Module 3. Authorization of Telecommunication/ICT Services

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Module 3. Authorization of Telecommunication/ICT Services

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Executive Summaries

Module 3. Authorization of Telecommunications Services

Executive Summary

1 Overview of ICT Authorization

This section is an introduction to the module and provides information and guidance on licensing issues faced by regulators and regulated service providers in the ICT sector.

THIS SECTION IN OTHER LANGUAGES:

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1.1 Introduction to Licensing & Authorization

Traditionally, in many parts of the world, a licence was issued to authorize a person to provide telecommunications services or to operate telecommunications facilities. Such licences generally described key rights and obligations of licensees and often defined conditions relating to the provision of services. These licences also tended to be service-specific and technology-specific. A licensee was authorized to provide a particular type of service over a specific type of network. Alternatively, a licensee was authorized to operate specifically defined types of telecommunications facilities. A wide range of different licensing approaches has been adopted around the world.

Today the practice of issuing detailed individual licences to specific telecommunications, or ICT (to use the current terminology), service providers is gradually being replaced by general authorization regimes. However, the issuance of detailed individual licences remains common in developing economies. Moreover, issuing detailed individual authorizations remains the norm for authorizing the use of radio spectrum where the demand for the use of a particular frequency band exceeds availability.

In general authorization regimes in developed economies, few, if any, conditions are included in a licence document issued to a specific service provider. Instead, regulatory conditions are generally established in rules or regulations that apply equally to all service providers of the same class (e.g. cellular mobile providers) or across the whole ICT industry. While general authorization regimes are most prevalent in developed economies, these regimes have also been adopted in a number of developing and transitional economies. In developing or transitional economies, where the regulatory framework governing the ICT sector is still maturing, it is common for general authorizations to contain a fairly detailed set of terms and conditions. There are thus different variants of general authorization regimes.

With increased liberalization, some regulators are removing all authorization requirements for some ICT services. These service markets are then open to entry by any new service providers, without restriction. Open entry regimes are generally found only in countries with a highly developed, competitive ICT sector and a robust set of institutions that can safeguard consumer interests and protect against anti-competitive conduct.

There has also been a movement away from the issuance of service and technology-specific authorizations. In light of rapid technological development and service innovations, countries are increasingly moving towards the adoption of multi-service and neutral or “unified” authorization frameworks. These frameworks feature authorizations that are service and/or technology neutral, allowing licensees to offer a range of services under the umbrella of a single authorization, using any type of communications infrastructure and technology capable of delivering the desired services. There are a range of different approaches to multi-service and unified licensing around the world.

There are significant differences in the authorization practices in force in different countries. At one end of the spectrum are wide-open authorization regimes, where no form of governmental approval is required to start an ICT service business or to operate network facilities. At the other end are individual licensing regimes with lengthy authorization documents customized to the circumstances of a specific service provider. In between are many forms of general authorization or “class licences” that authorize and provide generally applicable regulatory conditions for classes of ICT service providers.

This module uses the term ‘authorization’ to refer to all forms of licensing, permission or approval required from telecommunication or ICT regulatory authorities to carry on business as an ICT service provider. In light of technological advances and the wide range of services now available, this module also uses the term “info-communications technology” or “ICT” rather than “telecommunications” in most cases.

This module discusses authorization issues faced by regulators and regulated service providers. The module focuses on recent trends in authorization. Many of the trends and practices described in this module illustrate reforms and innovations that improve the efficiency of the authorization process and enhance the economic and social benefits of authorizing the provision of new and existing ICT services.

Issues related to authorizing the use of radio spectrum are discussed in Module 5, Radio Spectrum Management. Matters related to the authorization of rural and universal access services will be dealt with in Module 4, Universal Access.

RELATED INFORMATION

Authorization Trends

Advantages of General Authorizations

1.1.1 Authorization Terminology

In some countries, authorization to provide ICT services is established in laws or regulations. In other countries, it is provided in documents variously referred to as licences, authorizations, permits, concessions, franchises, or simply regulatory decisions.

The terms “authorization”, “concession”, “franchise” and “permit” may be defined in different ways in the laws of different countries. For example, some countries maintain an older approach of entering into mutually binding concession or franchise agreements that specify the rights and obligations of the government authority as well as the ICT service provider. However, all these terms relate to the same basic concept of “authorizing” ICT service providers or networks. In the context of ICT regulation, these terms generally refer to a legal document issued by a regulator or other government authority that determines the rights and obligations of an ICT service provider. For the sake of simplicity, in this module, we generally only use the term “authorization”. In most cases, what is said about authorizations applies equally to concessions, franchises, permits, licences, and other forms of authorization.

The process of authorization is sometimes handled by independent ICT regulators and sometimes directly by governments, Ministers or other authorization authorities. In this module, we generally refer to the authorization authority as the “regulator”. This term is usually intended to include other government authorities that grant licences or other forms of ICT authorizations.

RELATED INFORMATION

Public-Private Partnerships, Concessions and Similar Arrangements

1.1.2 ITU Trends in Telecommunication Reform

As indicated on this Toolkit web site, the Telecommunications Development Bureau (BDT) of the International Telecommunication Union (ITU) is a partner in the development of the ICT Toolkit. The ITU, headquartered in Geneva, Switzerland, is an international organization within the United Nations System where governments and the private sector coordinate global telecommunications/ICT networks and services. The ITU is also the leading publisher of information about telecommunication/ICT technology, regulation, and standards. Many publications can be purchased through the Electronic Bookshop or the ITU Publications Online subscription service.

This Toolkit module on Authorization of ICT Services was developed in collaboration with the ITU as it prepared its annual publication “Trends in Telecommunications Reform – 2004/05: Licensing in an Era of Convergence”. The issues canvassed in this Trends Report on licensing are very closely related to those dealt with in this module. Accordingly, many of the Reference Documents and Practice Notes in this module are based on that Trends Report. Citations to this Trends Report are indicated in the relevant documents.

The Licensing Trends Report would be very useful to those interested in developing a broader understanding of ICT authorization practices around the world. The report includes the following chapters:

1. Developments in the ICT Sector
2. Why Licence?
3. Options for Telecommunications Licensing
4. Licence Fees Practices: Historical Perspectives and New Trends
5. Licensing Approaches in an Era of Convergence
6. Convergence and Spectrum Licensing
7. Transitioning Regulation from Old to New
8. A New Era in Licensing.

The Report also contains appendices and tables summarizing the ITU’s annual regulatory survey of regulators around the world, a Glossary of Terms, and links to licensing resources and examples.

A full copy of the Report can be obtained at http://www.itu.int/ITU-D/treg/ under the link “Publications”.

1.2 Authorization Trends

The concept of licensing ICT services is a relatively recent development in many countries. Historically, in most countries, state-owned incumbent service providers delivered telecommunications services on a monopoly basis. Telecommunications services were supplied by a branch of the public administration, in a similar manner to postal, road transportation and other government services. These administrations were often referred to as Post, Telephone and Telegraph Administrations (PTTs). The mandate of PTTs was sometimes spelled out in a law or a policy document. However, specific authorizations or licences were generally not considered necessary.

With the global wave of telecommunications liberalization that began in the mid-1980s, many government telecommunications services were privatized. At the same time, private sector companies were often authorized to provide new telecommunications services, such as cellular mobile and value added services. In both cases, that is, privatization of PTTs and authorization of new private sector entrants, separate authorizations (“individual licences”) were generally issued to the authorized entities. These authorizations set out the terms and conditions governing the provision of telecommunications services and dealing with other aspects of the operations of these private sector companies.

In recent years there has been a trend away from granting individual authorizations in developed economies. This trend is due to a number of factors, including the development of increased competition, the proliferation of service providers, the dynamic nature of telecommunications (or ICT, to use current terminology) technologies and markets, and the resulting deregulation and reform movements.

Instead of issuing individual licences, regulators in developed economies are increasingly issuing general authorizations, or “class licences”, that authorize the provision of all ICT services of the same type, regardless of who provides them. In some countries, authorization requirements for services and networks that do not use scarce resources such as radio spectrum or numbering resources are been removed entirely. Service providers or operators may be required to provide notification of the start and termination of services, however. They may also be subject to rules and regulations that are generally applicable to the ICT sector.

In many developing and transitional economies, the issuance of detailed individual licences remains common. Moreover, issuing detailed individual authorizations remains the norm for authorizing the use of radio spectrum where the demand for the use of a particular frequency band exceeds availability.

Today, three basic approaches are used to authorize ICT service providers:

- Individual licences;
- General authorizations (or "class authorizations"); and
- No authorization requirement (i.e., open entry).

There are a range of different practices and procedures associated with each of these approaches. This Module will examine all three approaches and will discuss the range of practices and procedures associated with each one.

A trend that has shaped the nature of authorizations in the ICT sector relates to the range of new services available to consumers. Consumers today enjoy access to a wide range of fixed and mobile services including voice, data, Internet services, and even IPTV. The emergence of “triple play” (voice, Internet access, and video) and “quadruple play” (voice, Internet access, and video services available over broadband mobile networks) service packages illustrates the breadth of new services available to consumers, as well as the erosion of traditional distinctions between carriage and content service providers.

Technological innovation, convergence in ICT services, and a concern to safeguard competitive neutrality have given rise to an important new trend in ICT licensing: the emergence of multi-service and neutral or “unified” authorization regimes. ICT authorizations have traditionally been issued for specific services delivered over a particular type of network, using a particular type of technological infrastructure. Regulators are increasingly moving towards service-neutral and technology-neutral forms of authorizations, however. These authorizations allow licensees to offer a range of services under the umbrella of a single authorization, using any type of communications infrastructure and technology capable of delivering the desired services. Multi-service and unified authorization regimes promote the efficient rollout of new services and technology and provide the flexibility necessary for the development of Next Generation Networks (NGNs).

In countries that have liberalized their ICT market and adopted a unified licensing approach, administrative procedures to enter the market have also been simplified and made more flexible. Unified and multi-service licensing regimes often feature general authorizations and do not require applicants to go through a competitive selection process in order to obtain an authorization. In many cases, applicants may obtain an authorization if they demonstrate that they meet certain criteria for licensing. These criteria frequently resemble criteria used in competitive selection processes (e.g., financial stability; viable business plan; and technical competence), however. Thus, the review of applications for unified and multi-service authorizations often involves close regulatory scrutiny, particularly in developing and transitional economies. Moreover, unified and multi-service authorizations sometimes include a detailed set of terms and conditions. Again, this is especially true in developing and transitional economies, where competition is still growing and where the regulatory regime may still be maturing.

RELATED INFORMATION

Advantages of General Authorizations

Services Often Subject to General Authorizations or Open Entry

Main Types of Authorization Regimes

ITU Trends Report: Licensing in an Era of Convergence

General Authorizations

Individual Licences

1.2.1 More on Authorization Trends

This section provides further information on a subject introduced earlier in the module, namely trends in authorization of ICT services.

The concept of licensing telecommunications services is relatively new. In the 1970s and early 1980s, there were relatively few private sector telecommunications service providers outside of North America. A number of other countries had private sector service providers during the early years of the telephone era, but subsequently nationalized them, sometimes during the period following independence from colonial rule. Consequently, there is little history of licensing telecommunications in most countries until the last two decades of the 20th century.

Prior to the 1980s, telecommunications services in most of the world were provided by government departments or agencies, often referred to as PTTs (Post, Telephone and Telegraph Administrations). PTTs generally did not require 'authorizations' to operate. Instead, they were run as branches of government ministries, as autonomous state-owned commercial corporations, or somewhere in between.

By contrast, in North America, telecommunications services have been provided by private sector companies rather than PTTs, since Alexander Graham Bell invented the telephone at the close of the 19th Century, and caused the Bell telephone companies to be incorporated. In North America, however, authorizations were generally not important instruments of regulatory control.

When many North American telecommunications service providers became monopolies early in the 20th Century, government regulators were established to protect the public interest. The main objectives of early North American regulation focused on preventing perceived abuses of the service providers' monopoly position, such as charging excessive tariffs or engaging in practices that were considered to be unjustly discriminatory. Other objectives were aimed at enhancing the public interest in other ways, such as improving the quality of their service or establishing consumer-protection measures. Governments and regulators in North America gradually developed a detailed regulatory framework to achieve these objectives. However, since the service providers were already in business, this framework did not rely much on authorizations to create new rules. Instead, service providers were regulated through laws, regulations, regulatory and judicial decisions, orders and other legal instruments.

The processes of liberalization and privatization that began in the mid-1980s significantly increased the importance of authorization in telecommunications regulation. New entrants in telecommunications markets were usually granted an 'authorization', licence, concession, permit or other form of documentary authorization. In many cases, authorizations were also prepared for incumbent service providers, often as part of their privatization process. By specifying the rights and obligations of such service providers, investors were provided with greater certainty relating to the business in which they were investing. Well drafted authorizations provided all stakeholders, including consumers, competitors, governments and regulators with a clear understanding of the service provider's rights and obligations. Armed with an authorization, the investors of the new entrants could go to their banks or other financial backers, with business plans that provided reasonable projections of revenues, expenses and profitability. Thus, clear authorizations became an essential tool for the financing of new telecommunications services and of privatizations in many telecommunications markets.

When regulators first began to issue authorizations to new private sector entrants and to PTTs, it became the practice in most countries to issue detailed individual authorizations. In many cases, the telecommunications regulatory framework had not yet been fully adapted to the conditions of a privatized or competitive market. Regulators therefore developed authorizations that set out the regulatory terms and conditions governing the conduct of the licensees in order to fill the regulatory gap.

A good example of this approach can be found in the British Telecom (BT) authorization, which was issued at the time of BT's privatization in 1984. At that time, the concept of telecommunications regulation was relatively new in the UK. Unlike North America, there was no existing telecommunications regulatory framework in the UK. Therefore, the BT authorization was prepared as a largely self-contained regulatory code. It was a lengthy document, and it governed most aspects of the regulation and operations of BT. It granted a variety of exclusivity rights, such as a limited monopoly for basic voice services and limitations on simple resale, and dealt with a plethora of other

rights, obligations and regulatory conditions. Similarly, the authorization for Mercury, the first fixed-link competitor in the UK, also contained a fairly comprehensive regulatory code.

A similar model was adopted in other European countries and elsewhere as incumbent service providers were privatized and new service providers were authorized. Many other countries issued detailed individual authorizations to both privatized PTT operators and to new private sector entrants. Today, detailed individual authorizations remain in place for service providers in many countries around the world.

Given the different regulatory tradition in North America, Canada and the USA never developed comprehensive authorizations that included detailed regulatory regimes. Instead, regulatory conditions typically continue to be contained in regulations, decisions, orders or tariffs made or approved by the regulator. It is interesting to note that when Canada belatedly implemented its first telecommunications licensing regime in 1998, to license international service providers, the regulator issued very short (2 page) authorizations that did not set out detailed individual conditions. Instead, most of the rules governing these authorizations are set out in regulatory decisions and other documents that apply generally to all service providers of the same type.

The liberalization of telecommunications markets (now commonly referred to as ICT markets) and the growth in competition in the sector have resulted in a move away from the issuance of detailed individual authorizations in developed economies. A new type of licensing framework has emerged: the general authorization regime. Moreover, technological innovation and fixed-mobile convergence have highlighted the need for flexibility and neutrality in licensing approaches. Several regulators have thus moved towards service- and technology-neutral forms of authorizations. To learn more above these more recent trends in authorization, please see section 1.2.2, “More on Authorization Trends: Recent Developments”. A link to this section is set out below.

RELATED INFORMATION

General Authorizations

Advantages of General Authorizations

Services Often Subject to General Authorizations or Open Entry

1.2.2 More on Authorization Trends: Recent Developments

Liberalization of the ICT sector and increased competition have led to new trends in authorization practices. In developed economies, as ICT markets were liberalized and as market participants proliferated, the appropriateness of individual authorizations was increasingly called into question. Policy makers and regulators started to move towards sector-wide regulatory tools to replace the customized regulatory provisions of individual authorizations.

Again, the British, who had perfected the art of drafting comprehensive ‘individual authorizations,’ took the lead. The British popularized the concept of a ‘class licence’ (or general authorization) which would apply to more than one service provider – in fact to all who provided the same type or ‘class’ of services.

The move away from the individual authorization approach and toward sector-wide regulation accelerated when the European Union established its new electronic communications regulatory framework, through the series of Directives and other documents that came into force 25 July 2003. This framework generally requires member countries (now 27) to discontinue individual authorization in favour of general authorizations. (See links below to the EU Framework Directive and the EU Authorization Directive).

Under the EU’s regulatory framework, regulators no longer grant individual authorizations. Instead, regulators issue general authorizations that permit anyone to run ‘electronic communications’ networks and to offer ‘electronic communications’ services, subject only to general conditions that are applicable to all similar service providers. More onerous conditions may only be imposed on service providers designated as having significant market power (SMP). In addition, the EU framework only permits regulators to limit the number of service providers in a market due to the limited availability of scarce resources, notably radio spectrum or telecommunications numbers.

The EU framework brings the EU closer in line with the traditional North American approach. As a result, there is a move towards less reliance on individual authorizations in the EU. Indeed, a number of EU member countries no longer require that service providers obtain any form of authorization to provide electronic communications services or to operate networks. Service providers are required only to provide the regulator with notification of the start and termination of the provision of services or the operation of a network. Exceptions to these open entry approaches to authorization exist, however, where service provider use the radio spectrum or numbering resources. All service providers are subject to similar regulatory conditions prescribed in sector-wide regulations (such as those required by the package of Directives and regulations that comprise the new EU framework).

A summary of how EU member countries are performing in implementing the electronic communications regulatory framework, including the Authorization Directive, and other information on EU members’ regulatory performance and key market indicators can be found at: http://ec.europa.eu/information_society/policy/ecomm/implementation_enforcement/index_en.htm.

A similar trend to sector-wide regulation is evident in other developed countries outside the EU and in some developing and transitional economies. There are a number of good reasons for the move to general authorizations and away from individual authorizations (see the link below to Advantages of General Authorizations). However, in countries where the ICT regulatory framework is still maturing and where competition in the sector is still developing, there is often good reason to continue to issue detailed individual authorizations or to attach detailed terms and conditions to general authorizations. Many regulators and policy makers in developing and transitional economies thus continue to employ individual authorizations or, where a general authorization regime has been adopted, to impose detailed terms and conditions on licensees.

Detailed individual authorizations also continue to be issued in many countries where the use of scarce resources is necessary to provide the licensed services (e.g. cellular telecommunications services). Individual authorizations remain quite common for major facilities-based service providers, particularly incumbent service providers that provide basic voice telecommunications services. Finally, individual authorizations remain the norm for authorizations to use the radio spectrum where the demand for the use of a particular radio frequency band exceeds availability.

Another recent trend that has shaped the nature of authorizations in the ICT sector relates to the range of new services available to consumers. Twenty years ago, consumers in developed economies were beginning to enjoy cellular mobile services. Today, services extend far beyond basic mobile and fixed voice telephony. The range of services available to consumers now includes or will soon include mobile data services, Internet services, mobile Internet services, and even IPTV. The emergence of “triple play” (voice, Internet access, and video) and “quadruple play” (voice, Internet access, and video services available over broadband mobile networks) service packages illustrates the breadth of new services available to consumers, as well as the erosion of traditional distinctions between carriage and content service providers.

A need for greater flexibility and neutrality in licensing has arisen in light of the speed of technological innovation, consumer demand, the blurring of content and carriage services, and fixed-mobile convergence. The emergence of Next Generation Networks (NGNs) has underlined the importance of flexibility and neutrality in licensing. These trends have led to an important new development in licensing: the adoption of multi-service and unified authorization regimes.

Traditionally, authorizations permitted the provision of specific types of services, using a specific type of network and technological infrastructure. For example, until recently, regulators typically issued separate authorizations for data services, public fixed voice services, public mobile voice services, and private line services. A service provider active in all of these markets was required to obtain a separate authorization for each type of service. However, in light of the aforementioned recent trends and the need for flexibility and neutrality in licensing, regulators have increasingly begun to revisit service-specific and technology-specific approaches to licensing. Multi-service and unified authorization regimes have arisen as a result.

Multi-service and unified authorization regimes feature authorizations that are service and/or technology neutral, allowing licensees to offer a range of services under the umbrella of a single authorization, using any type of communications infrastructure and technology capable of delivering the desired services. Multi-service and unified authorizations offer licensees significant flexibility to develop the most efficient and valuable forms of service offerings. Multi-service and unified authorization regimes are currently in place or are being implemented in a range of developed, developing, and transitional economies. There are a range of different approaches to multi-service and unified authorizations around the world. These approaches are discussed in greater detail in Part 8 of this Module.

In countries that have liberalized their ICT market and adopted a unified licensing approach, administrative procedures to enter the market have also been simplified and made more flexible. Unified and multi-service licensing regimes often feature general authorizations and do not require applicants to go through a competitive selection process in order to obtain an authorization. In many cases, applicants may obtain an authorization if they demonstrate that they meet certain criteria for licensing. These criteria frequently resemble criteria used in competitive selection processes (e.g., financial stability; viable business plan; and technical competence), however. Thus, the review of applications for unified and multi-service authorizations often involves close regulatory scrutiny, particularly in developing and transitional economies. Moreover, unified and multi-service authorizations sometimes include a detailed set of terms and conditions, even when they are issued within a general authorization framework. This is especially true in developing and transitional economies, where competition is still growing and where the regulatory regime may still be maturing.

1.3 Authorization Objectives and Policies

The development and implementation of authorization policies is one of the most important steps in reforming the ICT sector. Authorization policies determine the structure and level of competition in ICT markets and, ultimately, the efficiency of the supply of ICT services to the public.

Historically, many countries developed authorization policies on an *ad hoc* basis. Frequently, policies were only developed when specific decisions were made to authorize additional service providers. However, as the global regulatory experience evolved, an increasing number of countries adopted explicit authorization policies. Many countries developed policies based on the experience of regulatory reform and telecom market liberalization in other countries. In developing and transitional markets, authorization policies often provide for (1) immediate opening of peripheral telecom markets to competition, and (2) phased opening of voice telephony and related 'core' markets.

Clearly stated telecom policies remove uncertainty and regulatory risk for service providers and their investors. However, regulation is an art, not a mathematical science, and it is neither possible nor desirable to attempt to prescribe detailed policies for all situations that may arise. ICT markets and technologies are too dynamic to permit that. An ideal ICT policy should establish the main objectives and approaches of government policy and deal with major issues of national concern to service providers and investors. However, the more detailed provisions are better left to subsidiary legislation or regulatory rules which can be amended to meet evolving market conditions.

