

Telecommunications Regulation Handbook

Module 2

Licensing Telecommunications Services

edited by
Hank Intven
McCarthy Tétrault

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Telecommunications Regulation Handbook

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Telecommunications Regulation Handbook

Principal authors:

Hank Intven
Jeremy Oliver
Edgardo Sepúlveda

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MODULE 2

LICENSING TELECOMMUNICATIONS SERVICES

2.1 Introduction

2.1.1 Telecommunications Licences

A telecommunications licence authorizes an entity to provide telecommunications services or operate telecommunications facilities. Licences also generally define the terms and conditions of such authorization, and describe the major rights and obligations of a telecommunications operator.

Licences for new entrants in telecommunications markets are frequently granted by means of a competitive licensing process, which involves the selection of one or more operators from a group of applicants. In other cases, general authorizations are issued. These authorize any entity that complies with the basic terms and conditions of the authorization to provide a telecommunications service, without the need for an individual licence.

Licensing is a relatively recent development in many telecommunications markets. Historically, state-owned incumbent operators provided telecommunications services on a monopoly basis in most markets. Telecommunications operations were treated as a branch of the public administration, along with postal services, road transportation and other government services, and licences were not considered necessary.

In many cases, licences for incumbent operators were prepared as part of their privatization process. By specifying the rights and obligations of such operators, investors were provided with some certainty as to the business in which they are investing. The licence provides all stakeholders, including consumers, competitors and the government with a clear understanding of what the operator is and is not permitted or required to do.

Licences are particularly significant in the context of emerging and transitional economies. Licences provide certainty for investors and lenders, and with it the confidence that is required to invest the millions or billions of dollars required to install or upgrade telecommunications infrastructure in such economies.

Licences do not have the same importance in all countries. In a few countries where monopoly telecommunications operators have long been privately owned, notably the US and Canada, there have traditionally not been telecommunications licences. Instead, regulatory terms and conditions were imposed through decisions, orders or tariff-approval processes of a government regulatory authority. In some other countries, including Latin American countries, privately-operated telecommunications carriers were traditionally granted concessions or franchises.

While the terms “licence”, “concession” and “franchise” may be defined differently in the laws of different countries, these terms generally refer to the same basic concept. In the context of telecommunications regulation, they all refer to a legal document granted or approved by a regulator or other government authority that defines the rights and obligations of a telecommunications service provider. For the sake of simplicity, we will use the term “licence” only in this Module. In most cases, however, what is said about licences applies equally to concessions and franchises.

The process of licensing incumbents and new entrants is sometimes handled by independent telecommunications regulators and sometimes directly by governments or Ministers. In this Module, for ease of reference, we will generally refer to the licensing authority as the “regulator”. This term is intended to include other licensing authorities, such as Ministers.

No matter which government authority is responsible, the licensing process is generally one of the most important “regulatory” processes undertaken in the course of reforming the telecommunications sector. The licensing process is integrally tied to the structure of telecommunications markets, the number and types of operators, the degree of competition between them, the revenues earned by governments in opening markets, and, ultimately, the efficiency of the supply of telecommunications services to the public.

2.1.2 Licensing Objectives

Governments and regulators normally have several different objectives for licensing telecommunications operators. Common licensing objectives are set out below:

- (i) **Regulating Provision of an Essential Public Service** – Basic telecommunications 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 basic telecommunications services are provided in the public interest. Licences

are an important tool for exercising such control in most countries.

- (ii) **Expansion of Networks and Services and Other Universal Service Objectives** – This is a major reason for licensing new telecommunications operators in most countries. Network roll-out and service coverage obligations are often included in licences. This is particularly the case where a state-owned incumbent operator (a PTT) is privatized, or some degree of exclusivity is granted (e.g. a duopoly cellular licence, with a right to use scarce spectrum). Licences are an important tool for expanding infrastructure investment and promoting universal service and universal access objectives in developing countries. (Universal service objectives are discussed in detail in Module 6).
- (iii) **Privatization or Commercialization** – A licence is necessary where a state-owned incumbent (a PTT) is privatized. The licence specifies the rights and obligations of the operator. It is a key document in the privatization process. It specifies what the investor is buying and what the government expects from the operator and the investor.
- (iv) **Regulating Market Structure** – A key aspect of regulation is the determination of the market structure of the telecommunications sector, and in particular, the number of operators licensed to provide telecommunications services. In many countries a prime reason for licensing new telecommunications operators is to increase competition. Licensing of new operators has made competition the dominant mode of supply in some telecommunications markets (e.g. cellular, ISP), but not yet in others, including basic services. Figure 2-1 illustrates the different levels of competition in various telecommunications markets around the world. A major objective of the licensing process in many markets is to ensure the viability and benefits of new competitive entry. On the other hand, while licensing initiatives can increase competition, licensing requirements can also provide a

