frameworks imposes costs and administrative burdens on regulators. Transparency, efficiency, and regulatory certainty are all enhanced when all service providers are subject to the same authorization regime. However, requiring existing licensees to migrate to the new, converged authorization framework may trigger legal challenges and allegations of unfairness. Accordingly, it is often prudent to give existing licensees the option to migrate to the new authorization regime immediately or to continue to offer services under their existing authorizations until their terms expire. Indeed, many countries provide existing licensees with this option, as the experiences of countries such as Tanzania, Botswana, and India illustrate.

Chapter 15 of the *Electronic Communications Act, 2005* (ECA) sets out the general framework for the transition to South Africa's new technology- and service-neutral multi-service authorization regime. The key features of the transition include:

- Mandatory migration to the new authorization regime. The migration occurs through a conversion of existing licences to one or more licences that comply with the ECA.

- The Independent Communications Authority of South Africa (ICASA) must convert all existing licences by granting new licences that comply with the ECA within 24 months of the adoption of the ECA. (The schedule for conversion has been extended into 2008.)

- The new licences must be granted on no less favourable terms than the existing licences. However, as part of the conversion process, the ICASA may grant rights and impose obligations on a licensee to ensure that existing licences comply with the ECA.

- All existing licences issued under the *Telecommunications Act* (one of the predecessors to the ECA) remain valid until converted to a new licence by the ICASA. Existing licences remain subject to all terms and conditions that are not inconsistent with the ECA until these licences are converted and re-issued under the ECA.

- All licences converted pursuant to the ECA retain their original term of validity unless otherwise specified by the ICASA.

- Once an existing licence is converted and re-issued, the new licence is governed by the terms of the ECA and the existing licence is considered to have been surrendered and is of no force or effect.

- The ICASA is not permitted to grant or to include in the terms of a converted licence any monopoly or exclusionary rights in any network or services contemplated in the ECA or related legislation. Existing monopoly and exclusionary rights are null and void, subject to the proviso that radio frequency spectrum that is assigned to a licence holder is not considered to be a monopoly or to constitute exclusionary rights.

◄ **Box 1 Features of the Transition to the Multi-Service Authorization Regime in South Africa**
Source: South Africa, *Electronic Communications Act, 2005*, Act No. 36, 2005, Chapter 15

The experiences from a number of countries that have implemented unified or multi-service authorization regimes suggest that the following practices are helpful in managing the transition to a new unified or multi-service authorization regime:

§ Engage industry stakeholders in discussions about the new authorization regime. Most countries conducted consultation processes on the proposed unified or multi-service authorization regime prior to implementing any changes. In some countries, the consultation process has gone through a number of phases. In Hong Kong, China, for example, the regulator and the policy maker concluded three rounds of consultations before introducing the framework for the unified licensing regime. The Nigerian transition to a unified licensing regime was also proceeded by three rounds of consultations.

§ Once the details of the unified or multi-service authorization regime has been finalized, host meetings with existing licensees and other industry stakeholders to explain the new regime. The status of existing licensees and their options with respect to the new authorization framework should be carefully explained to them. It is also helpful to develop materials for existing licensees (as well as other stakeholders) that explain the nature of the new authorization framework and that provides guidelines for applying for authorizations. Uganda, Tanzania, Singapore, and Botswana have all published information designed to provide stakeholders with information about their unified or multi-service licensing frameworks.

§ Be flexible in terms of the time frame for implementing the new unified or multi-service authorization regime. In many countries, existing licensees are given a period of time in which they may apply for a unified or multi-service authorization under the new licensing framework. After this period of time expires, if a licensee has not yet applied for a new authorization, the licensee is deemed to have elected to continue its operations under its existing authorization for the duration of the term of that authorization. While it is important to set deadlines, the experience of Tanzania suggests that flexibility with respect to such deadlines is important. The Tanzanian Communications Regulatory Authority (TCRA) initially set a 12 month period for existing licensees to migrate to the new Converged Licensing Framework (CLF). However, at the end of this 12 month period, several communications operators had not yet migrated to the new regime since they were not sure about which authorization category was most appropriate for them. Under the circumstances, the TCRA granted a six month grace period for such operators to complete the migration process. During this period, the TCRA held a number of meetings with operators to provide them with information about the CLF and to explain the advantages of migrating to this framework.

§ Employ incentive regulation to encourage existing licensees to migrate to the new unified or multi-service authorization regime. In Tanzania, for example, the TCRA waived application fees and initial licences fees for existing licensees that chose to migrate to the CLF.

§ Existing licensees should be migrated to the new authorization regime on the same or more favourable terms and

conditions as those featured in the new authorization regime.