1.3.1 Common Authorization Objectives

This section provides further information on authorization objectives, a subject that was introduced earlier in the module. Governments and regulators have normally had a range of reasons or objectives for authorization ICT service providers. Some common authorization objectives are set out below:

(i) Privatization or Commercialization – An authorization is usually necessary where a state-owned incumbent (a PTT) is privatized. It is a key document in the privatization process. The authorization specifies the rights and obligations of the service provider. It also specifies what the investor is buying and what the government expects from the service provider and the investor.

(ii) Expansion of Networks and Services and Other Universal Service Objectives – Authorizations are an important tool for expanding infrastructure investment and promoting universal service and universal access objectives in developing countries. Network roll-out and service coverage obligations are often included in authorizations. This is particularly the case where a PTT is privatized, or where some degree of exclusivity is granted (e.g. to a duopoly cellular licensee, with a right to use scarce spectrum). Universal service objectives are discussed in detail in Module 4, "Universal Access" in this Toolkit and in Module 6 (Universal Service) of the Telecommunications Regulation Handbook.

(iii) Regulating Provision of an Essential Public Service – Basic telephony is viewed as an essential public service in most countries. While there has been an irreversible trend toward privatization and reliance on market forces, most governments continue to impose some controls to ensure that basic voice services are provided in the public interest. Authorizations are an important tool for exercising such control in many countries.

(iv) Regulating Market Structure – A key element of authorization policy is the determination of the market structure of the ICT sector, and in particular, the number of service providers authorized to provide ICT services. In many countries a prime reason for authorizing new ICT service providers is to increase competition. Authorization of new service providers has made competition the dominant mode of supply in most ICT markets (e.g., cellular, ISP), though competition has not yet fully matured in some market segments, such as fixed voice telephone services. A major objective of the authorization process in many markets is to ensure the viability and benefits of new competitive entries. On the other hand, authorization requirements are also used to limit market access. This is the objective of authorization authorities in some countries where monopoly, duopoly or other exclusive rights have been granted for political or financial reasons. For example, governments in many countries have increased privatization proceeds to the government treasury by granting a newly privatized service provider monopoly rights for a fixed term of years. Monopoly supply arrangements generally reduce efficiency in ICT markets, and dampen economic growth in services that are dependent on ICT. However, many governments traditionally accepted these disadvantages in order to generate cash for purposes like national debt reduction. Today, however, it is becoming less common to grant monopoly rights, even to newly privatized service providers.

(v) Establishing a Competition Framework – In countries that do not have a well developed regulatory framework, authorizations may include conditions to establish a "level playing field" for competition, and to limit the prospect that incumbent service providers will abuse their dominant position in ICT markets. Such conditions are generally referred to in authorizations as "anti-competitive safeguards" or "fair trading conditions". (Examples of such conditions are discussed in greater detail in Module 2, Competition and Price Regulation of this Toolkit.

(vi) Allocation of Scarce Resources – Finite resources required in the operation of an ICT service (such as radio spectrum, numbers and rights of way) should be allocated between service providers fairly, efficiently and in the public interest. This allocation often requires a balancing of competing interests and priorities. Radio spectrum, for instance, may be auctioned to the highest bidder or allocated at low cost to reduce prices or to encourage the rollout of new services. Issues related to the authorization of spectrum are dealt with in greater detail in Module 5, Radio Spectrum Management of this Toolkit.

(vii) Generating Government Revenues – In many countries, the authorization of ICT service providers and of radio spectrum has provided significant revenues to governments. An auction for new authorizations can generate high one-time revenues. In addition, annual authorization fees often provide a continuing source of revenue to fund the operations of the regulator, or for other purposes. Issues related to authorization fees are dealt with later in this module. In addition, authorization of new service providers can increase the size of ICT markets and generate higher tax revenues for governments.

(viii) Consumer Protection – In some countries, conditions relating to consumer protection are included in ICT authorizations. This is particularly true in countries that did not have a well-developed regulatory framework to deal with such issues. However, the better practice is to have consumer protection provisions included in rules of general application to the industry or to certain classes of service providers.

(ix) Regulatory Certainty – Regulatory certainty is a critical element of the authorization processes where the aim is to attract new service providers and investment. This is particularly true in cases where foreign investment is sought in developing or transitional economies struggling with political and/or financial instability. By clearly defining the rights and obligations of the service provider and the regulator, an authorization can significantly increase confidence in the regulatory regime.

(x) Facilitating the Development of Next Generation Networks – Facilitating the emergence of Next Generation Networks (NGNs) has become an increasingly important authorization objective. In order to reap the full economic and social benefits of technological innovations, regulators and policy makers have become highly attuned to structuring a regulatory environment conducive to the development of NGNs. Measures taken in regards to this objective include, for example, the adoption of technology-neutral and service-neutral authorizations, permitting infrastructure sharing, and allocating spectrum to service providers without restricting the services for which such allocations may be used. Thus, this objective has required regulators and policy makers to reconsider the very nature of authorizations and their terms and conditions. NGNs and authorization practices and trends related to the emergence of NGNs are discussed in greater detail in section 8 of this Module.

1.4 International Trade Rules

In recent years, ICT services have played a larger role in international trade agreements, both at the multilateral and regional level. The World Trade Organization (WTO) and its predecessors have promoted liberalization of trade in ICT services. The General Agreement on Trade in Services (GATS) and the 1997 WTO Agreement on Basic Telecommunications (ABT) both include specific rules that apply to telecommunication and ICT regulation and authorization. As a result, new signatories to the ABT, as well as countries wishing to join the WTO, must bring their regulatory and authorization practices into compliance with WTO trade rules.

The trade rules most relevant to the authorization process are summarized in sections 1.4.1, 1.4.2, and 1.4.3. Links to these sections are set out below. Other WTO rules relating to telecommunications services are dealt with in other modules of this Toolkit. See, for example, Module 2, Competition and Price Regulation and Module 4, Universal Access. Links to these modules are set out below. The central theme of these rules is the evolution towards more open competitive markets and transparent authorization processes.

1.4.1 Key GATS Authorization Obligations

This section provides further information on a subject introduced earlier in the module, namely the WTO approach to authorization of telecommunications services. All WTO member states are bound by the "general obligations and disciplines" of the *General Agreement on Trade in Services* (GATS). There are three Articles of the GATS are directly applicable to the authorization process:

- **Most Favoured Nation (MFN) Treatment** *(GATS Article II)* – An authorization regime must grant market access to service providers from a WTO member country on terms "no less favourable" than the terms applicable to service providers from "any other country".
- **Transparency** *(GATS Article III)* – All laws and rules affecting trade in services must be published. The Telecommunications Annex to the GATS specifically requires publication of, among other things, all notification, registration or authorization requirements, if any, as well as any other forms of recognition and approval (e.g. type approval of terminal equipment) needed before foreign service suppliers can lawfully do business in a member country.
- **Barriers to Trade** *(GATS Article VI)* – Authorization requirements must not "constitute unnecessary barriers to trade".

RELATED INFORMATION

Specific WTO Telecom Sector Commitments

1.4.2 Specific WTO Telecom Sector Commitments

This section provides further information about the WTO rules applicable to the authorization of telecommunication services, a subject introduced earlier in this module.

In addition to the general Articles of the *General Agreement on Trade in Services* (GATS), the schedules to the GATS contain additional trade commitments by individual member countries concerning specific services, including basic telecommunications services. As part of the 1997 *Agreement on Basic Telecommunications*, 69 developed and developing countries, representing more than 90 percent of the global telecommunications markets, filed national schedules of commitments to liberalize or maintain open telecommunications markets. As part of their schedules of commitments, most of these countries agreed to adhere to certain telecommunications regulatory practices set out in the *WTO Regulation Reference Paper* (the "Reference Paper"). Since then, other WTO signatories have filed schedules of commitments governing trade in the telecommunications sector, which generally included a commitment to adhere to the Reference Paper. As of February 2008, 107 WTO members have made commitments to open some or all segments of their telecommunications markets to foreign suppliers, and 80 members have committed themselves to the Reference Paper. The Reference Paper has had a major impact on the reform of telecommunications regulation, including authorization practice reform, in many countries.

RELATED INFORMATION

WTO Regulation Reference Paper: Key Authorization Rules

1.4.3 WTO Regulation Reference Paper: Key Authorization Rules

This section provides further information on a subject introduced earlier in this module, namely the WTO approach to the authorization of telecommunications services. The *WTO Regulation Reference Paper* contains two rules that specifically relate to the authorization process:

- **Article 4** sets out commitments relating to the public availability of authorization criteria. It provides that where an authorization is required, the following must be made publicly available: all of the authorization criteria and the period of time normally required to reach a decision concerning an application for authorization, and the terms and conditions of individual authorizations. The article also provides that the reasons for the denial of an authorization must be made known to the applicant upon request.

- **Article 6** outlines the requirements governing the allocation and use of scarce resources. It provides that "[a]ny procedures for the allocation and use of scarce resources, including frequencies, numbers and rights of way, will be carried out in an objective, timely, transparent and non-discriminatory manner." The article further provides that the current state of allocated frequency bands must be made publicly available, although detailed identification of frequencies allocated for specific government uses is not required.

1.5 Who Authorizes Telecommunications Services?

Today, authorizations are usually issued and administered by telecommunication or ICT regulatory authorities. However, until recently, Ministers or Ministries responsible for the ICT sector played a much more prominent role in licensing. They continue to do so in quite a few countries. However, the trend is clearly toward separation of licensing from the political process. ICT authorization responsibilities are increasingly carried out by independent professional regulators, who are expected to use objective criteria and transparent processes for the authorization of ICT services.

As part of the ITU's 2007 regulatory survey, information was gathered on the allocation of authorization responsibility in 140 countries. In over three-quarters of those countries (110), it was reported that the national telecommunications regulatory authority (NRA) was responsible in whole or in part for licensing. In 25 countries, the NRA shared authorization responsibility with the Ministry. This occurs, for example, in countries like St. Lucia, where the NRA reviews applications and advises the Minister, who then issues authorizations. Another example is Canada where the few authorization functions are split between the NRA (international authorizations) and the Minister (radio spectrum authorizations).

According to the 2007 ITU survey, the Ministry alone was responsible for authorization in 23 countries of the 140 countries. A total of 31 other agencies from various countries also had responsibility, in whole or in part, for issuing authorizations. These entities included the President (Suriname), the Congress (Costa Rica) and multi-sector authorization authorities (Seychelles).

1.5.1 Who Authorizes Telecom Services?

Who Authorizes ICT Services?

Who is responsible for ICT Authorization?

Region	Countries Reporting	NRA Alone or Shared	NRA & Ministry	Ministry Alone	Other Authority
Africa	34	29	9	4	4
Americas	26	19	7	5	11
Asia Pacific	24	16	4	6	2
Arab States	15	11	2	4	2
Europe & CIS	41	35	3	4	12
Total World	140	110	25	23	31

Notes:
1. There is some duplication due to overlapping responsibilities.
2. Includes general authorization agencies, President, Congress, etc.
3. "NRA & Minister" implies that both the NRA and the Minister have some responsibilities for ICT authorizations, but does not exclude the possibility that another agency may share this responsibility.
4. Data are based on responses to the ITU's 2007 Telecommunication Regulatory Survey.
Source: ITU World Telecommunication Regulatory Database, 2007

1.6 Types of Authorization Regimes

Just as there are different types of authorization authorities in different countries, different types of authorization regimes have been adopted. Again, with the sharing of global experience, there has been a convergence in the types of authorization regimes adopted in various countries. Today, the approaches to authorizing ICT service providers and services can be divided into three main categories:

1. Individual authorizations;

2. General authorizations; and

3. Open entry – i.e. no authorization requirement.

As discussed throughout this module, there is a clear trend toward the use of general authorizations and open entry regimes in developed economies, consistent with the general liberalization and convergence of ICT markets. However, individual authorizations continue to be in place in a large number of countries, particularly in developing and transitional economies. Moreover, individual authorizations are used to license the use of radio spectrum when the demand for use of a particular band of radio frequency exceeds availability. Accordingly, issues related to individual licences are also discussed in detail in this module.

RELATED INFORMATION

General Authorizations

Individual Licences

1.6.1 Main Types of Authorization Regimes

Main Types of Authorization Regimes

Types of Authorization Requirement	Main Features	Examples
Individual Authorizations	· issued to a single named service provider · usually a customized authorization document · often contains detailed conditions · frequently granted through some from of competitive selection process · Useful where: · a scarce resource or exclusive right is to be authorized (e.g. spectrum), and/or · the regulator has a significant interest in ensuring that the service is provided in a particular manner (e.g. where the service provider has significant market power)	Frequently issued for: · basic PSTN services · in a monopoly market · in countries where the regulatory regime is still maturing · mobile wireless services · services using scarce spectrum resources
General Authorizations (Class Licences)	· useful where individual authorizations are not justified, and where significant regulatory objectives can be achieved by establishing general conditions · normally set out basic rights and obligations, and regulatory provisions of general application to the class of services authorized · normally issued without a competitive selection process; all qualified entities are usually authorized to provide service or operate facilities	Have been issued for: · data transmission services resale services · · international services · VSATs · private networks · All data and voice services in markets with robust competition, except services requiring the use of scarce resources such as radio spectrum and numbering resources
Open Entry (Services may be provided without an authorization)	· no authorization process or qualification no requirements, beyond rules generally applicable to the ICT sector · registration requirements or other rules of general application are sometimes imposed by regulation	Have been issued for: · Internet service providers (ISPs) · Value-added services · All data and voice services in markets with robust competition, except services requiring the use of scarce resources such as radio spectrum and numbering resources

These three types of authorization regimes provide a useful reference point for considering different authorization requirements around the world. However, national authorization approaches do vary considerably. For example, as previously noted, the North American situation is quite different from the rest of the world. There have generally been no authorization requirements for ICT service providers or services in North America. The exceptions to this rule are spectrum authorizations, FCC Section 214 facilities certifications, CRTC basic international telecommunications service authorizations, and public convenience and necessity certificates which were required to construct ICT facilities in some US states and Canadian provinces.

Examples of various types of authorization regimes are discussed in this module. The practice notes linked below provide a good range of examples of different approaches. The reference documents attached to these practice notes are also useful resources in reviewing different types of authorization regimes. .

RELATED INFORMATION

General Authorizations

Individual Licences

1.7 The Legal Framework for Authorization

The form of an authorization depends on the national legal regime. In most countries, authorizations comprise only one element of the regulatory framework. Other rules that govern service providers are included in ICT sector policies, laws, regulations, decrees, orders, decisions, guidelines, directions and other regulatory documents. The authorization trends section of this module described the trend in developed economies away from detailed individual authorizations and towards the development of regulations of general application to the ICT sector.

Two factors generally determine whether a service provider's rights and obligations are set out in an authorization or in other regulatory documents: requirements of local law and the level of development of the local regulatory framework. Due to differences in these requirements, the same rights and obligations that are dealt with in authorizations in some countries are addressed through general regulations in others.

1.7.1 Administrative Authorizations, Agreements and Concessions

This section provides further information on a subject introduced earlier in this module, namely the legal framework for authorization.

The act of granting an authorization is treated in some countries as a unilateral administrative act of a government authority and in other countries as a form of mutually-negotiated agreement, concession or public-private partnership.

In most countries today, the grant of an ICT authorization is a unilateral act of the regulatory authority. The authorization is issued to one or more authorized service providers subject to the terms and conditions specified in the authorization or in the general ICT regulatory framework. In such a case, the grant of the authorization is a purely administrative act.

In other countries, an authorization can be included in a contract between the regulator and the service provider or network operator. This approach has been used where authorizations form part of a concession agreement or part of a public-private partnership (PPP) between a government organization and a private investor. Authorizations in this form generally set out the rights and obligations of both the government authority granting the authorization and the service provider. In the ICT sector, this "contractual" form of authorization is most common and useful in countries where the legal and regulatory framework is less developed. It is particularly useful in cases where there is a perception of high regulatory risk or political country risk which may, in the absence of a contract, deter ICT investment.

Whether authorizations are issued as a unilateral act of the regulator or as part of a contract or PPP, it is essential that the regulator or other governmental organization involved have the authority to issue the authorization or to enter into the related contract. In some countries, this authority is established in the legislation that created and empowered the regulator. In other countries, the legislation that governs the ICT sector may impose an obligation on the regulator to administer the authorization regime or, alternatively, may give the regulator the discretionary power to issue authorizations.

RELATED INFORMATION

Concessions and Licence Agreements
Public-Private Partnerships

1.8 Developing Market Entry Policies

This section considers different approaches used to open markets through the authorization of new ICT services and networks. The authorization approach and process adopted by a country depends on national and regional sector policies, laws and market structure. Increasingly, the approach taken to licensing also depends on international trade rules, such as those established by the WTO.

Depending on the level of development of general ICT policies, the typical steps in designing a new authorization process might include:

- a review of market performance, including: measuring performance of existing service providers, considering existing legal exclusivity rights, studying demand for new services, benchmarking local market performance with similar economies and considering international authorization experience and trade commitments;
- development of a policy for authorization of new service providers, with options such as:
  - public-private partnerships (generally not advisable unless there are important policy, constitutional or legal restrictions on authorization of private sector service providers)
  - open market policies, with unrestricted market entry for all networks and services
  - phased market opening policies, which limit entry to some key markets (e.g. fixed voice, international gateways, etc.) in the early years, to increase authorization fees or network rollout obligations; and
  - open entry for other services to maximize economic benefits;
- development of a process for licensing new service providers (e.g. competitive auction, comparative evaluation, general authorization process);
- a public consultation on proposed new authorization policy and process, setting out considerations for existing service providers, new entrants, consumers and the national economy;
- development and approval of any necessary legal and regulatory amendments to implement a new authorization policy; and
- commencement of the authorization process (see sections in this module on general authorization regimes and competitive authorization processes, in addition to Module 5, Radio Spectrum Management).

This module includes authorization policies and other authorization documents that illustrate a range of approaches to implementing market entry policies. Some good examples are accessible through the links set out below.

RELATED INFORMATION

Public -Private Partnerships

1.8.1 Defining Service Areas

One important issue that is normally considered in designing a market entry policy relates to the definition of geographic service areas to be covered by new authorizations.

A variety of approaches have been taken to defining the service area for a new authorization. In some cases, national authorizations are issued. In others, separate authorizations are issued in different regions or for rural and urban markets. In some cases, national authorizations have been issued in parallel with competing regional authorizations for the same service. This is the case, for example, in Tanzania's Converged Licensing Framework, where authorizations are issued for the International, National, Regional, and District market segments.

There is no one right approach to designating service areas. However, some approaches are likely to be less successful than others. One approach that has experienced limited success in a number of countries is to preserve the profitable urban markets for a state-owned PTT, and to invite private sector service providers to serve only rural areas that are financially less viable. In some cases, the failure of the private sector service providers to perform well in such areas has been used as evidence to argue against further sector liberalization.

The following points are relevant in defining the geographic service area of a new authorization:

- Financial viability must be a key factor. If financially non-viable rural or high cost areas are authorized, a universality fund, or similar mechanism should be established. A preferred approach in such cases is to select a licensee from among competing applicants, based on the lowest requested subsidy. Universality funding mechanisms and approaches for measuring financial viability are discussed in Module 4, Universal Access in this Toolkit.
- Experience shows that regional licensees often merge with, or are acquired by, other regional licensees to serve larger regions or form national service providers. Examples range from the Colombian cellular service providers to the U.S. Regional Bell Operating Companies. These moves are often driven by economies of scale. Regulators may want to keep this trend in mind, and authorize several competing national service providers at the outset, rather than numerous financially weaker regional service providers. The result will be lower transaction costs for the sector, and less disruption due to integration of different operating systems.
- Licensing service providers to serve larger areas will permit them to cross subsidize from more profitable areas to less profitable ones. This approach can be used to extend service to less profitable areas. However, it can lead to anti-competitive conduct where an incumbent service provider retains exclusive rights to serve profitable urban markets as well as less profitable rural ones, while new entrants can serve only the rural markets. Problems of anti-competitive cross-subsidy are discussed in detail in Module 2, Competition and Price Regulation in this Toolkit.
- National authorizations and large service areas are consistent with the consumer interests in obtaining seamless "one stop shopping"

service from a single service provider. This is particularly true where technical or other barriers to efficient interconnection or roaming are present.

- Finally, it is good practice to hold public consultations during the design and implementation of an authorization process. Such consultations may be initiated in a number of ways, from issuance of a detailed public consultation paper (sometimes called a green or white paper) to publication of a simple invitation for public comments on a proposed authorization action. Any input from members of the public, including existing industry stakeholders, can provide valuable input in designing an approach for new market opening and other authorization initiatives.

RELATED INFORMATION

Public Consultation

2 General Authorizations and Open Entry Policies

Many different approaches have been applied to authorizing ICT services around the world. However, there is an increasing convergence of approaches as the experience of liberalizing the ICT sector is shared among regulators and policy-makers. This experience is also producing generally accepted 'best practices', which are increasingly being adopted as countries continue efforts to reform their ICT sectors.

Both general authorization and open entry regimes have gained acceptance in developed economies as 'best practices' for permitting the provision of a wide range of ICT services. This section will review practices and procedures that have been adopted in these regimes.

General authorization regimes also exist in some developing and transitional economies, although individual authorization frameworks are far more common. Where general authorization regimes do exist, they have been adapted to meet the particular conditions in these countries (e.g., low levels of competition). This section will also review practices and procedures in general authorization regimes that have been adopted in developing and transitional economies.

THIS SECTION IN OTHER LANGUAGES:

Version française (PDF)

Versión Española (PDF)

2.1 Introduction

The first section of this module described the difference between individual authorization approaches, general authorizations (or class licences as they are sometimes called) and open entry regimes. There is a clear trend in developed economies away from issuing detailed individual authorizations and towards issuing general authorizations that apply a consistent approach towards all service providers that provide the same class of service. Some developed countries have gone a step further and adopted open entry regimes, where service providers are not required to obtain any form of authorization to provide services, though they may be required to register with the regulator.

The trend towards the adoption of general authorization regimes and open entry policies has accelerated with the adoption of the EU's Authorization Directive. In developed economies, widespread adoption of market liberalization policies and an increased recognition of industry convergence are also accelerating the trend toward the use of general authorizations and in some cases, the elimination of all authorization requirements or other restrictions on market entry.

However, many developed countries issue individual authorizations for some services or facilities, such as those that use scarce resources like radio spectrum or numbering resources, and issue general authorizations for other types of services. As markets become more competitive and as regulators seek to streamline and to lighten regulatory intervention in the ICT sector, it is likely that more regulators in developed countries will begin to rely primarily, or even exclusively, on general authorizations and open entry. General authorization regimes are generally considered the best practice today in most markets where some form of authorization regime is still deemed necessary. Where competition is sufficiently robust to protect consumer interests and where any necessary regulation of service providers can effectively be achieved through general, sector-wide rules and policies, open entry is considered the best practice in most developed countries.

Individual authorization regimes remain common in most developing and transitional economies. Since there are often low levels of competition in these countries and because the regulatory regimes are often still maturing, issuing individual authorizations remains a prudent approach to licensing in developing and transitional economies. Nevertheless, some developing and transitional economies have also adopted general authorization regimes for some services. For example, Malaysia, Botswana, Uganda, and Jordan have all adopted general authorization regimes for some services.

Where general authorization regimes have been adopted in developing and transitional economies, the practices and procedures used in these regimes have been adapted to respond to their national particular competitive and regulatory conditions. See section 2.3 for more information. A link to this section is set out below.

RELATED INFORMATION

Authorization Trends
Types of Authorization Regimes
Advantages of General Authorizations

Services Often Subject to General Authorizations or Open Entry
Issuing General Authorizations
ITU Trends Report: Licensing in an Era of Convergence

2.2 Advantages of General Authorizations and Open Entry Policies

Regulators have increasingly adopted the practice of using general authorizations or establishing an open entry authorization regime for a number of good reasons. Most important, general authorizations and open entry regimes:

- eliminate individual differences in the treatment of service providers and create a level playing field;
- are more consistent with technological neutrality principles;
- are more consistent with open market entry policies;
- simplify the regulatory process;
- reduce regulatory and administrative costs;
- provide the regulator with greater flexibility to introduce changes to the licensing regime since the regulator does not need to negotiate the amendments of individual authorizations; and
- facilitate the introduction of industry-wide regulatory changes to reflect changing technologies and sector conditions (i.e. no need to amend individual authorizations).

2.2.1 Services Often Subject to General Authorizations or Open Entry Policies

The following types of services, among others, are frequently subject to general authorization or open entry policies in many developed countries around the world and in some developing and transitional economies. (In more liberalized jurisdictions, such as in the EU, most other types of services, such as electronic communications, are also subject to general authorizations):

- Internet Service Provider (ISP) services;
- other value-added services, including information content services, intelligent digital network features (e.g. voice-mail, call-forwarding, call-waiting, audio-conferencing, etc.);
- Internet content and transmission services, including e-mail;
- Cyber/Internet cafés;
- resale-based services, such as calling card services, call-back services, pay phone and public call office services and, sometimes resale-based IP voice services;
- fax services;
- private networks, including private virtual networks and private facilities-based networks (except for radio spectrum authorizations, which are usually granted on an individual basis, except for shared bands); and
- customer terminal equipment, including VSAT terminals, PBXs, routers and all data processing equipment.

Some multi-service and unified authorizations are also subject to a general authorization regime. In Singapore, for example, the multi-service authorization regime includes service-based operator licences that are categorized as “class licences”. Moreover, the framework governing individual service-based operator licences and facilities-based operator licences has characteristics that are similar to general authorization regimes.

2.3 Issuing General Authorizations

This section provides further information on a subject introduced earlier in this module, namely issuing general authorizations.

While individual licences are granted to a single service provider at a time, general authorizations provide authority for a whole class of service providers to provide service or operate facilities. A general authorization normally prescribes any eligibility conditions and ongoing regulatory conditions for provision of the service.

For example, a general authorization might approve the operations of all VSAT service providers that meet certain conditions, such as: (1) registration with the regulator, (2) use of ITU-co-ordinated satellite service providers authorized in an ITU member country, (3) approval of earth station equipment under national spectrum regulations, and (4) compliance with any consumer protection or spectrum management regulations established by the regulator. Most general authorizations would contain more conditions; however, all would apply equally to all VSAT service providers. In this example, any entity that meets these four conditions would be entitled to start providing VSAT services,

without the need to obtain a specific authorization or to go through any other authorization procedure.

With general authorizations, the regulator normally has no discretion to grant or withhold an authorization to a particular person. If a person meets the eligibility criteria for obtaining the general authorization and complies with the conditions of the general authorization, that person is automatically authorized.

A few countries have introduced variations on the theme of general authorizations. For example a general authorization may only permit a specified number of service providers of a specific class. These may be authorized on a first-come-first-served basis or using some other form of selection process. Nevertheless, all authorized service providers of the same class are subject to the same conditions, leaving intact one of the key principles of general authorizations. The Saudi Arabian Telecommunications Bylaw establishes several types of class authorizations, which include some of the features described above.

Another variation that is common in developing and transitional economies relates to the eligibility criteria for obtaining a general authorization. It is not uncommon for applicants in developing and transitional economies to be required to establish that they meet a wide range of eligibility criteria, including criteria related to financial viability, operational experience, and technical expertise. The licensing process for issuing general authorizations in such countries thus involves the submission of a detailed application and supporting materials and careful regulatory scrutiny. However, the licensing process is not competitive *per se* and all successful applicants of the same class are issued a standard authorization. Thus, while the licensing process may involve a more detailed evaluation of applicants and more onerous eligibility criteria, the process still bears the hallmarks of a general authorization regime. To see an example of this type of general authorization framework, review the materials on “Type A Class Licences” in the St. Lucian Procedures Manual for Licence Applications. A link to this document is set out below.

See also Box 1, which sets out the regulatory provisions governing the grant of Class Licences by the Pakistan Telecommunications Authority. Notably, although the Pakistan Telecommunications Authority (PTA) has more discretion to reject an application than many other regulators, there are clear criteria that the PTA must take into account when making its determination. Furthermore, applicants have the procedural right to be heard before the PTA rejects an application. The PTA also is required to provide detailed reasons for any refusal to grant an application. These provisions help to offset the risk of arbitrary or unfair licence application determinations.

Box 1: Regulatory provisions governing the grant of Class Licences and Registrations by the Pakistan Regulatory Authority

Class Licensing and Registration Regulations 2007, Pakistan

Section 6 **Grant of Licence** – (1) The Authority may grant license or Registration Certificate to any applicant, who fulfills the open, transparent and non-discriminatory eligibility criteria given by the Authority from time to time.

2) The Authority shall consider all applications on merits and in determining whether or not to grant a licence or registration certificate, the Authority shall take into account the following factors, namely:

(a) financial and economic viability of the applicant;

(b) applicant’s experience in telecommunications and relevant past history;

(c) technical competence and experience of applicant’s management and key members of staff and local participation in the business; and

(d) nature of services proposed and the viability of the applicant’s business plan including its contribution to the development of the telecommunications sector.

(3) The Authority may reject an application; if it appears that the grant of the License or Registration Certificate shall threaten or potentially threaten national security.

Section 7 **Procedure for grant of a License** – (1) On receipt of an application for grant of License or Registration Certificate, the Authority shall examine the application and suitability of grant of Licence or Registration Certificate.

(2) The Authority shall not reject any application without giving a reasonable opportunity of being heard. In case the application is incomplete, the Authority may return the application without rejecting it or may require the applicant to make up the deficiency within given time.

(3) In case the Authority decides to reject the application, it shall give detailed reasons of rejection.

Source: *Class Licensing and Registration Regulations 2007, available on the website of the Pakistan Telecommunications Authority: http://www.pta.gov.pk/index.php?option=com_content&task=view&id=184&Itemid=347*

The Canadian basic international telecommunications services (BITS) authorization regime represents yet another variation on the theme of general authorizations. Until 1999, telecommunications services were not subject to any authorization requirements in Canada, other than spectrum authorizations. When a new authorization regime was established for the provision of basic international telecommunications services, the Canadian regulator, the CRTC, adopted a general authorization model. The same standard conditions of authorization apply to all authorized service providers. However, instead of merely filing a registration to obtain an authorization, an application must be filed, and applications are processed individually. As long as an application contains the necessary information, the authorization will typically be granted within 30 days.

RELATED INFORMATION

The New EU Authorization Framework

2.3.1 Transitioning to General Authorization Regimes

This section outlines some considerations that are directly relevant to the implementation of a general authorization regime. Other sections of this module provide a broader discussion of the issues related to transitioning to a new authorization regime and the related matter of re-authorizing incumbents under a new licensing regime. Links to these sections are set out below.

Introduction of a general authorization regime can be complicated where existing individual authorizations authorize the same services as those covered by the general authorization. For example, general authorizations are frequently used to establish conditions for the provision of value added services. However, incumbent service providers may already be authorized to offer value added services under their individual authorizations.

To promote competitive neutrality, regulators should ensure that differences between general authorizations and individual authorization conditions do not significantly favour one competitor over another. A good solution is to indicate that individual authorizations do not authorize the offering of any service that can be offered under a general authorization. In this way, regulators can ensure that all providers of the services provided under the general authorization are subject to the same conditions.

In some cases, individual authorizations may have to be amended in order to harmonize the conditions under which existing services are offered with the terms of new general authorizations. This may be achieved with the full co-operation of existing licensees, particularly where the conditions of general authorizations are less onerous than those of existing individual licences.

2.3.2 Conditions of General Authorizations

There is no standard set of conditions for general authorisations or class licences. The conditions attached to general authorisations in different countries are products of the individual circumstances and regulatory framework in each country.

In Canada, the conditions for the basic international telecommunications services (BITS) class licence are relatively short and concise. The conditions include a requirement to keep information on file with the Canadian Radio-Television and Telecommunications Commission (CRTC) current; a prohibition on anti-competitive conduct; obligations relating to the contribution (universal service) regime; and a requirement to file any information required by the CRTC to be filed.

The conditions of general authorizations issued in EU Member States must comply with the terms of the EU Authorisation Directive. This Directive stipulates that general authorisations may only be subject to certain conditions listed in the Annex to the Directive. Box 1 outlines the permissible scope of conditions imposed on general authorizations.

Box 1: Conditions permitted to be imposed on general authorizations pursuant to the EU Authorisation Directive

Pursuant to the EU Authorisation, general authorizations issued by Member States may only be subject to the following conditions:

· financial contributions to funding of the universal service;

· interoperability of services and interconnection of networks;

· accessibility and portability of numbers- portability means that users have the option to keep their telephone number when they change operators;

· rules on privacy protection and, more specifically, the protection of minors;

· the obligation to transmit certain television and radio programmes ("must carry");

· environmental and town and country planning requirements;

- the possible imposition of administrative charges on undertakings; and
- restrictions concerning the broadcast of illegal content.

The conditions that have been imposed by the Irish regulator and by Ofcom, the UK regulator, on general authorizations are examples of how these requirements of the Authorisation Directive have been put into practice in an EU Member State.

In Singapore, the conditions of class licences are contained in the Telecommunications (Class Licences) Regulations. There are two sets of conditions. The first set is outlined in Part III of the Regulation and applies generally to all class licences issued in Singapore. The second set of conditions consists of the specific conditions that apply to each particular type of class licence. Class licences in Singapore are issued for specific services. There is a schedule to the Telecommunications (Class Licences) Regulations for each specific type of class licence. Each schedule contains the particular conditions that are applicable to the class licence described in that schedule. The general and specific conditions imposed on class licences are set out in the guidelines on Service-Based Operator Licensing published by Infocommunications Development Agency (IDA), the regulator in Singapore. A link to these guidelines is set out below.

The conditions of class licences in Malaysia can be found in the class licences issued by the Minister for Applications Services, Network Facilities, and Network Services. The conditions for each type of class licence are essentially the same.

Some general authorizations contain detailed terms and conditions. In countries where the regulatory framework is still maturing, it may be necessary to include fairly detailed terms and conditions in order to protect the public interest. In Jordan, for example, the provisions of the Public Telecommunications Class Licence cover a range of matters, including (but not limited to): eligibility; ownership and control; use of Jordanian resources; licence fees; universal service obligations; interconnection; emergency services; directory services; general service obligations and quality of service obligations; confidentiality of information; pricing; modification of Licence; and renewal and termination of Licence. Some of these terms and conditions are set out in the actual Licence, while others are included in the schedules to the Licence.

2.4 Open Entry Notification Procedures

The adoption of an open entry policy does not necessarily mean that ICT service providers are not required to file information with the regulator. In many countries, service providers are required to file some form of notification with the regulator prior to or shortly after commencing the provision of ICT services or network operations.

In some countries (e.g. Estonia, Ireland, and Sweden), regulators will provide confirmation of the receipt of notification, though in other cases (e.g. Germany), such confirmation is provided only upon request. In some countries (e.g., Canada), the regulator typically does not provide formal confirmation, however, service providers may check a list of registered entities that is posted on the regulator's website to verify that they have been registered.

Service providers and operators usually have an ongoing duty to keep information filed with the regulator current and to notify the regulator upon terminating the provision of ICT services and network operations.

Filing a notification of the commencement of services and network operations is frequently tied to the enjoyment of certain rights established in the legislative framework governing the sector. For example, legislation or regulations may stipulate that a service provider obtains the right to negotiate interconnection and access arrangements once it has filed a notification of the commencement of services and network operations. Prior to filing such a notification, a service provider does not enjoy such rights. Tying the enjoyment of various rights such as the right to negotiate interconnection and access arrangements creates a positive incentive for service providers to comply with notification requirements.

2.5 The EU Authorization Framework

The European Union has recently adopted a new regulatory framework for its ICT sector (renamed the 'electronic communications sector' in the framework documents). The new framework was adopted in 2002 and has been effective since July 2003.

The authorization procedures adopted by EU members must comply with the new regulatory framework, and particularly the provisions of two parts of the framework: the Authorisation Directive and the Framework Directive.

The Framework Directive contains general principles and guidelines that are applicable to ICT regulation as a whole. The Authorization Directive contains specific rules applicable to the authorization of ICT networks and services in the European Union.

Due to the speed of technological change and service innovation in the ICT sector, the European Commission has already initiated a review of its electronic communications regulatory framework. In November 2007, the Commission issued a number of proposals for reform. These proposals focus on four main areas: cultivating more competition, fostering better regulation, strengthening the internal market, and

protecting consumers better. The proposals include consideration of how best to use the spectrum that will become available as a result of the introduction of digital television and the resultant "switch-off' of analogue services (the digital dividend). The digital dividend is discussed in Module 5, Radio Spectrum Management.

Although the directives are binding only on European Union members, other countries have found the EU approach useful in developing their own approach to regulation of the ICT sector. In particular, countries that plan to join the European Union, or to harmonize their economic approach with that of the EU, have adopted many of the features of the new framework.

2.5.1 The EU Regulatory Framework

This section provides further information on a subject introduced earlier in this module, namely the European regulatory framework for ICT services or 'electronic communications services' as they are referred to in the framework documents.

Regulation of the ICT sector in Europe, including authorization, is subject to a set of directives and other legal instruments that together comprise the regulatory framework. These directives were adopted in 2002 and have been effective since July 2003.

The EU has enacted seven directives and related documents in connection with ICT regulation, including: the Framework Directive; the Access Directive; the Authorization Directive; the Universal Services Directive; the Privacy and Electronic Communications Directive; the Radio Spectrum Directive; and the Commission Competition Directive. These directives have a broad implication for regulation of the ICT sector, and they are discussed in greater detail in Module 2, Competition and Price Regulation, Module 4, Universal Access, and Module 5, Radio Spectrum Management. Links to these Modules are set out below. In this module, we will focus on the Authorization Directive and the Framework Directive, which are most relevant to authorization.

The electronic communications directives were developed in response to a dynamic and increasingly unpredictable market in which a growing number of competitors are participating. A key objective of the directives is to create a flexible regulatory framework that is capable of responding to new technologies, convergence, and an increasingly competitive market.

The fast pace of technological change and service innovation in the ICT sector has prompted the European Commission to undertake a review of the current regulatory framework. This review was deemed necessary in order to ensure that the regulatory framework continues to serve the best interests of consumers and the ICT industry. In November 2007, the Commission issued a number of proposals for reform. These proposals focus on four main areas: cultivating more competition, fostering better regulation, strengthening the internal market, and protecting consumers better.

The review of the current regulatory framework encompasses consideration of how to ensure that the ICT sector makes better use of radio spectrum. This dimension of the review includes an exploration of how best to use the spectrum that will become available as a result of the introduction of digital television and the resultant 'switch-off' of analogue services (the digital dividend). The Commission's proposals in this regard advocate flexible and market-oriented management of the radio spectrum so that service providers have the freedom to use the spectrum to offer the services that have the highest value attached to them. The Commission's support for a flexible and market-oriented approach to radio spectrum management is consistent with its commitment to neutrality in authorizations since this approach does not dictate the services for which radio frequency authorizations must be used.

2.5.2 EU Authorisation and Framework Directives: Authorization Requirements

This section provides further information on a subject introduced earlier in this module, namely the European regulatory framework for ICT services or 'electronic communications services' as they are referred to in the framework documents. This section focuses on one of the key framework documents, the Authorization Directive.

The EU's Authorization Directive sets out the regulatory framework for issuing ICT authorizations in member states of the European Union. The Authorization Directive applies to authorizations for all electronic communications networks and services, regardless of whether the networks and services are provided to the public. The Directive does not apply to authorizations for the use of radio frequency, unless the use of the frequency involves the provision of an electronic communications network or service.

The Authorization Directive requires the replacement of individual authorizations with general authorizations. In general, electronic communications networks or services may only be subject to a general authorization requirement. As a result, an ICT service provider may be required to submit a notification that it is providing services, but it may not be required to obtain a decision or be dependent on any other administrative act by the national regulatory authority before commencing operations under the authorization.

The Authorization Directive also dictates certain rights and obligations of authorized service providers. For example, at a minimum, general authorizations must give undertakings the right to provide electronic communications networks and services and to negotiate interconnection with other providers in the EU. The Authorization Directive also specifies when a holder of a general authorization will be subject to universal service obligations, including the right to provide certain universal service functions.

The Authorization Directive sets out conditions that may be attached to general authorizations. It also specifies the types of measures that countries may take in order to verify and enforce compliance with these conditions. Subject to certain conditions, the Authorization Directive permits the imposition of administrative charges on undertakings providing a service or a network.

The requirements related to general authorizations do not apply to use of scarce resources such as radio frequency and numbering resources. The Authorization Directive sets out different requirements for authorization of these scarce resources.

The Authorization Directive has been developed to conform to the more general regulatory requirements of the EU Framework Directive. While the Framework Directive does not establish specific rules for the authorization process, several general provisions are relevant, including:

- A requirement that national regulatory authorities exercise their powers (including the power to issue authorizations) impartially and transparently.
- The adoption of a technology-neutral framework for regulation. Thus, technology-specific authorizations are not permitted.
- The adoption of a broad framework for regulation. In light of evolving technologies and convergence, the Framework Directive and all other telecommunications directives apply to a broad range of networks and services, which are generally referred to as “electronic communications networks” and “electronic communications services”. These terms are given wide definitions.
- The requirement that national regulatory authorities promote the development of an internal EU market by ensuring that there is no discrimination in the treatment of undertakings providing electronic communications networks and services.
- The requirement that national regulatory authorities manage the allocation of radio frequency for electronic communications services. The Framework Directive specifies that radio frequency must be allocated and assigned on a basis that is objective, transparent, non-discriminatory, and proportional.

3 Individual Licences

While many developed countries have adopted general authorization regimes or open entry policies, individual licences continue to have relevance in many emerging and transitional economies. Individual licences are also typically used to authorize the use of spectrum where the demand for access to radio frequency bands exceeds availability. Individual authorizations have been standard for 3G spectrum licences, for example.

This section reviews common licensing practices related to individual licences. The next section addresses the competitive licensing processes that are used to issue individual licences.

THIS SECTION IN OTHER LANGUAGES:

Version française (PDF)

Versión Española (PDF)

3.1 Individual Licences and Regulatory Certainty

Detailed individual licences have particular importance in emerging and transitional economies that have not yet developed a comprehensive or stable regulatory framework. In such a context, licences provide certainty for investors and lenders. This certainty is often required before investors will provide the millions or billions of dollars required to install or upgrade telecommunications infrastructure.

RELATED INFORMATION

Contents of a Detailed Individual Licence

Sample Contents of a Detailed PSTN Licence

3.1.1 Licensing Certainty in Developing Markets

It is often difficult to attract investment in ICT markets in developing and transitional economies. Different circumstances prevail in these economies, due to a perception of high country risk and economic, national security or governance problems. Most countries with such economies do not have clear or consistent policies or frameworks for the regulation of the ICT sector. Where it is not possible to develop a stable and credible regulatory framework quickly, it is important to develop authorizations that are clear and detailed in order to facilitate privatization and liberalization initiatives. Such authorizations may be subject to replacement by a more comprehensive regulatory framework once it is developed. However, in such circumstances, the basic economic rights of ICT investors should be protected.

There are two key objectives in preparing such individual licences:

Regulatory Certainty-Where privatization and licensing transactions are implemented before a clear regulatory framework has been developed, the rights and obligations of service providers should be clearly defined in authorizations. Regulatory certainty on key business issues, such as interconnection, price regulation and competitive safeguards, promotes the success of privatization and market liberalization initiatives. Uncertainty reduces investor confidence. As a result, it usually also reduces the potential proceeds to governments from privatization sales or licence fees.

Defining Exclusivity Rights-Sector policy may call for the authorization of multiple service providers. It may also grant exclusive monopoly (or duopoly) rights for specified periods of time. The granting of exclusivity rights generally increases government revenues from privatization and licensing transactions. However, as noted in Modules 1 (Overview of Telecommunications Regulation), 4 (Price Regulation) and 6 (Universal Service) of the Telecommunications Regulation Handbook, maintaining monopolies will generally limit sector and economic growth, and reduce service provider efficiency to the detriment of consumers. Whatever policy is adopted on exclusivity, it should be clearly reflected in the authorizations of new service providers in order to provide certainty to them, their investors and lenders.

To implement these objectives, regulators that intend to authorize new service providers or attract investment in incumbents, but that do not yet have a comprehensive regulatory framework, often develop fairly detailed individual authorizations.

Countries that have initiated privatization and liberalization without clear and detailed authorizations or a detailed regulatory framework have experienced serious problems related to regulatory uncertainty. In other more successful cases, countries without a clear regulatory framework have achieved certainty in their early authorization initiatives through the use of detailed individual authorizations. Examples include Hungary, Uganda, Morocco, and Jordan. The provision of such detailed authorizations removed ambiguity on important matters such as exclusivity rights, authorization fees, network roll-out obligations, tariffs, and interconnection requirements. The success of privatization and new competitive entry in these countries was based, in part, on authorizations that provided a degree of certainty regarding the rights and obligations of investors and service providers.

RELATED INFORMATION

Sample Contents of a Detailed PSTN Licence

3.2 Contents of a Detailed Individual Licence

Section 3.2.1 describes an example of the contents of a detailed PSTN (Public Switched Telephone Network) service provider's licence in an emerging economy without a well-developed regulatory framework. This type of licence has been chosen as an example since it is fairly comprehensive. It covers many of the conditions often dealt with in authorizations for non-PSTN services, such as mobile services. Some additional and different conditions will be required in authorizations for particular services.