§ Provide existing licensees with the option of migrating to the new unified or multi-service authorization regime, but do not require such a migration. In Tanzania, operators that elected to migrate to the CLF were issued fresh authorizations. *i.e.*, authorizations whose term began as of the date of issuance and was not off-set to account for the years that the operator had held its previous licence. Similarly, in Botswana, existing licensees who opted to apply for a new multi-service licence were granted a new authorization with a full term. Licensees that opted not to apply for a new authorization were advised that they would continue to operate under their existing authorization until their current authorization expired.

Practice Notes

- **Approaches to Transitioning to New Authorization Regimes**
- **Hong Kong, China – Transition to the Unified Carrier Licensing Regime**
- **India – Transition to the Unified Authorization Regime Chronology**
- **India- 'Unified' Access Service Licensing**
- **South Africa – Individual Licence Amendment Provisions in the Electronic Communications Act**

Reference Documents

- **Hong Kong China -- Executive Summary of the Licensing Framework for Unified Carrier Licence**
- **Hong Kong China: Licensing Framework for Unified Carrier Licence**
- **South Africa -- Electronic Communications Act, 2006**

3.8.3.7 SELECTING THE SECTOR REGULATOR

As has already been noted previously in this Section, regulators and policy makers may have to grapple with the issue of which regulatory agency should administer the new forms of authorization. This issue is most common if the new unified or multi-service authorizations consolidate authorizations that had previously been administered by more than one regulatory agency. It is not uncommon, for example, for different regulatory agencies to be responsible for telecommunications (*i.e.*, transmission services), content-based services (*e.g.*, broadcasting), and wireless services. When consolidating such authorizations, a decision must be made about which regulatory authority will administer the authorizations.

As a general rule, countries must either assign the responsibility to one of the regulatory agencies or create a new "converged" regulator to administer the unified or multi-service authorization framework, as well as other aspects of the ICT sector. In order to promote clarity and regulatory certainty, it is best to avoid creating an authorization framework where different regulatory agencies share concurrent jurisdiction. Moreover, having more than one regulator with authority over various aspects of the ICT authorization framework increases the costs of regulation and adds to the administrative burden of service providers.

Practice Notes

- **The UK's OFCOM- A Converged Regulatory Authority**

3.8.3.8 CONSULTATION PROCESSES

The adoption of a unified or a multi-service authorization regime is a significant development in the overall regulatory framework. In order to foster transparency and to bolster the confidence of key stakeholders in the ICT sector, best practices suggest that the policy maker and the regulator should undertake a consultation process on the issue of the proposed authorization regime. This is particularly important at present since many operators are looking for regulatory certainty in response to the large investments they must make in their infrastructure in order to transition to a converged NGN environment. Moreover, policy makers and regulators would likely benefit from the knowledge and experience of industry stakeholders. Such stakeholders are often better placed than policy makers and regulators to understand the technical and operational requirements of providing converged NGN-based services.

There is no set formula for shaping a consultation process. However, issues that are commonly considered in a consultation process on the implementation of a unified or multi-service authorization regime include:

§ The advisability of transitioning to a converged licensing regime

§ Whether to adopt a single unified authorization or several categories of multi-service authorizations

§ What categories should be established for multi-service authorizations and the scope of multi-service authorizations

§ The terms and conditions that should be applicable to the new form of authorization

§ Access and interconnection requirements of licensees under the unified or multi-service licensing regime

§ Whether licensees will be permitted to share infrastructure and, if so, what part of the network must be shared

§ Quality of service requirements for holders of unified or multi-service authorizations

§ The plan for transitioning existing licensees to the new authorization framework

§ Licensing fees

§ Whether the number of unified or multi-service authorizations that will be issued should be limited

§ The process to be used for issuing unified or multi-service authorizations (e.g., notification, comparative evaluation, auctions)

§ Licensing criteria

Practice Notes

- **Hong Kong, China – Consultations on the Licensing Framework for Unified Carrier Licences**
- **India – Unified Licensing Regime Consultation Paper**
- **Ireland – Transition to the General Authorisation Regime**
- **Kenya -- Consultation on the Implementation of a Unified Licensing Framework**
- **Public Consultation Processes**

Reference Documents

- **Hong Kong, China -- Consultation Paper on Licensing Framework for Unified Carrier Licence**
- **Hong Kong, China -- Consultation Paper on the Creation of a Unified Carrier Licence under the Telecommunications Ordinance**
- **Hong Kong, China -- Executive Summary, Consultation Paper on the Licensing Framework for Unified Carrier Licence**
- **India- Consultation Paper on the Unified Licensing Regime (March 2004)**
- **India- Consultation Paper on Unified Licensing for Basic and Cellular Services (July 2003)**
- **India- Preliminary Consultation Paper on Unified Licensing Regime (November 2003)**
- **Ireland- Consultation Paper – Future Regulation of Electronic Communications Networks and Services: Arrangements for General Authorisations**
- **Kenya -- Implementation of a Unified Licensing Framework & New Market Strategy**