Not all of the matters included in the authorization example set out in section 3.2.1 will be necessary in all authorizations for PSTN services. In many countries, some matters in the list are already covered in laws, regulations or other documents that form part of the regulatory framework. Examples include general regulations on universal service or authorization fees, a competition law or general rules of practice and procedure governing authorized service providers, information reporting or authorization termination and renewal. It generally does not matter which type of legal document is used to deal with these issues, as long as the regulatory framework is stated clearly and is enforceable under local law.

3.2.1 Sample Contents of a Detailed PSTN Licence

Sample Contents of a Detailed PSTN Licence

Notes

Part 1 – Background and Identification of Parties

- Provides background, governing law, authorization circumstances, etc.
- Important for posterity, and for courts and governments interpreting the authorization
- Ensure authorized entity has legal and financial substance
- Key to clarity of authorization conditions
- May repeat relevant definitions from laws, regulations, etc., and deal with what happens if these definitions change

Part 2 – Grant of Authorization

- Approaches may differ (e.g. authorization of services common today; however, some authorizations authorize operation of facilities)
- Radio Spectrum usually authorized separately – refer to separate authorization – ensure that there are not excessive 'double authorization' delays or charges.
- For precision, it is sometimes useful to define exceptions – i.e. list what licensee is not entitled to do, and/or list specify services licensee is not authorized to provide (e.g. to implement competition policy)
- It is a good practice to issue separate authorizations for each major type of services provided, e.g. an incumbent operator may obtain a PSTN authorization and separate mobile cellular and ISP authorizations. This assists in ensuring that existing and future authorizations for the same services (e.g. mobile cellular) contain similar conditions.
- The general presumption today should be against granting any monopoly or exclusivity rights. Where such rights are granted, they should be strictly limited.
- Define scope (i.e. services covered) and timing of any exclusivity rights precisely, including time limits, possible extensions and any pre-conditions for extensions
- Establish effective date of authorization. Note that an authorization may be issued several months (or even years) before the service provider is entitled to commence services. This approach may be useful when an authorization is granted in advance of the expiry of exclusive rights granted to a previous licensee.

- Specify duration of authorization term, and conditions and duration of any renewal terms

Part 3 – Authorization Fees

- Usually based on competitive bid process (auction) or fixed in advance
- Any one-time fee should be clearly differentiated from other fees (e.g. royalties, taxes, annual authorization fees, etc.)
- May be payable in installments, with revocation penalty
- Annual fee (may be paid quarterly or on another periodic basis)
- Best practice is to recover administrative costs of regulation only (see Module 1 of the Telecommunications Regulation Handbook and the section of this module on authorization fees for a calculation of authorization fees). Administrative costs should be based on a transparent and duly approved regulatory budget process
- Should be a competitively-neutral assessment of fees across the industry
- Usually provided for separately in spectrum authorization
- Best practice: Limit fees to cost recovery for spectrum management
- Higher fees may be warranted to auction scarce spectrum and generate government revenues (should not duplicate authorization acquisition fees)

Part 4 – General Conditions of Authorization

- Cite requirements to retain eligibility to hold authorization (if any)
- Cite any restrictions on ownership and control of licensee (e.g. cross-ownership with major competitors, foreign ownership restrictions, etc.)
- Rules on equipment that may be used (e.g. type approval rules, or compliance with mutual recognition agreements 'MRAs')
- Any applicable rules (e.g. to verify price cap regulation regime or service quality rules)
- Specify reporting requirements and rules on provision of information to the regulator
- Specific obligations to provide access by regulator to information or premises, and to co-operate with regulator for specific regulatory purposes
- Specify obligations to co-operate with other authorities (e.g. police and national security forces regarding interception of communications, environmental protection, health and safety rules if not covered by law of general application)
- Rights of service provider to access streets, sidewalks, road allowances and other public property and rights of way for the purpose of constructing, operating and maintaining facilities
- Cite legal authority for any such rights
- Include rules for access, if not stated elsewhere (e.g. payment, if any, public safety and convenience, aesthetics, compliance with applicable law)
- Any rights of service provider to access private property (e.g. rights of way for cable or microwave routes) including expropriation rights, if applicable
- Cite legal authority for any such rights

Part 5 – Specific Conditions of Authorization

- Normally dealt with in separate spectrum authorization – may be referenced in spectrum authorization
- Should be subject to national and ITU spectrum management rules, including rules for efficient spectrum use
- Assignment of numbers, if applicable
- Refer to national numbering plan, if applicable
- Rights and obligations regarding implementation of number portability arrangements
- Obligations to provide such services, and co-operate with other service providers in providing them jointly
- See Module 6 of the Telecommunications Regulation Handbook
- Specific obligations (usually set out in Appendix, including maps, number of access lines, etc.)
- See Module 6 of the Telecommunications Regulation Handbook
- Specific obligations (usually set out in Appendix, including specific indicators, standards to be met by specified dates, reporting procedures, etc.)
- May be covered or supplemented in other regulatory documents
- Reference details of performance bond or other method used to secure performance of authorization obligations
- Bond or security document(s) may be annexed to authorization

Part 6 – Relations with Customers

- Terms and conditions usually set out in other regulatory documents, but may initially be included in authorization
- May include mandatory contents of customer contracts

- May include consumer “code of rights”
- Rules on handling and recording complaints
- Usually set out in other regulatory documents
- Provisions may be set out in regulatory documents or approved customer contracts (to provide notice to customers)
- Include protection of privacy
- Rules often published in telephone directories
- Price regulation (tariff) regime usually specified (e.g. price caps)
- Specify services to which price regulation regime applies
- Review period and rules for review often specified
- Key to financial viability of authorization
- Details in appendices or referenced regulatory documents
- See Module 4 of the Telecommunications Regulation Handbook
- Method to resolve disputes over application of authorization conditions

Part 7 – Relations with Other Service providers

- See Module 3 of the Telecommunications Regulation Handbook
- May include rights and obligations to interconnect, if these are not yet set out in the general regulatory framework. May include collocation obligations.
- See Module 5 of the Telecommunications Regulation Handbook
- Include remedies and sanctions, if not specified elsewhere
- Rights and obligations regarding collocation and access to poles, towers, conduit, etc.
- See Module 3 of the Telecommunications Regulation Handbook
- Rights and obligations regarding resale by licensee and by other service providers (e.g. for payphones, Internet services, value added and simple resale)
- Method to resolve disputes with other service providers and network operators, e.g. regarding interconnection
- See Module 3 of the Telecommunications Regulation Handbook

Part 8 – Amendment, Renewal and Termination

- Unilateral modifications should only apply to certain regulatory matters, not key commercial terms of authorization
- Procedural safeguards
- Competitive neutrality should be maintained
- Provides certainty, where needed
- To provide investor certainty, key commercial terms may only be subject to amendment by agreement between licensee and regulator
- Competitive neutrality should be maintained
- Specify sanctions and penalties for failure to comply with various terms of authorization (e.g. fines, forfeiture of performance bonds, revocation)
- Include renewal rights (e.g. if certain performance targets met)
- Termination, revocation and/or suspension may be included
- Grounds (usually certain major, unresolved breaches only)
- Procedure (include due process)
- Include lesser penalties (e.g. fines) which will not disrupt service
- Clarify surviving rights of licensee, property rights, treatment of as¬sets, and other effects of non-renewal

Part 9 – General

- Excuses performance in case of specified events beyond control of licensee
- Assignment may require consent of regulator, particularly in early days of PSTN authorization. Later, restrictions on assignment are generally removed or made subject to general regulatory framework.
- Cite any rules and restrictions on assignment of authorization
- Rules and timetable for coming into full compliance with authorization (important in authorization of PTT or other incumbent service provider)

The actual terms and conditions of telecommunications licences vary considerably, from country to country, depending on the local legal, regulatory and industry environment, among other things. For specific examples of licence conditions in a range of different telecommunications licences please follow the link, below:

RELATED INFORMATION

Sample Licences and Related Documents

4 The Competitive Licensing Process

This section discusses competitive licensing processes, the purposes for which they are used, and the methods for carrying them. While competitive licensing processes vary from country to country, these processes frequently have common features. The following sections review practices that are commonly employed to improve the effectiveness, efficiency and transparency of licensing processes.

THIS SECTION IN OTHER LANGUAGES:

Version française (PDF)

Versión Española (PDF)

4.1 Competitive Licensing Process

Competitive licensing processes are generally used to issue an individual licence to a single service provider or a limited number of them. In a competitive licensing process, the regulator (or other licensing authority) typically describes the business opportunity and invites interested parties to submit applications for the licence to enter the business. The successful applicant is normally selected through a form of competitive evaluation, such as a comparative evaluation process (sometimes called a “beauty contest”), an auction, or some combination of the two.

A competition for the award of an individual licence is frequently referred to as a “licensing” or “tender” process or a “request for applications” process. In this module, we use the term “competitive licensing process” to refer generally to a competitive selection process, by which a number of applicants compete for the right to hold a limited number of licences.

4.1.1 Features of a Multiple Round Auction: The Canadian Example

Features of Multiple Round Actions: The Canadian Example	
1.	**Bidder Eligibility Points:** Each licence in an auction is assigned a number of points proportionate to the bandwidth and population covered by that licence. Each bidder must indicate which licences, and the number of “points-worth” of licences, it may wish to bid on.
2.	**Activity Rule:** A bidder is considered active on a particular licence if it has the current high bid from the previous round or if it submits on acceptable bid in that current round. In each stage of bidding, a bidder must be active on licences whose corresponding points add up to a certain percentage of the bidder’s eligibility point level.
3.	**Bid Withdrawals/Penalties:** If a bidder makes a bid and later wishes to change it, it may do so subject to paying a penalty which corresponds to the potential loss of revenue caused by the withdrawn bid.
4.	**Bid Increments:** Bid increments are used to expedite the auction. They are set in percentage and/or absolute dollar terms and are changed during the course of the auction.
5.	**Waivers:** Waivers protect bidders against mistakes they may make or in the case of technical or communication problems. They prevent a bidder from losing bidder eligibility points when it does not satisfy the activity requirements in a given stage.
6.	**Stopping rule:** The auction generally stops when a round finishes with no acceptable bids or waivers having been submitted on any licences.
7.	**Forfeiture:** A bidder who submits the high bid on a licence but fails to pay will forfeit its right to the licence and must pay a penalty.
	Source: Department of Industry Canada

4.2 Phases of a Competitive Licensing Process

Competitive licensing processes generally have a number of phases. After determining the basic objectives of a licensing process, the regulator will establish the schedule for the process and prepare some form of guide to be used by applicants in the licensing process. Typically, the licensing process begins when the regulator issues some form of notice of invitation to apply for the licence. Some form of guide to the licensing process is often made available at the same time as this notice, or shortly thereafter.

In some cases, the licensing process includes a pre-qualification phase, in which potential applicants are screened in order to limit the competition to qualified applicants. The pre-qualification phase is followed by the qualification phase and the selection phase, where the regulator uses a competitive mechanism (or combination of mechanisms) to select the successful applicant. In other cases, however, the licensing process does not feature a pre-qualification phase and instead proceeds directly to the selection phase.

The licensing process culminates with the selection of the successful applicant and the award of licence or licences. More information about each of the phases mentioned above can be found by following the links below.

RELATED INFORMATION

Scheduling the Licensing Process

The Guide to the Licensing Process

The Request for Applications

The Pre-Qualification Phase

The Selection Phase

4.3 Scheduling the Licensing Process

A licensing process schedule normally lists the steps in the licensing process and the date and time for such steps. The schedule sets out the framework for how the licensing process will unfold, and is thus of major interest to both the regulator and potential applicants for the licence.

Publishing a schedule for the licensing process aids in compliance with one of the requirements set out in the *WTO Regulation Reference Paper*. The Paper requires that certain information about licensing, including the "period of time normally required to reach a decision concerning an application for a licence", be made publicly available. In most cases, the schedule is published as part of the guide to the licensing process.

4.3.1 Steps in the Licensing Schedule

This section provides further information on a subject introduced earlier in this module, namely the steps outlined in the licensing schedule.

The steps included in a schedule will depend on the nature of the licensing process. Generally speaking, schedules include the dates of all significant steps in the licensing process, especially any deadlines governing tasks that applicants are required to complete. Many schedules also include the timelines for the review of the applications and the date on which the decision concerning the award of the licence will be announced. Other important steps may be included in the schedule, for example, the effective date of the licence.

In setting a schedule, the regulator should balance its own interests, the interests of the public, and the interests of potential applicants. For example, the interest in moving the licensing process ahead as quickly as possible after issuing the request for applications must be balanced against the need to provide potential applicants with sufficient time to conduct due diligence and to prepare the required materials for the application.

The regulator should also consider how the scheduling of events affects the transparency of the licensing process. For example, lengthy review periods for the evaluation of applications may undermine the appearance of transparency. Generally speaking, the selection of the highest bidder in an auction process should take little or no time. However, the evaluation of applications to determine compliance with

technical or financial qualification criteria can take longer. Comparative evaluations processes will normally also take longer.

Dates and deadlines included in licensing schedules are usually specific. In addition to noting the day, month and year of a particular event, it is often advisable to include a fixed time (*i.e.*, the hour) for certain steps. If a fixed time is indicated for a particular event, it is important to designate the relevant time zone.

In some cases, it may be appropriate to indicate in a schedule that a particular step will occur after a certain number of days or weeks have passed since a preceding event. Where this is done, it is important to clearly define what the initiating event is. It is also important to define what a "day" means for the purposes of the licensing process so that it is clear whether a day includes weekends and holidays.

In some cases, the regulator may wish to retain the power to make changes to the schedule. This power gives the regulator flexibility to adapt the schedule as the need arises and as circumstances change. The regulator should notify all participants in the licensing process of any changes to the schedule as promptly as possible. It is also advisable to post notification of all changes to the schedule on the regulator's website.

While it may be necessary on occasion to amend a licensing schedule, regulators should bear in mind that excessive changes or delays in a licensing process will undermine confidence in the process.

4.4 The Guide to the Licensing Process

A regulator will typically issue some form of guide to the licensing process. Such a guide is sometimes referred to as a "Request for Applications for a Licence", "Invitation to Tender", "Licensing Guidelines", or even "Licensing Tender". We will refer to these documents collectively as the guide to the licensing process.

The guide to the licensing process sets out a range of important information about the licensing competition. Such information may include background to the competition, market conditions, the scope of the licence, the procedures that will be followed in the competition, qualification criteria, selection criteria, fees, and the schedule for the licensing process. This guide is typically made available to the public or to qualified bidders as soon as a form of notice of invitation to apply for the licence is released.

In some cases, additional documentation is issued in order to provide potential participants in the licensing process with more information about the licence, the licensing process, the local economy and regulatory framework, and other relevant matters. For example, in Singapore, the ICT regulator, Info-Communications Development Authority, published an Information Memorandum to provide interested parties with information about the proposed grant of Public Cellular Mobile Telecommunications Services Spectrum Rights. This Information Memorandum clearly states that its publication was for informational purposes only and is not an offer or invitation to participate in the auction process.

4.4.1 Contents of the Guide to the Licensing Process

This section provides further information on a subject introduced earlier in this module, namely the contents of a notice, information memorandum, request for tenders or similar "guide" to applying for an individual licence or other authorization to provide an ICT service.

Guides to the licensing process usually contain information that allows applicants to analyze the prospective opportunity and to submit responsive applications. Guides to the licensing process often include:

- **An Introduction**, including a brief overview of the purpose of the licensing process and the address for correspondence with the regulator.
- **A Schedule** of the various steps in the licensing process.
- **Background Information on the ICT Sector in the Country**, including information related to the current structure of the ICT sector, major stakeholders, current network capabilities, ICT policy, ICT legislation and other licences or authorizations in place.
- **Rights and Obligations of the Licensee**, including information related to exclusivity, network roll-out requirements, scheduling, service quality, interconnection, access to public and private lands, the term of the licence and spectrum allocation.
- Instruction to the Applicants, including information related to the selection process, eligibility and qualification, content and format of the application, communications and requests for clarification, the cost of the application and bidding, the modification of the terms of the licence and other legal and formal requirements.
- **A Draft Licence** may be included. This approach adds considerable certainty and transparency to the process.
- **Information** may also be provided, including relevant investment legislation and policies, interconnection guidelines, an application for spectrum, the existing tariff, the national numbering plan and a tariff guideline.

4.5 The Public Notice of the Request for Applications

The licensing process generally begins with a public notice of the licence competition. One of the purposes of issuing a public notice is to alert potential applicants about the opportunity to obtain the licence. Accordingly, the public notice usually states the regulator's intention to issue a licence and provides a high level summary of the licence and the licensing process. The public notice also provides information on where to obtain more information about the licensing process. In the past, notices of invitation to apply for a licence were sometimes sent to only a few qualified bidders that were pre-selected by an investment bank or other advisor to the regulator. However, with the increasing emphasis on regulatory transparency, most authorities will issue some form of public notice of their licensing process, often at a preliminary or pre-qualification phase of the process.

4.5.1 Licensing Process Public Notice

A public notice that one or more individual licences will be issued generally includes a brief summary of the opportunity and the proposed licensing process. Information commonly included in a public notice is:

- a description of the services or facilities to be authorized;
- the geographic area of the licence;
- the competitive process that will be used to award the licence; and
- key dates in the licensing process, especially the deadline for submitting applications.

Some longer notices include information about pre-qualification and selection criteria; information about application and licence fees; and other information that is usually left to the licensing guide.

Some licensing authorities charge a sizable fee for the purchase of the guide to the licensing process. In such cases, it is necessary to provide enough information in the public announcement for interested persons to determine whether it is worth purchasing the full licensing package.

Public notices may be in print or electronic format, or both. Notices typically appear on the web site of the regulator, in the trade press, magazines, newspapers, journals and other media where industry participants can be expected to learn of the notice.

4.6 The Pre-Qualification Phase

It is sometimes desirable to limit the field of applicants to parties that have demonstrable financial and technical qualifications to achieve the objectives of the regulator. In these cases, the licensing process includes a pre-qualification phase. During the pre-qualification phase, potential applicants must demonstrate or confirm that they meet the pre-qualification criteria in order to be eligible to participate in the licensing competition.

The pre-qualification criteria are usually minimum requirements that establish a baseline of financial capability and technical competence. In some cases, applicants must demonstrate past experience in providing certain types of services or running a specified type and size of

network. In other cases (typically spectrum auctions), applicants must confirm that they already hold a particular kind of telecommunications or ICT licence. The fact that an applicant holds the designated licence serves as evidence of its financial capability and technical competence since the applicant would have had to meet such criteria in order to obtain the designated licence. This approach was used in the 2007 Nigerian 800 MHz spectrum auction and in the 2007 10.5 GHz spectrum auction in Singapore, for example.

In some cases, legislation or regulations require regulators to include a pre-qualification phase in a competitive licensing process. In Saudi Arabia, for example, the Telecommunications By-law requires that the Communications Information and Technology Commission (CITC) include a pre-qualification phase in any auction or comparative evaluation process. The By-law broadly identifies financial capability and technical capability as the two pre-qualification criteria that applicants must meet to participate in a competitive licensing process. The CITC is authorized to determine the specific form and substance that is used as measures of whether an applicant has meet these two pre-qualification criteria.

4.6.1 Whether to Include a Pre-Qualification Phase

This section provides further information on a subject introduced earlier in this module, namely whether to run a pre-qualification process as part of a licensing process.

As was noted in section 4.6, in some cases, regulators are obligated to include a pre-qualification phase in any competitive licensing process by the terms of applicable telecommunications legislation or regulations. The Saudi Arabian regulator, for example, must include a pre-qualification phase in any auction or comparative evaluation phase. However, in many other cases, regulators are not obligated to include a pre-qualification phase. In these latter cases, regulators must determine whether a competitive licensing process ought to include a pre-qualification stage. The decision about whether to require applicants to pre-qualify generally takes into account a number of factors.

The nature of the ICT market and the circumstances of the licence competition are relevant to determining whether a pre-qualification phase would be beneficial. The level of competition in the market for which the licence is being issued is also an important consideration.

For example, in the case of individual licensees that will enjoy monopoly or other exclusive rights, there is an imperative to ensure that the licensed service provider is financially and technically able to meet obligations contained in the licence related to network rollout, service coverage and quality. The process of enforcing compliance with the terms and conditions of the licence or revoking and administering a new licensing process in the case of default is time consuming, costly and disruptive for consumers.

In the case of highly competitive services, consumers can switch away from a service provider that fails to provide adequate service to another. A pre-qualification process to establish financial viability and technical competence is therefore less important.

However, even in relatively competitive markets, such as mobile cellular services, it is important to establish some minimum qualification requirements. These requirements will ensure that valuable spectrum and other scarce resources are awarded to applicants who are financially and technically capable of providing the service.

The type of selection mechanism that will be applied to award the licence is also relevant. Comparative evaluation processes are often structured to include an evaluation of the financial and technical merits of applicants. The selection mechanism for an auction, however, often does not focus on financial and technical considerations. Thus, pre-qualification phases often have more relevance in auctions than in comparative evaluation processes.

One potential disadvantage of requiring pre-qualification is that the pre-qualification round extends the licensing process and delays the actual issuance of the licence. One way to minimize the delay caused by the pre-qualification round is to adopt criteria that are relatively easy to adjudicate and that require little subjective analysis.

In any event, the regulator may ultimately save time by requiring that applicants pre-qualify since the regulator will then have fewer applications to review during the selection process. Receiving applications from large numbers of clearly unqualified applicants does not advance the licensing process. On the contrary, it complicates the task of the regulator since the regulator must expend time and money to review these applications. It is often preferable to exclude persons who are not likely to be issued the licence from participating in the process at an early phase. Thus, while the licensing process is lengthened by the pre-qualification phase, time is gained during the selection phase.

Regulators sometimes impose a significant application fee instead of or in addition to relying on a formal pre-qualification. Such an application fee will discourage frivolous bidders. The fee may be tied to the submission of an application or may be charged for the purchase of the guide to the licensing process.

Because the purpose of a pre-qualification phase is to limit the field of applicants, this phase occurs early on in the licensing competition. It is advisable to inform potential applicants at an early phase that they will be required to pre-qualify to participate in the selection phase of the licensing competition.

The public notice of the invitation to participate in the licensing process often makes reference to pre-qualification requirements. The guide to the licensing process may also contain information about the pre-qualification phase. Some regulators, however, prepare a separate document that addresses only the pre-qualification phase. Applicants that successfully qualify for the licensing competition are then provided with the guide to the licensing process, which outlines the selection process, among other things.

RELATED MATERIALS

For a discussion on the specific considerations relevant to deciding whether to include a pre-qualification requirement in universal access and services (UAS) bidding processes, see Module 4, "Universal Access and Service", section 7.1.3, "Design of Bidding Process".

4.6.2 Pre-Qualification Criteria

This section provides further information on a subject introduced earlier in this module, namely a pre-qualification process for applicants for individual licences.

Pre-qualification criteria are minimum requirements that must be met in order to participate in a competitive process an award of licence. Generally, pre-qualification criteria are aimed at ensuring that applicants have the financial and technical resources and experience to successfully provide the authorized service. In order to enhance transparency and certainty in the licensing process, it is preferable that the pre-qualification criteria be objective rather than subjective measurements of financial viability and technical competence.
An objective pre-qualification criterion that is often used requires applicants to demonstrate that they, or an affiliated entity, have actually operated a network of a certain size. For example, applicants might have to demonstrate that they have run a mobile cellular telephone network with 100,000 subscribers in order to pre-qualify for a mobile cellular licensing process. While such a criterion is objective and effective in ensuring experience, it would preclude financially capable new entrants from participating. This can be counter-productive, since adequately financed new entrants can usually 'buy' good cellular operating experience by hiring some of the thousands of engineers and business people who have worked in the global cellular business.

In some cases (typically licensing processes for spectrum allocations), the pre-qualification criteria include the requirement that applicants already hold a particular kind of telecommunications or ICT licence. In these cases, the pre-existing licence acts as a proxy for financial capability and technical competence: presumably, the applicant had to satisfy such criteria when it obtained the first licence. Thus, the fact that the applicant holds the specified licence is evidence of its ability to meet financial capability and technical competence requirements. Nigeria used this approach in its 2007 800 MHz spectrum auction. One of the pre-qualification criteria for participating in the auction was a requirement to hold a national network operating licence or a Unified Access Services (UAS) Licence. In order to acquire either of these licences, applicants would have had to satisfy a number of criteria relating to financial capability, operating experience, and technical expertise. See Box 1 to review the pre-qualification criteria featured in the 800 MHz spectrum auction.

Singapore also used this approach in its 10.5 GHz spectrum auction in 2007. Participation in this auction process was restricted to holders of Facilities-Based Operator (FBO) Licences and the Singapore Armed Forces, the Singapore Police Force, and the Civil Defence Force. The criteria for obtaining an FBO Licence in Singapore include, among other things, evidence of the applicant's financial capability and strength; the applicant's technical plan and capability; and the technical soundness of the applicant's plans. Thus, FBO licensees would have already satisfied an evaluation of their financial capabilities and technical competence prior to participating in the 10.5 GHz auction.

Box 1: Pre-Qualification Criteria for the 2007 Nigerian 800 MHz Spectrum Auction
Applicants were required to confirm that they met the following pre-qualification criteria in order to be eligible to participate in the auction:

The Applicant must:
• be a company operating in Nigeria;
• possess a subsisting national network operating licence or a Unified Access Services (UAS) Licence;
• must not already have a cumulative spectrum size equal to or more than 5MHz on any or combination of spectrum band(s), except for point-to-point microwave frequency band;
• not have any outstanding obligations, including any obligations relating to administration, licence, and operating fees owed to the Nigerian Communications Commission and interconnection debts, due at the time of the deadline for submitting applications;
• not have a relationship with any other Applicant, where a relationship is defined as a situation where an Applicant owns directly or indirectly an ownership stake of ten percent or more in another Applicant; and
• pay the Intention-to-Bid Deposit (Niara 40 million) into a specified account.

Applicants were further required to submit confirmation that they met the above criteria using the templates provided in the Information Memorandum issued with respect to the auction. Applications were required to be accompanied by proof that the Intention-to-Bid Deposit had been paid into the designated account and that the funds had cleared. The Information Memorandum specifically stated that bank guarantees were not acceptable substitutes.
Source: Nigerian Communications Commission, Information Memorandum: 800 MHz Spectrum Auction

Some countries impose foreign ownership restrictions that establish minimum levels of local ownership for authorized service providers.

Foreign ownership restrictions are generally contrary to the spirit, if not the letter of international trade agreements, including the GATS. However, various WTO signatories have registered exemptions permitting them to continue to apply foreign ownership restrictions. Over time, such restrictions are expected to be phased out in most countries. Until they are, the restrictions should be noted in any pre-qualification criteria.

RELATED INFORMATION

Qualification Criteria and Selection Criteria

4.7 Qualification Criteria and Selection Criteria

It is important to distinguish between criteria relating to the qualification of an applicant to participate in the selection phase of a licensing process and criteria for the actual selection of a successful licensee from among the qualified applicants.

Qualification criteria serve to determine which parties will have the right to advance to the selection phase of the licensing process. Selection criteria are used to determine which applicant will be awarded the licence or licences.

In the case of a general authorization, only the qualification criteria are relevant because no competitive selection is made. In the case of a selection process for an individual licence, both qualification and selection criteria are normally developed. It is generally advisable to conduct a licensing process in at least two phases. The qualification phase is completed first. For less complex licensing processes, the pre-qualification and qualification phases are sometimes combined as one. Only qualified applicants participate in the second phase – the licensee selection process.

RELATED MATERIALS

For a discussion about the specific considerations relevant to the eligibility criteria for universal access and services (UAS) bidding processes, see Module 4, "Universal Access and Service", section 7.1.3, "Design of Bidding Process".

4.7.1 The Qualification Phase

This section provides further information on a subject introduced earlier in this module, namely the qualification process for applicants for individual licences.

In some licensing processes, the qualification phase and selection phase are dealt with separately, such as in the classic “two envelope” approach. Under this approach, the qualification phase occurs first. The first envelope is opened and the submissions of applicants are reviewed to determine which ones are technically, financially or otherwise qualified to proceed to the selection phase.

The second envelopes of non-qualified applicants are usually returned un-opened. Sometimes an explanation is given as to which qualification criteria the applicant failed to meet. Such an explanation is consistent with the requirement of the *WTO Regulation Reference Paper* to make reasons for denial of a licence known to the applicant upon request.

Where the qualification and selection processes are run separately, such as under the two envelope approach, an applicant’s second envelope contains information related to the selection criteria. The most common and objective selection criterion is the financial amount of a bid. This may be based on the highest bid, for example, for a 3G licence. It may also be to the lowest bid, for example, in the case of a least-cost subsidy auction. Such auctions are discussed in Module 4, Universal Access. Selection criteria are discussed further below.

In some cases, the qualification and selection processes are held simultaneously, such as in a comparative evaluation process.

Qualification criteria should be published in advance of the commencement of the qualification phase. This is consistent with the provisions of the *WTO Regulation Reference Paper*, which stipulate that “all licensing criteria” must be made publicly available.

In order to maximize the transparency of the process, direction may be provided on how potential applicants can demonstrate that they have met qualification criteria, such as technical competence or financial backing. As previously indicated, one of the most common type of evidence involves prior experience in operating a network with a specific number of subscribers.

There are potentially negative consequences to adopting very specific qualification criteria and to specifying the type of evidence that will suffice to demonstrate that these criteria have been met. This specificity makes the process more rigid and constrains the regulator's flexibility to address novel situations or unexpected but useful qualifications. Maintaining some degree of regulatory discretion in the qualification process may be appropriate.

Transparency in the qualification phase is maintained by communicating clearly with potential applicants about how their submissions will be evaluated. In particular, it is advisable to inform potential applicants whether minimum compliance with pre-qualification criteria is sufficient to advance them to the selection phase of the competition. There has been litigation against regulators in some countries where qualification criteria were specified but some otherwise qualified applicants were subsequently rejected on the basis that they were less qualified than others.

In order to increase certainty of the licensing process, as well as its transparency, regulators usually state the date for a decision on which applicants have successfully qualified to advance to the selection phase. This date, as well as other significant dates in the qualification process, is frequently included in a schedule provided in the qualification process materials issued to potential applicants.

4.8 The Selection Phase

The heart of the licensing process is the selection phase. During this phase, the competition for the licence occurs and the successful applicant is selected. There are two main types of competitive selection processes: a comparative evaluation approach (or "beauty contest") and auctions. Other approaches include lotteries and a variety of hybrid approaches that use elements of pre-qualification, comparative evaluation and auctions or lottery approaches. A guide to a licensing process should provide details about the selection mechanism to be used in the licensing competition, as well as information about selection criteria and the process that will be followed.

4.8.1 Competitive Selection Mechanisms

This section provides further information on a subject introduced earlier in this module, namely the selection process for applicants for individual licences.

Two main approaches are used in competitive selection processes:

- Comparative Evaluation Approaches, and
- Auctions

In addition, there are many hybrid approaches that combine elements of these main approaches. Less common approaches include lotteries, first come-first served processes, and selections based on the best performance under previously held licences.

Comparative Evaluation Approach — In a comparative evaluation, or "beauty contest", the award of licence is determined using a merit-based assessment of competitive applications. Each application is evaluated on the basis of a pre-set list of selection criteria or on the basis of the applicant's ability to fulfil certain, more general, requirements. This approach allows regulators to award the licence to the service provider that is best placed to meet the specific objectives of the licensing process.

If more than one licence is being issued at the same time, the applicant with the most points is deemed the winner and is permitted to choose which licence it wants. The applicant with the second-highest amount of points has the right to choose next, and so on. This approach was used in the 2007 GSM spectrum auction in Iceland, where two licences were issued using a beauty contest.

There are many forms of comparative evaluation schemes. In some cases, licences are awarded to applicants expected to make the best use of the limited resources associated with the licence to serve the public. For example, in the 2007 Icelandic GSM spectrum auction, the evaluation centred on which applicant would be able to roll out its network and services in the shortest amount of time, to the greatest number of people. In other cases, the evaluation is based on criteria related to technical competence, experience, and cost efficiency. Some comparative evaluations rely in part on quantitative measures, such as the number of years of operational experience. Others rely on more qualitative (and thus subjective) criteria, such as the quality of management.

Specific selection criteria, should be clearly described in the guide to the licensing process. It is also useful to pre-determine and to publish the weighting for each criterion. This promotes transparency in the licensing process. This also helps applicants to prepare more responsive applications to ensure that the regulator selects the best qualified applicant for the award of the licence.

Auctions — While the comparative evaluation approach involves the selection of an applicant based on merit, auctions involve little or no qualitative analysis of the merits of the applicant. Instead, selection is based on a single evaluative criterion, namely the amount bid by qualified applicants.

Many different types of auctions are possible. The most common involves selection of the qualified applicant who submits the highest bid for the right to hold the licence. In least-cost subsidy auctions, which are described in Module 4, Universal Access, a selection is made based on which qualified applicant requires the lowest subsidy to provide a non-economic service. The services authorized using a least-cost subsidy auction are generally subsidized as part of a country's universal access program. In a least-cost subsidy auction, applicants make offers of the subsidies they would require to provide the authorized services. The applicant that bids the lowest subsidy is awarded the licence, along with the right to the subsidy it has proposed. Such auctions have been used successfully on a number of occasions to license subsidized rural telecommunications services in Latin America, and more recently in other regions. For example, the Nepalese regulator used this mechanism to issue a rural telecommunications services licence in its country.

Auctions can also be based on any other measurable indicator that is financial or based on financial considerations. These might include the lowest consumer tariff to be charged, the highest quality of service, or the greatest level of service to non-economic areas.

In many auctions, bidders are pre-qualified or qualified using criteria similar to those used in comparative evaluation processes. As a result, participation in these auctions is limited to bidders with proven financial and technical capabilities.

While some auctions feature only a single round of bidding, many auctions include multiple bidding rounds. There are frequently rules governing how often a bidder must bid to avoid disqualification, minimum bid increments, the start-of-round price, the duration of each round, and so on. In many cases, all bidders participate in the auction until a winner has been determined or they have been disqualified. In some cases, however, the auction itself has two stages. During the first stage, all bidders participate and typically must provide a sealed bid. Only a certain number of bidders, however, are permitted to advance to the second stage, where the winner of the auction is actually determined through one or several rounds of bidding. This approach was used in the 2007 Nigerian 800 MHz auction. All Approved Bidders were required to submit a sealed bid during the first round of bidding. Only the two Approved Bidders who had submitted the top bids advanced to the second round of bidding. The winner of the auction was determined in the second round of the auction.

Regulators have frequently relied on auctions to issue spectrum licences. A discussion of various auction procedures in the context of spectrum licences will be included in the spectrum licensing module of this Toolkit.

Hybrid Approaches – There are many variations of the two main selection approaches. In some cases, hybrid approaches blend elements of a comparative evaluation with elements of an auction. For example, applicants may be scored on a number of quality-based criteria and market-based criteria, such as the amount of their bid for the licence, financial security, technical competence, and operational experience. In this case, the applicant with the highest combined score may be awarded the licence.

RELATED INFORMATION

The Pre-Qualification Phase

Selection Criteria

The Selection Process

Choosing Selection Mechanisms and Criteria

For a discussion on the specific considerations relevant to the design of the selection mechanism in universal access and services (UAS) bidding processes, see Module 4, "Universal Access and Service", section 7.1.3, "Design of Bidding Process".

4.8.2 Selection Criteria

This section provides further information on a subject introduced earlier in this module, namely selection criteria used in the selection process for applicants for individual licences.

Selection criteria are used to determine which qualified applicant will be awarded the licence during a licensing process. A wide range of criteria can be used in the selection process. The choice of criteria is related to the objectives of the licensing process.

For example, if an important objective is to license a competent operator to provide adequate services to the public on a long-term basis, then criteria that measure technical competence, operational abilities, and financial viability will be important. Alternatively, if the prime objective is to raise money for a government treasury, price may be the best selection criterion. However, in such a case, applicants

should normally be pre-qualified to ensure some minimum level of capability to implement the service.

Selection criteria may be quantitative or qualitative. A comparative evaluation procedure may involve one or the other or both types of criteria. Which type of criteria should be used in a licensing process depends on the objectives of the licensing process and the advantages and disadvantages of each type of criteria in the particular licence and ICT market circumstances.

Regulators may attribute different weight to different selection criteria. In such a case, information should be provided about the weighting of selection criteria, in order to promote transparency in the licensing process.

RELATED INFORMATION

The Selection Process

For a discussion on the specific considerations relevant to eligibility and selection criteria in universal access and services (UAS) bidding processes, see Module 4, "Universal Access and Service", section 7.1.3, "Design of Bidding Process".

4.8.3 The Selection Process

This section provides further information on a subject introduced earlier in this module, namely the selection process for applicants for individual licences.

To increase confidence in the licensing process, it is important to build as much transparency and certainty as possible into the selection process. There are a number of ways that regulators can enhance transparency and certainty.

To build transparency and certainty, the guide to the licensing process should describe the selection mechanism that will be used. It should also outline the selection criteria and the weight given to each criterion. The guide should include a coherent and complete set of selection procedures that will be followed in the selection process. All steps of the process should be outlined and any required action of applicants at each step should be noted.

The guide to the licensing process should also address various contingencies that are frequently encountered. For example, it is helpful if the guide specifies the procedures that will be followed if there is a tie in the selection process. Understandably, not all contingencies can be addressed. If the selection process takes an unexpected turn, transparency and certainty can be maintained by consulting openly with applicants about the unanticipated circumstances and communicating clearly the proposed course of action.

The major steps in the selection process should be clearly identified. These may include: if there is a qualification phase, the announcement of the decision on which applicants have successfully qualified to advance to the selection phase of the process; the deadline for submitting questions about the licensing process; the date on which the regulator's questions of clarification regarding submitted applications will be issued; the deadline for replying to questions of clarification; the date on which the successful applicant will be announced; the deadline for the successful applicant to confirm acceptance of the licence; and date on which the licence will be issued. A Practice Note in this module discusses the steps of selection processes in a comparative perspective.

Transparency and certainty may also be fostered by specifying to applicants all the materials that must be submitted for review during the selection process, as well as the acceptable form for submission of these materials. It is helpful to provide applicants with a "compliance list" that summarizes all the required materials to be submitted, cross-referenced to the relevant portion of the guide to the licensing process. The regulator may require that the applicant submit this list with its application in a form that identifies where each of the required materials may be found in the application package.

The selection process concludes with the award of licence. It is a good practice to specify when and where the award of licence will be announced. It is also good practice to require the successful applicant to confirm its acceptance of the award of licence in writing within a prescribed amount of time. If the successful applicant is required to comply with any conditions before the licence is issued (e.g., the payment of a licence fee), such requirements should be clearly identified.

RELATED INFORMATION

Scheduling the Licensing Process

Choosing Selection Mechanisms and Criteria

For a discussion on the specific considerations relevant to the design of the selection mechanism in universal access and services (UAS) bidding processes, see Module 4, "Universal Access and Service", section 7.1.3, "Design of Bidding Process".

4.8.4 Choosing Selection Mechanisms and Criteria

This section provides further information on a subject introduced earlier in this module, namely selection mechanisms and criteria used in the selection process for applicants for individual licences.

Choosing appropriate selection criteria and processes can be very challenging. Consideration must be given to such factors as: local market conditions, policy objectives, compliance with WTO rules or other transparency requirements, the underlying legislative framework, the nature of the licence being issued, the capacity of the regulator, and the time frame for the issuance of licence, in addition to a number of other factors.

Several observations can be made about the choice of selection criteria and selection process. First, qualified applicants are motivated to devote financial and other resources to those aspects of their applications that will form the basis of the selection decision. Licensing criteria can be seen as part of a zero-sum game. Each applicant has a finite amount of cash and other resources to devote to the proposed service. Other things being equal, resources which are allocated to one selection criterion (e.g. the highest licence fee or aggressive network roll-out commitments) are not available to fund other aspects of the operation which are not related to selection criteria (i.e. lower prices, introduction of enhanced networks or services).

Second, transparency is increased by use of simple quantitative selection criteria. A comparative evaluation process that is based on subjective or qualitative criteria will be less transparent. The same is true of multiple criteria that cannot easily be compared. A lack of transparency undermines the credibility of the process and of the regulator. It also opens the door for complaints of bias, corruption or incompetence. To maximize transparency, it has often been argued that a single financial or other quantitative selection criterion should be used. This can be derived by use of a formula which combines a number of selection criteria into a single numeric factor if desired.

On the other hand, depending on market conditions, use of a quantitative auction process can lead to excessively high bids. Frequently cited examples of excessive bidding are the 3G auction process held in the UK, Germany and elsewhere in Western Europe around the year 2000. These auctions are described in Module 5, Radio Frequency Management.

Use of a single financial criterion does not mean other service factors or licensing objectives are irrelevant. Important factors and objectives not used as selection criteria can be included in the qualification process or incorporated into the conditions of licence. For example, network coverage, rollout and universal service commitments can be specifically incorporated as licence conditions that any successful applicant must comply with. All applicants must then incorporate these minimum requirements into the calculation of their financial bid.

RELATED MATERIALS

For a discussion on the specific considerations relevant to the design of the selection mechanism and selection criteria in universal access and services (UAS) bidding processes, see Module 4, "Universal Access and Service", section 7.1.3, "Design of Bidding Process".

5 Fees

Authorization regimes around the world feature a variety of different fees that are imposed on licensees. This section reviews the different types of authorization fees that exist and outlines common trends and practices related to the imposition of these fees.

THIS SECTION IN OTHER LANGUAGES:

Version française (PDF)

Versión Española (PDF)

5.1 Authorization and Other Fees

Many different kinds of authorization fees have been imposed on the telecommunications industry. Transparency in the authorization process is enhanced by differentiating between different kinds of authorization fees and by clearly identifying which authorization fees apply in each authorization situation. The main types of authorization fees include:

- administrative fees, based on cost-recovery for regulators;
- cost-based spectrum management fees;
- discretionary administrative or spectrum fees (i.e. not cost-based); established on a one time or periodic basis (e.g. annually);
- royalties or highest bid 'auction fees' paid to a government or regulatory authority for a authorization, and unrelated to the administrative costs of regulation; and
- other special fees bundled with authorization fees, such as access deficit charges, universal service fees, industry taxes etc.; such fees should be separated from authorization fees.

5.1.1 More on Authorization Fees

This section provides further information on a subject introduced earlier in this module, namely authorization fees.

In the ICT industry, the term "licence fee" (or "authorization fee") is used to describe different things. It may include one or more of the following:

- administrative fees that compensate a regulator for its costs of regulation; such fees are increasingly common, and are often seen as the 'best practice';
- spectrum management fees, which are based on similar cost-based principles to the aforementioned administrative fees; these are usually charged separately from "operating authorization fees";
- discretionary administrative or spectrum fees established on a one time or periodic basis (e.g. annually), but not cost-based; these fees may be established on an arbitrary 'value of authorization' basis or based on some type of benchmarking of other rates;
- revenue-sharing fees, that is, royalties, premium or "rent" paid to a government or regulator for the right to operate a network, provide a service or use a limited resource, such as radio spectrum or numbers; these fees may be set based on arbitrary numbers, benchmarking or market-based 'auction fees'; and
- in some cases, other special-purpose fees have been bundled with authorization fees such as access deficit charges, universal service fees, industry taxes etc. Transparency and good authorization practice requires such fees to be separated from authorization fees. Special-purpose fees are discussed further in Module 4, Universal Access.

Where more than one type of authorization fee is charged, it is good practice to unbundle them – that is to calculate them separately. This improves transparency and makes it easier to determine that the administrative charges related to cost recovery are indeed cost-based. Separating administrative authorization fees related to spectrum management from other administrative fees improves transparency and accountability. Spectrum management is usually handled by a separate branch, and sometimes a wholly separate ministry or agency from the ICT regulator.

Authorization fees paid for the right to operate a network, to provide certain services, or for the right to use a scarce resource are

generally set before or during the process of awarding the relevant authorization. These fees may include a one-time initial charge for the authorization, recurring charges payable on a regular basis over the term of the authorization or, in some cases, both a one-time initial charge and a recurring fee. Most regulators provide details in tender documents about what charges, if any, will be levied on licensees and how such charges will be calculated in order to promote greater transparency and certainty.

One-time initial authorization fees may be fixed fees determined by the regulator, Minister, or government or the market value of the authorization, as determined through an auction. The nature of one-time initial authorization fees reflects the mechanism used to select the successful applicant. For example, in an auction, the fee is generally determined by the bids made by applicants. By contrast, authorizations awarded through a beauty contest may be subject to a fixed fee that is determined by the regulator or by the Minister or to no fee at all.

Fixed fees may be set at an arbitrary amount determined by the regulator or Minister. However, in order to promote transparency in the authorization process, it is prudent to adopt a market-set fee. Market-set fees are developed by using common telecommunications valuation methodologies. The ITU "Trends in Telecommunications Regulation – 2004/05, Licensing in an Era of Convergence" offers the following examples of measurements that may be used to determine a market-set fee:

- A measurement of discounted cash flow;
- A measurement of net present value;
- Benchmarking against regional or international results for comparable authorizations and markets;
- Previously applied authorization fees (in the case of multiple authorizations issued at different time periods); and
- A specific amount set to address government revenue objectives.

There are a number of different payment schedules for one-time initial authorization fees. The ITU Trends Report notes that the two most common payment schemes are "split payments", where unequal portions of the fee are payable over the term of the authorization, and the payment of equal, periodic instalments over a set number of years. (See the Practice Note on One-Time Fees and Recurrent Fees, which is excerpted from the ITU Trends Report. A link to this Practice Note is set out below.)

Authorization fees paid for the right to operate a network, to provide certain services, or for the right to use a scarce resource have evolved considerably over the past five to seven years. The advent of mobile technology is responsible in part for this evolution. Although authorization fees had remained stable for several years, the development of wireless technology triggered significant changes in fees structures. Over the past five to seven years, most individual authorizations have been awarded to wireless operators, while fixed line operators are increasingly operating pursuant to general authorizations or class licences.

The ITU Trends Report on Licensing includes further information about the fluctuation of one-time initial authorization charges levied on wireless operators. Relevant portions of the Trends Report in this regard are excerpted in a Practice Note, a link for which is set out below.

In addition to one-time initial authorization fees, some authorizations are also subject to recurring fees such as revenue sharing fees (royalties) and annual authorization fees. In some cases, the recurring fee is paid as compensation or as royalties to the government for the right to operate a network, to provide a service, or to use a scarce resource. Other recurring charges include administrative charges levied to compensate the regulator for the cost of regulation and fees levied to promote certain public policy objectives such as universal access.

The ITU Trends Report on Licensing notes that the annual recurring revenue charges (revenues sharing fees) that were first introduced in the ICT sector were quite high. Regulators have recognized, however, that a reduction in the level of revenue-percentage payable to the government is prudent in order to avoid imposing barriers to entry. Both India and Venezuela have taken measures directed to reducing the level of revenue-sharing with the government imposed on telecommunications operators. (See Box 1.)

Box 1: Reduction of Revenue-Percentage Charges in India and Venezuela

"India's Department of Telecommunications recently asked the Ministry of Finance for approval to lower the revenue-sharing amount, which stood at 6-10 per cent, to a level designed solely to cover administrative costs. Meanwhile, in contrast to many countries, Venezuela was able to reduce revenue sharing when it introduced its new Telecommunications Law in 2000. It implemented a gradual reduction from 10 per cent to the current rate of 5.3 per cent. Recently implemented revenue-sharing schemes usually impose lower rates, ranging from 0.2 per cent to 2 per cent, but significant exceptions still remain."

Source: ITU Trends Report 2004, Chapter 4, "Licence Fee Practices: Historical Perspectives and New Trends".

Policy considerations sometimes play a central role in determining what type of fees will be levied on ICT services providers and how such fees should be calculated. The ITU Trends Report on Licensing notes that regulators can advance a number of policy objectives by setting authorization fees at reasonable levels during the first years of market development. This Report identifies in particular the objective of promoting economic or social goals such as universal access or service affordability and the objective of stimulating competition in the sector by lowering barriers to market entry. With respect to this latter objective, the Report also advocates maintaining the stability of authorization fees during the initial years of market development since increases to authorization fees are disruptive and may threaten the financial viability of operators. Further discussion of the socio-economic benefits of establishing low authorization fees is set out in a Practice Note, a link for which is set out below.

It is generally accepted that administrative fees should not impose unnecessary costs on the ICT sector. The most transparent manner by which to achieve this objective is an explicit cost-recovery scheme. Cost recovery schemes involve establishment of authorization fees based on the projected or actual costs of the regulator.

Once that overall level of cost-recovery has been set, it is necessary to allocate the costs among licensees or market participants. This allocation can be based on different factors, including ICT revenues, authorized coverage areas or types of services. The most common allocation base is gross revenues from the provision of ICT services.

Given the high degree of interconnection among ICT service providers, and correspondingly high interconnection and access charges among them, it is a good practice to use the following base amount for calculating authorization fees: gross ICT service revenues minus interconnection and access charges paid to other ICT service providers. Use of this base amount prevents double counting. For example, an ICT service provider that depends heavily on resale, may pay 50% or more of its gross revenues to other service providers by way of interconnection and access charges. The other service providers will be paying authorization fees based on those revenues. In order to avoid levying authorization fees twice on these revenues, the reseller should not be required to pay authorization fees on the revenues that are paid to the other service providers.

The EU Authorization Directive provides a good example of how authorization fees may be imposed in a transparent and fair manner. The Authorization Directive mandates that, in the case of issuing general authorisations, regulators may only charge fees to recover the costs of administering the authorization regime. Thus, fees must be set on a cost recovery basis.

6 Authorization Practices & Procedures

While ICT authorization practices vary from country to country, there are frequently common features in licensing regimes. The following sections review practices and procedural approaches that are commonly employed to improve the effectiveness, efficiency and transparency of authorization processes.

THIS SECTION IN OTHER LANGUAGES:

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6.1 Transparency

Procedural transparency is one of the hallmarks of a good authorization process. Transparency increases the confidence of service providers, investors and other stakeholders in the authorization process. Accordingly, transparency reduces investment risk and increases the attractiveness of investment in national ICT markets. This in turn stimulates the expansion of the ICT infrastructure and ICT services.

The importance of transparency in the authorization process is emphasized in the WTO Regulation Reference Paper. Section 4 of this Paper specifically applies to transparency. This section provides that, where an authorization is required, the following information must be made publicly available: all of the licensing criteria; the period of time normally required to reach a decision on an application for an authorization; and the terms and conditions of individual authorizations. Section 4 also states that the reasons for the denial of an application for an authorization must be made known to the unsuccessful applicant upon request.

As suggested by the provisions of the *WTO Regulation Reference Paper,* in transparent authorization processes, ICT authorizations are generally issued, amended or revoked based on criteria published in advance. Specific practices that enhance the transparency of the authorization process are discussed throughout this module and particularly in the section on competitive authorization processes. As discussed in the Practice Note, “Using the Web to Increase Transparency (a link to which is set out below), some of the most common means of increasing transparency used by virtually all regulators today involve effective use of the Internet.

RELATED INFORMATION

Competitive Licensing Processes

6.2 Public Consultation

It is good practice to engage in public consultation before and during an authorization process. Consultation with ICT sector stakeholders reinforces the perception of a transparent process. Consultation also allows the regulator to directly receive the views of consumers, existing service providers and prospective applicants on a proposed authorization initiative. Receiving feedback from these stakeholders assists the regulator to fine-tune the proposed authorization procedures and the proposed authorization terms and conditions in order to maximize the prospects for a successful authorization process. Indeed, consultation is often the least expensive form of ‘research’ a regulator can use to improve the information base on which its decisions are made.

Even where regulators choose, for commercial or other reasons, to conduct some discussion with potential applicants out of the public eye, it is useful to conduct public consultation early in an authorization process. This improves the design of the authorization process. Consultation can be particularly important where a general authorization is to be issued. Advance publication of proposed conditions of general authorizations provides an important opportunity for public comment –especially comment by interested service providers.

6.2.1 The Public Consultation Process

This section provides further information on the public consultation process, a subject introduced earlier in this module.

Public consultation may occur both before and during the authorization process. It can be formal or informal. In the context of any major

authorization initiative, it is generally advisable for the regulator to establish a formal and transparent consultation process.

A good approach for a more formal consultation process involves publication of a notice or public consultation paper that states the regulator's intention to launch an authorization process and that invites comments on the proposed approach. The notice should set forth reasonable details of the proposed authorization approach and any specific issues on which comments are sought. Where the regulator is unsure of the best approach, comments may be invited on different options.

Notices of this kind should be sent to all interested parties, including prospective applicants, existing licensees, and consumer and industry interest groups. Notices are sometimes also published in official gazettes or the popular business press. Such notices may be in a short form that invites interested parties to request copies of a more detailed notice or consultation paper.

In some cases, the notices may advise interested parties of the regulator's intent to publish a consultation paper on a particular topic in the near future. Informing stakeholders of an upcoming consultation provides them with extra time to conduct their own research into the subject matter of consultation and thus allows stakeholders to participate more meaningfully in the process. This, in turn, improves the quality of the submissions received by the regulator in the consultation.

The Telecommunications Regulatory Commission (TRC) of Jordan published an Advance Notice of its intention to conduct a formal consultation on the transition of non-Class licences to the Integrated Licensing and Regulatory Regime. The stated purpose of the advance notice was "to assist stakeholders to prepare themselves adequately for that process (i.e., the upcoming consultation process)". This notice set out a brief background to the upcoming consultation, a time frame for the consultation, and a summary of the issues that would be considered in the process. A link to a copy of this advance notice is set out below.

In formal consultation processes, most regulators publish a detailed consultation paper at the outset of the process. This paper frames the issues raised for consultation and sets out a list of questions or issues for stakeholders' consideration. In consultation processes involving complex issues or significant changes to the regulatory regime, the process may have several phases. The regulator may publish consultation papers at various stages of the process. In Hong Kong, China, for example, the consultation on unified licensing had several phases. Both the Minister and the regulator published consultation papers at each stage of the consultation.

In some cases, one or more public meetings may be held to obtain input on the issues. These public meetings may occur at different phases of the consultation. For example, the regulator may commence the public consultation with an open meeting to present key issues for consideration and the regulator's proposed response to these issues. The regulator may then host a subsequent public meeting in which the regulator summarizes the submissions received during the consultation and outlines its response to these submissions.

A good example of this approach is the Kenyan consultation on the implementation of a unified licensing regime. In February 2008, the Kenyan regulator, the Communications Commission of Kenya (CCK), invited stakeholders to comment on the proposed framework for the unified licensing regime and the related principles and guidelines. In March 2008, the CCK followed up this initial consultation with stakeholders with a second industry consultation on the proposed unified licensing framework. The CCK held a Unified Licensing Stakeholders Forum to discuss issues related to the proposed unified licensing framework. During this Forum, the CCK delivered presentations on the general framework for the unified licensing regime and on related frequency issues. These presentations highlighted the feedback that the CCK had received earlier in the consultation process and also outlined the CCK's response to this feedback.

Copies of written comments may be published to foster greater transparency. The CCK published a summary of the comments of individual industry participants during its consultation on the implementation of a unified licensing regime, for example. The CCK also has published the submitted responses of participants in various public consultations on its website. Similarly, the TRC summarized the responses received from stakeholders to its Advance Notice of the consultation on the transition of non-Class licences to the Integrated Licensing and Regulatory regime. Some of these responses raised further issues and questions that the stakeholders felt should be addressed during the consultation process.

An opportunity is sometimes provided for a round of reply comments. This keeps parties more honest and accurate in making their initial submissions, and assists the regulator in assessing the merits of positions taken or information supplied in parties' comments. In the Jordanian consultation on the transition of non-Class licences to the Integrated Licensing and Regulatory regime, for example, the TRC advised parties that it would post the comments of all parties on its website once the deadline for making submissions had passed. Parties were then given ten days to provide input on any issues by other parties.

It is good practice to issue a final report at the end of a consultation process. The final report typically summarizes the process itself, the issues raised for consideration, the submissions received, the regulator's response to these submissions, and the regulator's final determinations or recommendations. The final report provides a good record of the process that led up to the regulator's final determinations and the reasons for the regulator's decision. It thus enhances the credibility and perceived fairness of the regulator's determinations. The final report also enhances the transparency of the consultation process and the decision-making process. We have included several good examples of the final reports of public consultation processes in this Module. Links to these documents are set out below.

A pre-authorization consultation process increases the likelihood that the regulator's approach to authorization will be based on a good understanding of all relevant considerations. Consultation also helps to ensure that even those who may disagree with the regulator's approach will believe that their views have been considered. This module contains a number of good pre-licensing consultation documents on the authorization of different types of services. Links to these documents are set out below.

6.3 Authorization Renewal, Amendment and Renegotiation

This section deals with a number of issues related to the renewal, amendment and renegotiation of authorization conditions – particularly conditions established in individual licences. The issues discussed in this section involve both renewals and amendment at the end of licence terms and amendment of licence conditions before the end of a licence term

Individual licences have normally been granted for fixed terms, and thus issues arise regarding how to handle renewals at the end of a licence term. Licences may be renewed, renewed with amendments, or simply terminated at the end of a licence term. The latter option is extremely rare, since it would deprive customers of service. It is seldom used except in the case of non-operational licensees or serious and continuous breaches of licence conditions, laws or other regulatory instruments.

The legal framework for licence renewals and amendments is normally prescribed in national ICT laws or regulations. Sometimes it is found in the conditions of the licence itself, or in the terms of privatization-related agreements, such as shareholders agreements between governments and strategic investors.

Many countries have introduced reforms in their authorization regimes, such as the move from individual licensing to general authorizations or the introduction of unified or multi-service authorization regimes. Such reforms raise the issue of how to treat authorizations granted under a previous regime. In some cases, existing or new laws grant regulators the right to amend licences unilaterally under the new regime. In others, incentives are provided to continue authorizations under the new regime or to amend licence conditions to harmonize with the new regime. A variety of approaches have been taken to the continuation of licences to reflect changing authorization regimes. Perhaps the most difficult issues are those involving the termination of monopoly or exclusive rights that have been granted under previous regimes, but that are no longer consistent with market opening policies of the new regimes that have been adopted around the world today.

6.3.1 Transition to New Authorization Regimes

Over the past five to ten years, a number of countries have introduced large-scale reform of their authorization regimes. In the E.U., for example, the 2003 Authorisation Directive has brought major changes to the authorization practices of member countries. Compliance with the Authorisation Directive required some E.U. member countries to make major changes to their authorization regimes. New legislation or regulations have been enacted to transition the member states' regulatory frameworks to a general authorization regime.

More recently, a number of countries have transitioned from service- and technology-specific licensing regimes to more neutral frameworks that feature unified or multi-service authorizations. Hong Kong China, Jordan, South Africa, Botswana, Uganda, Kenya, Nigeria, Tanzania, India, and Trinidad and Tobago are among the countries that have recently adopted new unified or multi-service authorization regimes. In some cases, the transition to a unified or multi-service authorization regime is accompanied by the introduction of a general authorization framework.

Countries have taken different approaches to introducing changes to the authorization regime. However, one common practice is the use of public consultations. The introduction of new authorization regimes is almost always preceded by a public consultation on issues related to changing the regime. Regulators seek feedback from industry stakeholders on a variety of matters, including:

- the proposed licensing framework;
- the types of authorizations to be issued in the new regime;
- the terms and conditions of the proposed new authorizations;
- the proposed process for issuing authorizations;
- the schedule for implementing the new regime; and
- the transition to the new licensing regime.

In a number of cases, including Hong Kong China, Kenya, and India, for example, the public consultation had more than one phase. Different issues were tackled at different stages of the consultation process. A multi-stage consultation process has several advantages. The introduction of a new authorization regime raises many complex issues; conducting the consultation in several stages allows the regulator to manage the issues better. A multi-stage consultation also avoids overwhelming the regulator and industry stakeholders with information, data, and proposals. Finally, in a multi-stage consultation process, the regulator can better focus the consultation at each stage. For example, once the regulator has received feedback on the basic structure of an integrated licensing regime and has made a determination about the structure, subsequent consultations can focus on how this particular structure should be implemented. Stakeholders do not have to address the implementation of various proposed frameworks; they can focus their comments on the framework that has been tentatively adopted.

Regulators have taken different approaches to transitioning existing licensees to a new authorization regime. In some cases, existing

licensees are required to migrate to the new authorization regime. This migration may occur automatically, by deeming that existing licensees have complied with all necessary requirements to obtain a new authorization (e.g., Estonia), through a conversion process led by the regulator (e.g., South Africa), or by requiring existing licensee to apply for a new authorization (e.g., Ireland).

In other cases, existing licensees have the option to continue to operate under the licence procured under the old regime until the end of the term of that licence or to transfer immediately to the new authorization regime. If licensees opt to continue to operate under their existing licence, they must convert to the new authorization regime when their existing licence expires. Botswana has taken this approach to the introduction of its multi-service authorization regime.

Where licensees have the option of migrating to the new authorization regime immediately or at the end of the term of their existing authorization, regulators may provide incentives for early migration. Incentives include the reduction or waiver of initial authorization fees and the grant of the new authorization on the basis of a full term rather than a term adjusted to reflect the years that the licensee has already held the existing authorization. In some cases, the opportunity to obtain a multi-service or unified authorization may be sufficient incentive in and of itself since such an authorization enables the licensee to provide a broader range of services.

Regardless of what approach is ultimately adopted to manage the transition to the new authorization regime, it is common (and advisable) for regulators to provide ample information to industry stakeholders about the transition process. By maintaining open and clear communication about the transition, regulators can ensure that the new regime is implemented in a transparent manner that bolsters the confidence of investors in the ICT sector.

Regulators have provided stakeholders with information in a variety of ways. Many regulators hold public meetings in which they explain the key features of the new authorization regime and outline the process of transition. Regulators also issue media releases to increase awareness of the transition. In addition regulators publish information on their website in order to facilitate the implementation of the new regime. Examples of information that regulators have published include: short summaries of the new authorization framework; guidelines to the new licensing process; instructions for applying for authorizations under the new framework; instructions to existing licensees for how to migrate to the new regime; flow charts that illustrate the application process under the new regime; summaries of the terms and conditions of the new forms of authorization; copies of presentations and speeches about the new regime that were given at public meetings; and answers to commonly asked questions about the new regime and the process of transition.

6.3.2 Termination of Monopolies

In a number of countries, the implementation of ICT market liberalization policies has forced regulators to deal with the issue of monopoly (or “exclusivity”) rights granted in the authorizations of existing operators. The introduction of competition sometimes runs counter to the incumbent operator’s legal rights to exclusivity in the provision of a certain services or operation of certain types of networks. The wave of liberalization in ICT markets in recent years, has sometimes caused governments to question why they granted exclusive rights to incumbent operators, in some cases lasting as long as 40 years or more.

In some cases, governments or regulators have not wanted to wait for the incumbent’s monopoly rights to expire, since they perceive this could delay the introduction of competition and the benefits that could bring in terms of sector development. Instead, they opt to terminate the incumbent’s monopoly rights prior to the expiry of these rights.

Terminating monopoly rights can be a difficult and controversial process. Monopoly rights are often highly valued by incumbents, and, failing agreement, many incumbents are prepared to take legal action to defend these rights. The arbitrary exercises of regulatory power to revoke or amend exclusive rights or other licence conditions may result in litigation and complaints under international trade agreements. In some cases, new legislation is introduced that mandates the termination of the incumbent’s period of exclusivity. However, such legislation may be subject to legal challenge in some countries on the grounds that it constitutes an illegal ‘taking’ or cancellation of property rights.

In other cases, governments or regulators have negotiated mutually acceptable arrangements with incumbent operators to terminate or amend their exclusive rights. In some cases, it is possible to agree to phase out an incumbent’s monopoly over a period of time in return for concessions, such as tariff reform, rate rebalancing, and the right to be issued additional operating rights under a new authorization scheme.

In Jamaica, for example, the first phase of telecommunications liberalization involved the negotiation of an agreement with the incumbent operator, Cable & Wireless Jamaica Limited (CWJ), for the early termination of CWJ’s monopoly rights. In September 1999, the Jamaican regulator successfully concluded an agreement with CWJ that provided for the termination of CWJ’s monopoly and the liberalization of the telecommunications sector on a phased basis.

Similarly, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines, acting under the auspices of the Organization of Eastern Caribbean States (OECS), negotiated with the Cable & Wireless (C&W) companies operating in each of these states for the termination of the C&W exclusivity rights in their countries. The agreement between the OECS states and the C&W companies was signed in April 2001. This agreement featured a phasing out of the C&W exclusivity rights over two periods.

Please click the link to section 6.3.3., Renegotiation of Licences (below) for a discussion of some good principles and practices relevant to the renegotiation of exclusivity or other licence conditions.

RELATED INFORMATION

Renegotiation of Licences

6.3.3 Renegotiation of Licences

This section provides further information on a subject introduced earlier in this module, namely the renegotiation of licences as regards exclusivity or other licence conditions.

In some cases, governments or regulators have the clear legal authority to make changes to the terms of existing ICT authorizations. Where this is the case, it is best to do so in consultation with the licensees and other stakeholders.

In other cases, licensees have existing rights, such as monopoly rights based on contracts, such as privatization agreements or concessions, that require the government or regulator to enter into negotiations to amend the authorizations. In such cases, it is often wise to base authorization renegotiations on sound, generally accepted principles used in other negotiations. These principles have been widely documented in books and articles on negotiation, including the books and other materials produced by Roger Fisher, William Ury and the Harvard Negotiation Project.

The following basic principles of good negotiation strategy are worth keeping in mind:

- Focus on the parties' long term Interests, not on Positions
- Develop Options for Mutual Gain
- Use Objective Criteria to assess Options

Each of these principles is discussed briefly below.

Focus on the parties long term Interests, not on positions

Many negotiations fail because parties disregard this principle. When parties establish firm positions early on in negotiations, lines are drawn in the sand. Success is then measured by which party 'wins' on most of its positions. In licence renegotiations it is best to avoid firm starting positions, such as: 'the monopoly must end on x date', 'the company must receive a 25% rate of return', 'the company must be 'compensated' for an early end to its licence rights', etc. If parties commence their negotiations by tabling such firm 'positions', success is less likely.

If governments and incumbent operators take a long run perspective, many of their interests can be viewed as being quite close. For example, these might include:

- A healthy, growing ICT sector
- Financial health of the country's main ICT service provider
- Development of a clear and predictable national ICT policy, consistent with international practice, and with fewer disputes and uncertainties

It is often best to develop options to help achieve such common interests. Each party will have to be flexible on some positions to develop such options.

Develop Options for Mutual Gain

It is often possible to develop various 'win-win' options that meet the long run interests of both parties to a licence renegotiation. One example is a reasonable rate-rebalancing program that brings local rates to economic levels and eliminates the need for cross-subsidies from other services. Governments sometimes avoid this option because of perceptions that there will be negative consumer or voter reactions. However, such reactions are often overestimated. Rate rebalancing can improve an incumbent operator's financial prospects while creating an economic environment that make it attractive for the incumbent and competitors to expand investment, particularly in local access networks. Investors will not be attracted to enter a market where they must subsidize services and where there is no prospect for profit. Thus the rate rebalancing option can benefit both the incumbent licensee and the government or regulator.

Early in any negotiations, the parties should develop a list of issues to be resolved. Both parties should then focus on developing options for mutual gain. However, parties may put forward any options they wish to put forward to deal with the issues. But all options should be assessed based on objective criteria. To avoid 'negotiation gridlock,' outside parties and expert advisors may be consulted to help develop options.

Use Objective Criteria to assess Options

Too often, negotiations fail because parties assess options in terms of their personal perspectives or 'will', rather than by objective criteria. It is a basic principle of good negotiations that options to resolve outstanding issues should be assessed based on objective criteria.

Objective criteria are available to assess the options for resolving many of the issues facing the parties. These include:

- Precedents – for example, the settlements reached by the governments and companies that have reached agreements to terminate monopolies and establish new policies in other countries;
- International Practices – regarding the treatment of ICT regulatory and policy issues;
- International Trade Rules – regarding expropriation and termination of concessions; and
- Transparent Financial Analysis – to calculate and assess the impact of licence changes, and value ICT businesses, currently and in the future under a liberalized ICT regime.

The prospect of success of licence renegotiation is often increased by appointing experienced negotiating teams and advisors that are capable of properly assessing objective criteria for resolution of the issues.

Preparation for Licence Renegotiation

Government and regulatory negotiators are often poorly prepared for negotiations to renew licences, particularly where the incumbent operators are well-financed and understand the financial and strategy implications of changes in their monopoly or other licence rights.

From the outset, a government negotiating team should prepare and analyze a complete set of relevant documentation on the issues between the parties, including all licence, contractual and legal conditions at issue, and any relevant materials prepared at the time the licence or contract was first negotiated.

All necessary background research should be conducted. Normally a legal opinion should be prepared on the legal rights of licensee. This work should ideally be done in advance, and not after the negotiations have commenced.

Research and analysis should be conducted to develop and assess both parties' best option if negotiations fail. In the Harvard Negotiation Project, this is referred to as the 'Best Alternative to a Negotiated Agreement' (BATNA). In some cases, the Government's BATNA involves legislation to terminate a monopoly. However, such an alternative should be carefully analyzed so that the government is fully aware of its implications. Such analysis would include assessment of the legal, trade, and political remedies that could be resorted to by the other party, including any relevant foreign investment guarantees or insurance and possible international trade repercussions (e.g. under multilateral agreements, such as the GATS or bilateral and regional investment agreements).

Appropriate professional resources should be retained for the negotiation and related advisory work. In addition to retaining an experienced negotiator, parties should make certain that they have available, on reasonably short notice, other skills or resources that may be required. These resources may include a financial analyst to assess claims regarding the impact of the proposed licence changes, and access to experienced 'insiders' in other licence renegotiations.

The parties should contact each other early on to establish an agreed process and schedule for negotiations. Neither party should impose a negotiation process or schedule on the other. Consistent with good faith negotiations, the parties should consult with each other to develop the process and schedules.

Negotiation Guidelines

Adherence to the following guidelines can increase the prospects for success of the negotiations:

- The parties should negotiate in good faith, and should be seen to be doing so, by adhering to an agreed negotiation process.
- The parties should agree to the process for negotiations at the outset, and both parties should adhere to this agreement, unless changed after mutual consultation.
- Each party should designate one official representative ('negotiator'), who should be fully authorized to negotiate, although not to agree to the settlement of any issues.
- Communications between the parties should flow between the negotiators.
- The negotiators should be selected on the basis of an ability to develop a good working relationship. Efforts should be taken to maintain that relationship.

· Parties should encourage their negotiators to comply with the negotiation guidelines set out in this document (e.g. negotiators should reconcile interests, not positions; they should brainstorm to develop 'win-win' options; and to apply objective criteria for assessing them). Negotiation teams should be given reasonable leeway, and not be undermined by their principals (e.g. the president of the licensee's parent company or the Minister responsible for ICT) providing conflicting or unreasonable demands.

- Negotiations should be conducted face to face or by exchange of correspondence between the authorized negotiators – not in the press. Representatives of the parties can easily 'poison' the atmosphere by gratuitous negative comments to the press or other third parties.
- If possible, the negotiations should be held on "neutral ground" or alternate between locations selected by each of the parties.

- The designated negotiators should present the terms of proposed settlements back to the final decision-making authority of each party.
- Insofar as possible, the parties should try to achieve a comprehensive settlement of outstanding issues. Settlement of some issues may involve delegation of technical implementation tasks to designated persons, committees or organizations, who may have to continue their work after an 'agreement in principle' has been reached.
- Parties should not, directly or through related entities, take steps that materially worsen the position of the other party – at least not without consultation.
- In general, the parties should maintain an open dialogue with each other, and not spring other 'surprises' on each other, that would undermine good faith negotiations.

Materials on Dispute Resolution and Negotiation

There has been a growing interest in the subject of dispute resolution in the ICT industry. The World Bank Group and the International Telecommunications Union have collaborated in holding a workshop and commissioning research and reports on the subject. Those interested in dispute resolution in the telecommunications sector should consult the following resources:

- *Dispute resolution in the telecommunications sector: Current practices and future directions*, which is available in electronic format on the ITU web site at the following URL: http://www.itu.int/ITU-D/treg/publications/ITU_WB_Dispute_Res-E.pdf

This document is also available in printed book form from the World Bank.

- ITU Seminar On Enforcing Telecommunication Law, Policy and Regulation materials, which are available on the ITU web site at the following URL: http://www.itu.int/ITUD/treg/Events/Seminars/2005/Enforcement/index.html
- ITU's European Workshop on Dispute Resolution materials, which are available on the ITU web site at the following URL:http://www.itu.int/ITU-D/treg/Events/Seminars/2004/Geneva/index.html

6.4 Balancing Certainty and Flexibility

ICT licensing should balance regulatory certainty with the flexibility necessary to address future changes in technology, market structure and government policy. This balance is never easy to achieve. Regulators in countries with higher ICT sector risks should generally favour regulatory certainty to attract investment. Those with more stable economic and regulatory environments normally have the luxury of increased flexibility to introduce reforms without undue market impacts.

6.4.1 More on Balancing Certainty and Flexibility

This section provides further information on a subject introduced earlier in this module, namely balancing regulatory certainty and the flexibility to address future changes in technology, market structure and policy.

There are a number of ways that a regulator can balance certainty and flexibility in the authorization process. In many countries, a balance between regulatory certainty and flexibility is achieved by using instruments other than authorizations as the main elements of the regulatory framework. For example, a country might adopt interconnection regulations rather than impose detailed terms and conditions concerning interconnection in service providers' authorizations. However, where a country's regulatory regime is not well developed, it has often been necessary to include a reasonably comprehensive codification of the basic regulatory regime in an authorization. This is necessary to provide the certainty required to attract new entrants and substantial investment to the sector.

A reasonable balance between certainty and flexibility must also be found in the terms and conditions of an authorization. The conditions must provide a reasonable degree of certainty to service providers in order to attract investors. On the other hand, such conditions should be sufficiently flexible to allow their integration into the general regulatory framework for the sector as it develops. The authorization of a particular service provider should not preclude future regulatory reform.

There are several approaches to providing such flexibility, including:

1. permitting unilateral authorization amendment by the regulator;
2. establishing short authorization terms;
3. permitting authorization amendments with the mutual consent of the licensee and regulator; and
4. permitting unilateral amendments by the regulator of specific types of authorization conditions considered key to the general regulatory regime, provided such amendments are made in a procedurally fair and competitively neutral manner.

The first two approaches are not consistent with regulatory certainty. They will generally make it difficult, if not impossible, to attract the

investment and financing required for a major authorization, such as a fixed line or cellular authorization. The third approach increases regulatory certainty, but can constrain the introduction of regulatory reforms.

The fourth approach is more attractive as regards regulatory certainty. To implement it, a distinction can be made between authorization conditions that are of a regulatory nature and those which can only be amended with the agreement of the licensee. For example, authorization conditions on industry-wide universal service mechanisms or general terms of interconnection may be subject to amendment by the regulator.

Other conditions of a purely contractual nature or which are fundamental to the economic value of the authorization may be subject to modification only with the consent of the service provider. These would normally include conditions such as the term of the authorization and the authorization acquisition fee payable.

Where the regulator has the right to amend the general regulatory conditions of an authorization, such amendments should be made in a transparent and competitively neutral manner. Any amendments should be preceded by consultation with the licensee and other affected parties. In some cases, a right of appeal or review may be warranted.

The *Electronic Communications Act* of South Africa contains provisions designed to provide certainty to the holders of individual licences while giving the regulator the flexibility to respond to changes in technology, market structure, and policy. Section 10 of the Act allows the Independent Communications Authority of South Africa (ICASA) to make certain kinds of amendments to the terms of an individual licence after consultation with the licensee. Amendments permitted under section 10 relate to general regulatory and policy matters. Licensees are afforded certain procedural rights in the amendment process. The Practice Note entitled “South Africa – Individual Licence Amendment Provisions in the *Electronic Communications Act*” provides more information about the ICASA’s authority to amend individual licences. A link to this Practice Note is set out below.

6.5 Distinguishing Authorization from Procurement

The act of authorizing an ICT service provider should be distinguished from the government procurement process. In many countries there has been confusion between the two types of processes, sometimes with adverse consequences for the authorization process.

6.5.1 More on Distinguishing Authorization from Procurement

This section provides further information on a subject introduced earlier in this module, namely distinguishing the act of authorizing an ICT service provider from the procurement process.

There are important differences between the authorization of an ICT service provider by a regulator and the procurement of services by a government entity. Yet the distinction is not sufficiently recognized in some countries. The government procurement process involves the purchase by the government of goods or services using public money. These goods or services are sometimes used internally by the government and sometimes used by the government to fulfil its public duties.

By contrast, a regulator is not buying goods or services using public money when it licenses an ICT service provider. Authorization involves the granting of certain rights and obligations to an authorized service provider. It can be seen as the granting of a business opportunity to qualified investors who agree to comply with certain authorization conditions and regulations. The regulator is more a seller than a buyer.

Two important recommendations for the authorization process flow from the recognition that authorization is, in essence, the offering of a business opportunity. First, the regulator must offer an opportunity that is financially attractive to experienced and competent ICT service providers. While some authorization opportunities sell themselves, others, particularly those in emerging and transitional markets, must be carefully structured and marketed to attract qualified applicants. Experience shows that almost any call for applications for ICT authorizations will attract some bidders. However, many are not financially or technically capable of meeting the regulator’s objectives to expand and improve services.

Second, government procurement procedures are generally not suitable for an ICT authorization process. Many countries have bureaucratic, centralized procurement administrations. Detailed government procurement procedures are often developed for good reason - to reduce corruption. However application of these procedures can cause legal and administrative headaches, delay and confusion about the real goals of the authorization process.

The regulator in an authorization process is primarily concerned about results. What matters is whether, not how, authorization conditions are met. Thus, it is more important to ensure that potential licensees are able to meet clear qualification requirements relating to their competency than to micro-manage the business or operational plans of licensees. From this perspective, such issues as technology choices, management structures, and marketing strategies should not be the subject of authorization conditions or selection criteria; they should be left to market forces. Generally, it is best to avoid the application of general government procurement procedures and to use a simple and transparent competitive authorization process, based on internationally accepted ICT authorization procedures.

6.6 Spectrum Authorizations

The provision of ICT services that make use of radio frequencies generally requires two authorizations: one to provide the ICT service and a second authorization for the use of the radio frequency. It is necessary, for instance, to authorize cellular service providers to use the required spectrum as well as authorizing them to operate the cellular networks. Spectrum authorizations required to provide a service are often granted as part of an individual licensing process.

Authorizations to operate an ICT service and to use the required radio spectrum should be granted at the same time. There should be no delays or risks of inconsistent regulatory requirements as between the two types of authorizations. If two separate authorizations are issued, they should be issued simultaneously. A good approach is to attach a draft spectrum authorization as well as a draft service provider's authorization to a request for applications for authorizations.

One reason for retaining two separate authorizations is administrative convenience in the management of the spectrum. In most countries spectrum management is delegated to a different administrative group from the group that regulates other aspects of telecommunications operations, such as price regulation or anti-competitive conduct. By having a separate, consistent form of spectrum authorization, technical, reporting and compliance requirements can be standardized for all users of the radio spectrum.

There are a number of regulatory considerations that are specific to spectrum authorizations. These issues, along with a range of other matters, are canvassed in Module 5, Radio Spectrum Management.

7 Special Authorization Situations

While ICT authorization practices have some common features, there are frequently particular circumstances that require the use of special authorization practices This section reviews some of these special authorization practices, as well as highlights a number of service-specific authorizations.

THIS SECTION IN OTHER LANGUAGES:

Version française (PDF)

Versión Española (PDF)

7.1 Public-Private Partnerships, Concessions and Similar Arrangements

In many countries today, authorization of ICT services involves a unilateral grant of licence or general authorization from a regulator (or other licensing authority) to a private sector operator. The authorization authorizes the operator to provide specified ICT services, subject to certain conditions. These conditions may be set out in the authorization document itself or, as is increasingly common, in other regulations or regulatory instruments. The issuance and enforcement of an authorization is therefore generally a matter of public administrative law.

However, there have been many variations on the theme of authorizing ICT operations. In some countries, private sector investors have entered into business arrangements with governments or state-owned service providers that are more in the nature of joint ventures with government entities than simple grants of rights to operate ICT facilities or provide services. These may be referred to as concessions, franchises, Build-Operate-Transfer (BOT) schemes, Build-Transfer-Operate (BTO) schemes, Build-Own-Operate (BOO) schemes, and a number of other variants, limited only by the imagination of project finance lawyers and bankers.

Collectively, many of these arrangements have been referred to as Public-Private Partnerships (PPPs). PPPs are increasingly common vehicles for the financing and operations of large infrastructure projects, such as highways, airports and ports. In the past, PPP arrangements were useful in attracting private investment to markets where privatization or private-sector participation in the ICT sector was legally or constitutionally restricted. However, they have become less common in the ICT sector, as a result of a growing recognition that there is little public benefit to state ownership or operation of ICT service providers. PPP schemes are generally seen to be inconsistent with the promotion of liberalized ICT markets and competitively-neutral regulation and policies.

7.1.1 Concessions and Licence Agreements

This section provides further information on a subject introduced earlier in this module, namely forms of authorization, including concessions and licence agreements.

In most countries, the term “concession” is used to refer to a commercial agreement between a government and the private builder, owner or service provider of an element of public infrastructure (such as a toll road or power plant) or a business located on public property. Such agreements were once fairly common in the ICT sector in some regions, particularly where there were legal or constitutional restrictions against private sector ownership or operation of ICT facilities. However, such agreements are becoming increasingly less common in the ICT sector. They are generally seen to be inconsistent with the promotion of liberalized ICT markets and competitively-neutral regulation and policies. The reasons for the decline in such agreements are similar to those for the decline in use of Public-Private Partnerships generally (see section 7.1.2, “Public-Private Partnerships).

Nevertheless, some governments continue to play an active role in the provision of ICT services and the operation of ICT networks. An important emerging trend involves the engagement of governments, particularly local and municipal governments, in the deployment of next generation access and core networks through public-private partnerships. This trend is discussed more fully in section 7.1.2, Public-Private Partnerships and in the Practice Note entitled “Public (Municipal) Initiatives”. Links to section 7.1.2. and this Practice Note are set out below.

Concession agreements had several advantages in attracting private sector investment, particularly in markets with high levels of political or regulatory risk. Such agreements sometimes granted governments an ownership stake and revenue-sharing interest, therefore providing governments with an incentive to support the growth of the ICT or telecommunications business in question. Also, the legal remedies available for breach of contract normally applied to concessions, such as money damages and arbitration. Negotiations often fine-tuned concession terms to establish the protections and incentives necessary to attract investors and to guarantee performance by the concession holder in each particular situation.

A related approach adopted in some countries is to grant 'licence agreements'. In many cases, licence agreements were relatively similar to the detailed individual licences granted in other countries. However, they typically included some obligations – often regulatory rather than commercial – on the part of the government, regulator or other government signatory. For example, a licence agreement might establish the basis of setting tariffs during the licence period, by way of a specific price cap formula. By including such mutual obligations in an agreement, the licensee received additional legal protections against changes in its basic operating environment. A major disadvantage of licence agreements was that many had quite long terms, therefore effectively restricting sector-wide regulatory reforms from being implemented without the consent of the parties to existing licence agreements.

Some licence agreements have both regulatory and commercial concession features. It is often important to distinguish between the two. A good approach is to deal with the concession features in a concession contract between the host government (not the regulator) and the investor. In project finance terms, such an agreement would be called a government support agreement.

It should be noted that the terms concession and licence agreement have different meanings in different countries. In some Latin American countries, concessions contain most of the features and types of conditions contained in individual licences in other countries. They might be called licence agreements elsewhere. Some other countries, particularly in Asia, have granted 'concessions' that are in the nature of joint venture agreements rather than granting full authorizations to operate ICT networks independent of the government. These are discussed further under the heading 'Public-Private Partnerships'.

RELATED INFORMATION

Public-Private Partnerships

7.1.2 Public-Private Partnerships

This section provides further information on a subject introduced earlier in this module, namely public-private partnerships.

Public-Private Partnership (PPP) arrangements are increasingly common vehicles for the financing and operation of large infrastructure projects, such as highways, airports and ports. PPP arrangements were once the only vehicle legally available to introduce private sector participation in telecommunications markets in countries that permitted only state-run telecommunications operations.

It has become generally recognized in most countries in recent years that there is little public benefit to state ownership or operation of ICT service providers. With the liberalization and privatization of the global ICT industry, joint venture arrangements between governments or PTTs and private sector investors have become less common in the ICT sector in recent years. PPPs also raise concerns about whether public policy and regulation will be competitively neutral if the government holds a stake in one or more of the commercial players in the ICT sector. Nevertheless, some PPP arrangements remain in place, and a few new ones have recently been initiated.

One important emerging trend is the involvement of local and municipal governments in the direct deployment of next generation core and access networks through PPPs arrangements. Municipally-sponsored FTTH projects have arisen across Europe and in the United States. Many of these projects (though not all) are designed to grant open access to competitive broadband service providers.

Critical assessment of these municipally-sponsored FTTH projects has been mixed. On the one hand, these arrangements do not raise many concerns that the competitive neutrality of the ICT regulatory framework may be compromised by the fact that a government has a stake in a commercial player active in the ICT sector. Since municipalities rarely have regulatory jurisdiction over ICT law and policy, their involvement in FTTH projects does not threaten the competitive neutrality of the regulation of the ICT sector.

On the other hand, however, there are concerns that public intervention in the provision of ICT networks and services distorts commercial incentives for efficient investment. Furthermore, historically, PPPs in the ICT sector have not enjoyed robust success in fostering a healthy ICT market and in improving access to services for customers.

At present, it is too soon to draw any definitive conclusions about the advisability of municipal involvement in the deployment of next generation network infrastructure. We can observe, however, that governments, particularly at the municipal and regional level, should be careful to ensure that they have the legal authority and right to enter into such arrangements. It was necessary to enact legislation in France, the Netherlands, and the United States, for example, to enable municipalities to enter into PPP arrangements in the ICT sector. Moreover, at present, 14 states in the United States have enacted some form of legislation that restricts municipalities from offering ICT services.

For more information on municipally-sponsored FTTH projects, see the Practice Note entitled "Public (Municipal) Initiatives".

Traditionally, PPPs were often structured as Build-Operate-Transfer (BOT), Build-Transfer-Operate (BTO), Build-Own-Operate (BOO), or similar arrangements. In general, BOT, BTO and BOO arrangements are all project finance structures aimed at attracting investment and management expertise required to develop ICT infrastructure in countries with state-controlled ICT sectors. A variation on such structures involves contracts where an investor does not build or own any facilities, but shares in revenues from a state-owned service provider in return for providing financing, management or both. Financing contracts of this type have been entered into in China and Indonesia. An example of a management contract with revenue sharing is the Vietnamese "Business Cooperation Contract".

Some examples of countries where joint venture-type arrangements such as BTOs, BOTs, and BOOs, have been implemented include:

- BTO: Thailand, Philippines
- BOT: Lebanon, India, Indonesia (Joint Operating Schemes or KSOs), East Timor
- BOO: Malaysia, Solomon Islands

Most of these structures experienced initial success in promoting network expansion. In part this was because they were not characterized as authorizations to private service providers but rather as contracts under which private contractors would build and operate telecommunications services "owned" by the government or by a state-owned service provider. This arrangement allowed for private sector participation in telecommunications service providers without breaching laws or policies that prevented private sector ownership of service providers.

However, experience in Lebanon, Indonesia and elsewhere suggests that these models are not viable in the long term. Investors in BOT projects lack the long-term security and equity interests of a full network licensee. They are therefore motivated to maximize short-term profitability at the expense of long term network or service development. A BOT must either terminate, with the resulting withdrawal of the private investor, or it must be converted into a true authorization. If the investor withdraws, the service provider may or may not be able to continue to expand and manage the service on its own. If the concession is converted to an authorization, serious questions may arise regarding the fairness and transparency of the authorization process. In all cases, the conversion of BOT-types schemes into conventional ICT authorizations can be problematic.

Singapore has introduced a variation of a BOO-type PPP as part of its strategy to roll out national next generation network infrastructure (fixed and wireless) capable of providing high-speed "super-connectivity" throughout the country. The government has indicated that it will provide funding to operators that are selected through a competitive process to build, own, and operate Singapore's wired and wireless next generation networks. At present, it does not appear that the government proposes to acquire an ownership interest in the operators selected to build and operate the next generation networks. However, the successful operators will be expected to build and operate networks that conform to mutually-agreed upon specifications. Operators will also be required to comply with government requirements related to open-access and structural and operational separation of the network operating companies and the retail service providers. See Box 1 for more information about this PPP in Singapore.

Box 1: Funding the Construction and Roll-out of Next Generation Network Infrastructure for Singapore's Digital Super-Highway

Singapore has introduced a variation of a BOO-type PPP as part of its strategy to roll out national next generation network infrastructure (fixed and wireless) capable of providing high-speed "super-connectivity" throughout the country. Singapore's strategic plan (the Next Generation National Infocomm Infrastructure or "Next Gen NII") involves the creation of a wired, open access, and carrier-neutral Next Generation National Broadband Network (Next Gen NBN) and an open-access Wireless Broadband Network (WBN). The Next Gen NBN and the WBN are to be built, owned, and operated by the private sector. The government has made clear that the operation of the Next Gen NBN and WBN will involve structural separation of the operator of the passive network infrastructure, the operator of the active network infrastructure, and the retail services provider.

The government of Singapore has indicated that it will provide various amounts of funding to the operators of the passive and active infrastructure of the Next Gen NBN and WBN. The funding is intended to kick-start the project and to ensure that the ultra high-speed broadband service provided over these networks will be viable, affordable and sustainable in the long-term. The government issued a Call-For-Collaboration in 2006 to select the operators for the WBN. It also issued a Request-For-Concept in 2006 to begin the process of selecting operators for the Next Gen NBN.

The funding arrangements are to be negotiated privately between the government and the operators selected to construct and to operate the Next Gen NBN and WBN. At this stage, it does not appear that the government proposes to acquire an ownership interest in the operators involved with building and operating the Next Gen NII. However, operators will be expected to build and operate the infrastructure in accordance with agreed upon specifications and in compliance with government requirements relating to open-access and structural separation.

In October 2006, Singapore selected three operators for the WBN project. These operators launched initial commercial services in January 2007. The roll-out of the WBN is expected to be complete by the end of 2008.

The selection process for the operators of the Next Gen NBN is on-going. As of June 2008, the government was completing the qualification phase of the selection process. The process will move to the selection stage by the end of summer, 2008.

At present, it is too soon to evaluate the success of the PPP initiated by the government of Singapore to fund the construction of the national next generation network. Given the importance of next generation networks and the expense involved with constructing and rolling out these networks, close observation of this PPP and similar arrangements in other countries is warranted.

7.2 Re-authorization of Incumbent Service Providers

The ICT reform process in most countries includes privatization of PTTs and the granting of competitive authorizations in various market segments. Many countries have completed this process; others are in the midst of implementing it, and a few have not started.

A major step in the privatization and liberalization process in many countries is the issuance of an authorization to incumbent service providers. This can be a complicated process. Special consideration must be given to the process of authorizing an incumbent and to the definition of the incumbent's rights and obligations under this authorization.

7.2.1 Re-authorization of Incumbents: Some Considerations

This section provides further information on a subject introduced earlier in this module, namely the re-authorization of incumbents.

In many countries, successful transition to a liberalized ICT market requires that special attention be paid to the authorization of incumbent service providers. Prior to privatization and liberalization, many incumbent service providers are PTTs, which may have operated for half a century or more without a formal authorization.

New ICT laws or amendments often authorize the licensing of the incumbent service provider. The authorization process generally involves the detailed identification of existing and new rights and obligations of the service provider. While there is a trend away from use of individual authorizations in mature competitive markets, there may remain good reasons for individual authorizations for incumbents in less competitive markets with less well-defined regulatory frameworks. For example, an individual authorization can add the regulatory certainty required to implement a successful privatization of a PTT.

In some cases, incumbent service providers may receive a mix of individual authorizations and general authorizations. This approach can be useful in cases where it is considered necessary (for example where a privatization is pending) to issue an individual authorization to establish the basic rights and obligations of a PTT to operate the fixed public switched telecommunications network. In such a case, the rights of the incumbent PTT to provide other services, such as VSAT, data transmission or value added services, may be subject to general authorizations. These general authorizations would apply equally to all other service providers of the same class of service.

The rights and obligations set out in a new authorization for an incumbent operator must generally be adapted to a new and evolving sector policy and regulatory regime. In particular, the rights and obligations must often be adapted to the realities of a market-based economy, especially where the service provider is to be privatized and is to face competition for the first time in some markets.

A concern about fairness may arise if the incumbent service provider is automatically entitled to be authorized to provide services for which other service providers must obtain an authorization through a competitive authorization process. Such a situation may create a perception that the competitive playing field is not level.

In practice, the authorization of incumbents often involves a process of negotiation between the incumbent and the regulator. Additional input generally comes from professional advisors, including investment bankers and lawyers hired by the incumbent, the government, the regulator, or all of them. It is important for the regulator (or other licensing authority) to obtain a good balance of views on the contents of the authorization. In this regard, there are often competing agendas between the incumbent's management, which may want to retain as much exclusivity and market power as possible, and those promoting a competitive ICT policy. Ministries of Finance and investment bankers in the process will often focus on granting exclusivity and market advantages as means of increasing privatization proceeds. Ministries of ICT and regulators are often more focused on promoting competition as a means of increasing efficiency of ICT markets and delivering better services to the public.

In some countries, incumbents are granted authorizations for new services (e.g. cellular, data communications, ISP, value added services) around the same time as authorizations are granted to new service providers for those services. The incumbents sometimes receive the authorization outside the competitive selection process that may be used to choose new entrants. This has been the case for cellular mobile authorizations in both developed and less developed countries.

Such a process raises issues of competitive fairness. Often the new entrant pays a significant amount for the authorization under a competitive selection process, but the incumbent does not. This issue has sometimes been addressed by requiring incumbent service providers to pay a fee equal to the amount of the winning bid or a fixed percentage of that amount. This occurred when Jordan authorized a second GSM service provider in 2000, for example. Similarly, when Colombia authorized second cellular service providers in each of three regional markets, the existing service providers were required to pay 95% of the amount of the winning bid in the applicable region.

In other countries the incumbent service provider has not been required to pay authorization fees, even though new entrants do pay. Some argue that the incumbent was awarded an authorization in accordance with past practice and law, and that it would be unfair to retroactively tax it. Others have pointed out that the incumbent may have taken risks and incurred expense in developing the market. From this perspective the retroactive imposition of a substantial authorization fee may be considered inappropriate.

While there is not always a right answer in these situations, care must be taken to promote a competitively neutral environment. If preferential treatment is given to an incumbent, there should be clear benefits to the public for doing so. These may include maintenance of extraordinary network rollout obligations or other specific universal service objectives.

7.3 Service-Specific Authorizations

The scope of services authorized by an individual licence or a general authorization varies considerably from country to country. Unlike spectrum and technology standards, there have not generally been any standardized authorization classifications. A mobile services authorization in one country may authorize a wide range of mobile voice, data and even video services, including mobile television services and IMT 2000 services. In other countries, mobile service authorizations only authorize the provision of GSM standard voice services and some related GPRS or SMS services.

In the early days of telecommunications licensing, incumbent operators were often granted authorizations with a very broad scope, authorizing provision of many if not all types of telecommunications services. With the introduction of competition, new entrants were often authorized to provide services based on specific technologies, such as those based on the mobile AMPS, GSM, CDMA or TDMA standards. Other new entrants were authorized to provide specific services, such as paging or trunking services, pay telephone services, data and internet access services, and the usually vaguely defined 'value added services'.

Over the last decade there has been a trend towards convergence and harmonization in the regulatory treatment of different technologies and services. As a result, there have been initiatives to standardize the authorization approaches and authorization conditions for different types of technologies and services. These initiatives have included the introduction of unified and multi-service authorization regimes. India, Hong Kong China, Jordan, Tanzania, South Africa, Nigeria, Uganda, Botswana, Singapore, Brazil, and Trinidad and Tobago, for example, have all introduced unified or multi-service authorization regimes.

These initiatives have also included attempts to bring technologies and services that had previously been considered 'broadcasting' or 'media' transmission services under the same authorization rules as telecommunications or 'carrier' services. Examples of such initiatives include the European Union's move to standardize the approach to authorization of all 'electronic communications services' in its Authorization Directive, and Malaysia's 1999 Communications and Multimedia Act.

Despite these initiatives, many countries continue to grant authorizations or general authorizations based on different service classifications, and to a lesser extent today, based on technology classifications. The ITU World Telecommunications Regulatory Database indicates that at least 24 authorization classifications are commonly used today.

This section contains links to documents that describe some of the more common types of service and technology-specific authorizations. The Reference Documents listed below include examples of specific authorizations issued for a variety of different types of services or technologies. Please note that, as with all authorizations and other Reference Documents linked to this module, the conditions of these authorizations are often highly dependent on local market, technical, legal and regulatory conditions. They may therefore be unsuitable for use as precedents in other countries.

7.3.1 Common Authorization Classifications

Common Authorization Classifications	
• Fixed local services (sometimes includes Voice over Internet Protocol services)	• Digital Subscriber Line (DSL)
• Fixed domestic long distance services	• Cable Data
• Fixed international long distance	• Leased lines
• Mobile local services	• Very Small Aperture Terminal (VSAT)
• Mobile domestic long distance	• Fixed Satellite Service (FSS)
• Mobile international long distance	• Mobile Satellite Service (MSS)
• Public voice telephony	• Global Mobile Personal Communications Service (GMPCS)
• Mobile cellular network	• Third Generation Mobile (IMT2000)
• Cable TV network	• Paging
• Cable TV service	• Public Mobile Radio Trunked Services (PMRTS)
• Wireless Local Loop	• Internet service provision (sometimes includes Voice over Internet Protocol)
• Value added services (e.g. email, database access, electronic data interchange, etc)	• Data
Source: ITU Trends Report 2007. Adapted from ITU World Telecommunication Regulatory Database	

7.3.2 Sample Licences and Related Documents

This section contains links to examples of authorizations issued for specific types of services or technologies in different countries. In reviewing these examples, please note that the authorization conditions and procedures are dependent on local market, technical, legal and regulatory conditions. These documents may therefore be unsuitable for use as precedents in other countries.

Second National Operators

Kenya- Prequalification Notice for a SNO Licences- 2003
Nigeria- SNO National Carrier Licence

International Services Authorizations
Canada- Licensing International Services
United States- International Services Licensing Regime
Bahrain- International Services Licence

Mobile Cellular Telecommunications

Switzerland- Invitation to Tender for GSM Licences - 2003
Jordan- Prequalification Notice for 3rd Mobile Licence – 2003
Ireland- Mobile Licence Terms- 1999
South Africa- Mobile Cellular Licence- 2002

▸ Singapore -- Information Memorandum: Auction of Public Cellular Mobile Telecommunications Services Spectrum Rights

3G Wireless Services
Norway- 3G Licensing Document - 2000
Estonia- 3G Licensing Information Document - 2004
France- 3G Licensing Consultation Document - 1999
3G Licensing Case Studies
Licence Fees for 2G and Combined 2G/ 3G Licences
3G Licence Results: Europe
3G Licence Results: Asia Pacific and Canada
Comparison of 3G

▸ Nigeria -- Information Memorandum: 800 MHz Spectrum Auction

- Nigeria -- Information Memorandum for the 2 GHz Spectrum Auction

- Macedonia -- Tender for granting authorizations for radio frequencies utilization for the provision of 3G services according to the IMT-2000/UMTS standard
- Algeria -- Notice of Invitation to the expression of interest related to third generation (3G) mobile communications licenses assignment

Rural Service Licences- Least Cost Subsidy Auctions

Nepal- Rural Services Licensing- 2003
Venezuela- Rural Mobile Licensing
South Africa- 'Under Serviced Area Licence'
Handbook Universal Service Module
Nepal- OBA Approaches

Satellite Services

New Zealand- Allocation Plan for Satellite Opportunities
Canada- Licence for Use of Satellite Orbital Slot
Hong Kong- Space Station Carrier Licensing
Hong Kong- Outer Space Licences
Pakistan- Application Form for the Establishment of a Satellite Earth Station
Canada- Licensing of Fixed Earth Stations
Canada- Mobile Satellite Services Licensing
Satellite Industry Association- Regulatory Principles to Foster Market Access for Satellite Services

VSAT Services
Singapore- VSAT Licensing
Jamaica- VSAT Licence Application
India- VSAT Licensing for Data Services
Jordan- VSAT Licence Application Form
Pakistan- VSAT Licensing
International VSAT Policy Declaration

- *Iceland -- Application for a VSAT Licence*
- *Saudi Arabia -- Special Conditions of VSAT Licences*
- *Saudi Arabia -- General Terms and Conditions of VSAT Licence*
- *Switzerland -- VSAT Application Form*

Submarine Cables
Canada- International Submarine Cable Licensing
United States- International Submarine Cable Licensing

Voice over Internet Protocol ("VoIP") Licences -- Note that some countries licence VoIP services as a fixed local service, while other countries licence VoIP services as part of Internet services. We have therefore included examples of both approaches.

- Germany -- Key elements of the regulatory treatment of Voice over IP (VoIP)

- Finland -- FICORA opinion on the use of telephone numbers in VOIP Services
- Finland -- FICORA Opinion on the Regulation of Skype Services in Finland

- Singapore -- Guidelines on Licensing and Regulatory Framework for IP Telephony in Singapore
- Singapore -- Guidelines on Licensing and Regulatory Framework for IP Telephony in Singapore
- Singapore -- Specific Terms and Conditions for IP Telephony Services

- Finland -- Application of Communications Legislation to VOIP Services in Finland
- Regulatory framework for voice communication services using Internet Protocol

(CRTC, May 2005)

- Hong Kong China -- E
- Hong Kong China -- Consultation Paper on the Regulation of Internet Protocol (IP) Telephony

xecutive Summary of the Consultation Paper: Regulation of Internet Protocol (IP) Telephony

- Finland -- Application of Communications Legislation to VOIP Services in Finland
- Frequently asked questions on the regulation of Voice over Internet Protocol services
- Barbados: Voice over Internet Protocol Policy (Draft Second Circulation for Comments)
- Statement of
- The treatment of Voice over Internet Protocol (VoIP) under the EU Regulatory Framework

Telecommunications Authority on Regulation of Internet Protocol (IP) Telephony, 29 June 2005

- Federal Communications Commission - Voice Over Internet Protocol - Stevens Report
- Hong Kong China - Regulation of Internet Protocol (IP) Telephony
- Statement of Telecommunications Authority on Regulation of Internet Protocol (IP) Telephony, 29 June 2005

IPTV

- REGULATING THE "TV" OF THE FUTURE: COMPARING THE TREATMENT OF VIDEO AS AN IP-ENABLED SERVICE IN THE U.S. AND CHINA
- IPTV: Experiences of China and Chinese Taipei
- IPTV in Korea and Japan
- India -- Broad Guidelines for Issue of Licence for Commercial VSAT Service Providers and Captive VSAT Service

Converged Service Licenses

Malaysia- Licensing for Convergence
Brazil- Multimedia Communications Services
India- 'Unified' Access Service Licensing

- Tanzania -- Application Form for the Converged Licensing Framework
- Tanzania -- Content Service Licence
- Tanzania -- Application Service Licence
- Tanzania -- Network Services Licence
- Tanzania -- Network Facility Licence
- Hong Kong China: Licensing Framework for Unified Carrier Licence

Statement of the Telecommunications Authority

- India -- Licence Agreement for Provision of Unified Access Services

Other Services

Licensing WLAN Technologies
Global Wireless LAN Policies
Bahrain- Paging Services Licence
Nigeria- Public Payphone Services Licence
Nigeria- Fixed Wireless Access Licence
Hong Kong- Public Radiocommunications Services Licensing
Singapore- PSTN Services Licensing

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"

THIS SECTION IN OTHER LANGUAGES:

Version française (PDF)

Versión Española (PDF)

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.

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 Telecommunciations 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.

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.[1]

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.

[1] **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**.**

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.

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.

8.3 Unified and Multi-service Licensing

This section provides more information on unified and multi-service licensing.

One of the most significant recent developments in the ICT sector has been the move to develop and to implement unified and multi-service authorization regimes. As countries respond to convergence in the ICT sector and as regulators seek to facilitate the transition to Next Generation Networks (NGN), neutrality, consolidation and flexibility in licensing have gained importance, as was explained in section 7.2. Regulators and policy makers have integrated neutrality, consolidation, and flexibility into authorization regimes by introducing unified authorizations and multi-service authorizations (sometimes also referred to as global licenses). These forms of authorizations allow licensees to provide any of a range of services using any infrastructure and technology capable of delivering the desired services, under the umbrella of a single, consolidated authorization.

In a unified authorization regime, all categories of authorizations have been consolidated into a single, service- and technology-neutral authorization. Thus, a single authorization authorises service providers and operators to provide all services, whether at the core or access level, using any technology available. Argentina introduced a unified authorization framework in 2000. The Argentinean unified authorization (licencia ùnica) permits licensees to provide any and all telecommunications services to the public. "Telecommunications" in this context is defined as any transmission, emission or reception of signs, signals, writings, images, sounds or information of any nature, by wire, radio electricity, optical mediums and/or any other electromagnetic systems. (See Article 3 and Article 5.1 of the Telecommunications Services Licence Regulations.) The Argentinean authorization does not distinguish between facilities-based service providers and resellers, nor does it distinguish between fixed and mobile services, wire line and wireless services, or local, national, and international services. However, spectrum rights and numbering resources are allocated separately from the unified authorization. Thus, service providers and operators require a separate authorization or grant to use the radio spectrum and numbering resources. This is also

the case in the EU.

Another example of a unified authorization is the "electronic communications" authorization issued by EU members pursuant to the EU *Authorization Directive*. Electronic communications authorizations allow licensees to provide all forms of electronic communications networks and services, including voice, data, and even content-based services. Electronic communications authorizations do not, however, authorise licensees to use the radio frequency spectrum to deliver services without an authorization that specifically permits such usage.

In a multi-service authorization regime, the diverse service-specific authorizations are consolidated into a few different categories of authorizations. A multi-service authorization authorizes service providers to offer any of the designated services that fall within the relevant authorization category, using any type of communications infrastructure and technology capable of delivering the services in question. Thus, like unified authorizations, multi-service authorizations are technology-neutral. Multi-service authorizations are also largely service-neutral, although the different categories of authorizations within these regimes are often based on broad distinctions between services. For example, a multi-service authorization regime may include authorizations for network operators, public telecommunications services (including fixed and mobile voice services), and value-added services (for example, Internet access services).

In Botswana, the service-neutral authorization framework features three categories of authorizations: Public Telecommunications Operators (PTO) Licences, Value-Added Network Services (VANS) Licences, and Private Network Licences. PTO Licensees may offer fixed telephony, mobile telephony, and Internet services, among others, under their PTO Licence. VANS Licences allow licensees to provide ISP services, data services, email services, and Voice over Internet Protocol (VoIP) services, among others. Private Network Licences authorize the operation of private networks.

Tanzania's Converged Licensing Framework (CLF) is another example of a multi-service authorization regime. The CLF, which was introduced in Tanzania in 2005, features four main categories of authorizations: Network Facility Licence (NF); Network Service Licence (NS); Application Service Licence (AS); and Content Service Licence (CS). The four authorization categories in the CLF are further divided into four geographic market segments. These four geographic market segments are: international, national, regional, and district market segments.

The Tanzanian CLF also features three types of authorizations: individual licences, class licences, and exempt licences. Individual authorizations include authorizations for services that have a major economic and social impact in Tanzania and that therefore trigger higher regulatory obligations. These authorizations are issued through competitive processes at present. Most NF, NS, and CS Licences are individual authorizations. Class Licences are authorizations for services that have lesser economic and social significance. Class Licences may be issued unconditionally. AS Licences are Class Licences. Exempt licences are authorizations that only require registration with the Tanzanian Communications Regulatory Authority.

Jordan took a slightly different approach to its integrated licensing regime. The Jordanian Telecommunications Regulatory Commission (TRC) adopted a regime that includes only two kinds of authorizations: Individual Licences and Class Licences. Individual Licences are required for providers of public telecommunications services and networks that use scarce resources in the provision of some or all of their services. "Scarce resources" in this context refer to the radio spectrum, public rights of way, and telephone numbers. Service providers that do not use scarce resources or those whose use of scarce resources is determined by the TRC to be immaterial are authorized under Class Licences.

In South Africa, the *Electronic Communications Act, 2005* (ECA) features two broad categories of authorizations: individual licences and class licences. Individual and class licences differ in terms of the geographic region that licensees are authorized to serve, the nature of the undertaking (commercial versus community, free-to-air type services), and the impact that the services have on socio-economic development. The ECA recognizes three main types of individual and class licences: "electronic communications network services," "broadcasting services," and "electronic communications services".

Broadcasting services" licences are required to provide "unidirectional electronic communications intended for reception by (a) the public; (b) sections of the public; or (c) subscribers to any broadcasting service", with certain limited exceptions. "Electronic communications services" licences authorize the provision of the services that consist, in whole or in part, of the conveyance by any means of electronic communications over an electronic communications network, but not including broadcasting services. "Electronic communications network services" licences authorize a person to provide services over an electronic communications network, whether by sale, lease or otherwise, to that same person to provide electronic communications services or to another electronic communications services licensee, or to a reseller of electronic communications network services.

Box 1: The Meanings of "Electronic Communications" and "Electronic Communications Networks" in South Africa's *Electronic Communications Act, 2005*

Section 1 of South Africa's *Electronic Communications Act, 2005* includes the following definitions:

"**electronic communications**" means the emission, transmission or reception of
information, including without limitation, voice, sound, data, text, video, animation,
visual images, moving images and pictures, signals or a combination thereof
by means of magnetism, radio or other electromagnetic waves, optical, electro-magnetic systems or any agency of a like

nature, whether with or without the aid of
tangible conduct, but does not include content service;

…

"**electronic communications network**" means any system of electronic communications facilities (excluding subscriber equipment), including without limitation—
(a) satellite systems;
(b) fixed systems (circuit- and packet-switched);
(c) mobile systems;
(d) fibre optic cables (undersea and land-based);
(e) electricity cable systems (to the extent used for electronic communications services); and
(f) other transmission systems, used for conveyance of electronic communications; …

Section 1 defines "electronic communications facilities" as follows:
"**electronic communications facility**" includes but is not limited to any—
(a) wire;
(b) cable (including undersea and land-based fibre optic cables);
(c) antenna;
(d) mast;
(e) satellite transponder;
(f) circuit;
(g) cable landing station;
(h) international gateway;
(i) earth station; and
(j) radio apparatus or other thing,
which can be used for, or in connection with, electronic communications, including where applicable—
(i) collocation space;
(ii) monitoring equipment;
(iii) space on or within poles, ducts, cable trays, manholes, hand holds and conduits; and
(iv) associated support systems, sub-systems and services, ancillary to such electronic communications facilities or otherwise necessary for controlling connectivity of the various electronic communications facilities for proper functionality, control, integration and utilisation of such electronic communications facilities; …

Source: South Africa, *Electronic Communications Act, 2005,* Act No. 36, 2005.

Central to the South African approach is the breadth of the definition of "electronic communications" and "electronic communications networks". (See Box 1.) These definitions are service-neutral and technology-neutral. The primary distinction between broadcasting services and electronic communications services lies in the fact that broadcasting services are unidirectional, while electronic communications services are defined more broadly as involving the "conveyance of electronic communications". The main difference between electronic communications network services licences and electronic communications services licences is that the former focuses on network operations and the provision of network services, while the latter centres on the provision of services to the public (the application layer of the network).

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.

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.

Box 1: Nigeria – Objectives of the Unified 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.

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.

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.**

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.

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.

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.

Box 1: Features of the Transition to the Multi-Service Authorization Regime in South Africa

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.

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.

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.

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

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