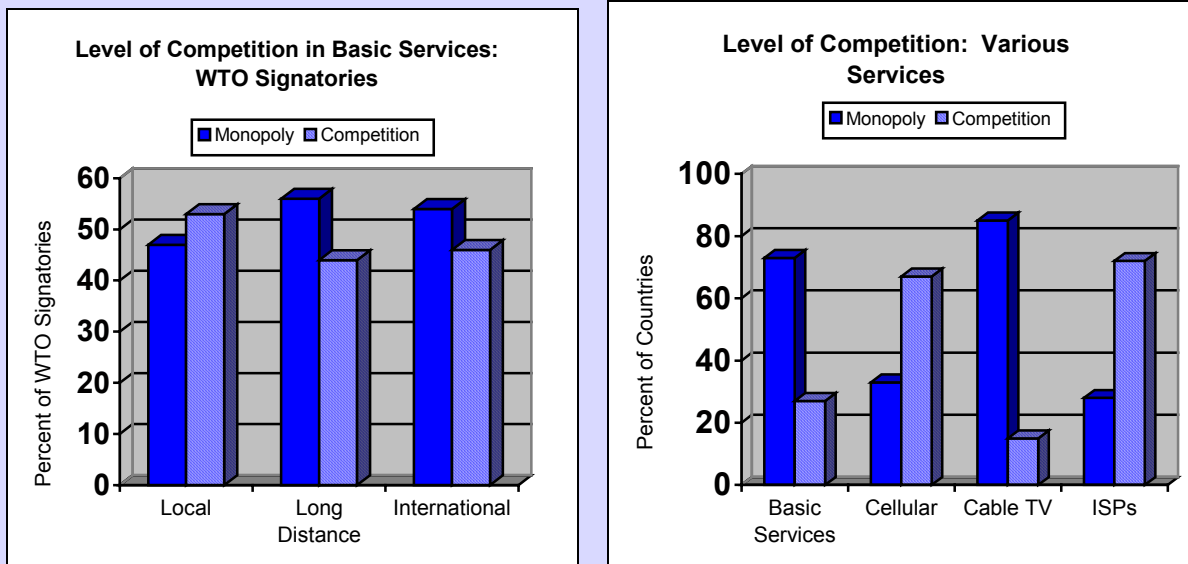
means to limit market access. This is the objective of licensing authorities in some countries, where licences have granted or retained monopoly, duopoly or other exclusive rights. Such rights are often retained for political or financial reasons. For example, governments in many countries have increased privatization proceeds to government coffers by granting monopoly rights to the newly privatized operator for a fixed term. While maintenance of monopolies generally reduces efficiency in telecommunications markets, many governments have accepted this as a “transitional” problem, in order to generate cash for purposes like debt reduction. In these cases, liberalization generally proceeds in stages.

- (v) **Establishing a Competition Framework** – Licences frequently include conditions to establish a “level playing field” for competi-

tion, and to limit the prospects that incumbent operators will abuse their dominant position in telecommunications markets. Such conditions are generally referred to in licences as “anti-competitive safeguards” or “fair trading conditions”. (Examples of such conditions are discussed in greater detail in Modules 3, 4 and 5).

- (vi) **Allocation of Scarce Resources** – Finite resources required in the operation of a telecommunications service (such as radio spectrum, numbers and rights of way) should be allocated between operators fairly, efficiently and in the public interest. This allocation often requires a balancing of competing interests and priorities. 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. Access to rights of way can

Figure 2-1: Licensing Competitive Operators



Source: ITU (1999)

be a source of revenue to government authorities or public utilities, but economic or other restrictions on access can delay the rollout of services and lead to higher consumer prices.

- (vii) **Generating Government Revenues** – Licensing of telecommunications operators and of radio spectrum can provide significant revenues to governments. An auction for new licences can generate one-time revenues. In addition, annual licence fees often provide a continuing source of revenue to fund the operations of the regulator, or for other purposes. In addition, licensing of new operators can increase the overall size of telecommunications markets and thus generate higher tax revenues for governments.
- (viii) **Consumer Protection** – Conditions relating to consumer protection are often included in telecommunications licences. Such conditions may relate to matters such as price regulation, billing practices, consumer complaint mechanisms, dispute resolution, limitations of liability for service defaults, and mandatory services to consumers (e.g. directory services, operator assistance and emergency services).
- (ix) **Regulatory Certainty** – By clearly defining the rights and obligations of the operator and the regulator, a licence can significantly increase confidence in the regulatory regime. Regulatory certainty is a critical element of the licensing processes where the aim is to attract new operators and investment. This is particularly true in the case when foreign investment is sought in riskier developing or transitional economies.

2.1.3 Licences and Other Regulatory Instruments

In most countries, licences comprise only one element of the regulatory framework. Other rules that govern operators are included in telecommunications laws, sector policies, regulations, decrees, orders, decisions, guidelines, directions and other documents of general application.

Whether an operator's rights and obligations are set out in a licence or by some other means is generally determined by two factors:

- requirements of local law, and
- the level of development of the local regulatory framework.

Matters that are dealt with in licences in some countries are dealt with in other regulatory instruments in different countries. For example, in Mexico, the quality of service standards and targets for Telmex were included in the licence (concession) prepared for Telmex prior to its privatization. In Canada, quality of service standards and targets are set out in decisions and orders of the regulator, the CRTC.

Privatization and liberalization first occurred in Europe in the United Kingdom in the early 1980s. At that time, the concept of telecommunications regulation was new to the UK. There was no existing regulatory framework. Therefore, the licence issued to British Telecom was prepared as a largely self-contained regulatory code. It governed most aspects of the operations of BT and granted a variety of exclusivity rights, such as a limited monopoly for basic voice services and limitations on simple resale. Similarly, the licence for Mercury, the first fixed-link competitor in the UK, contained a fairly comprehensive regulatory code for that operator.

A similar model was adopted in a number of other countries in Europe and elsewhere as incumbent operators were privatized and new operators were licensed.

As indicated above, some countries, particularly in North America, have no tradition of issuing comprehensive licences that spell out detailed regulatory regimes. In the United States and Canada, detailed regulatory rules are typically contained in regulations, decisions, orders or tariffs made or approved by the regulator. Accordingly, when Canada implemented a licensing regime for certain telecommunications operators for the first time in 1998, the regulator issued very short (2 page) licences for international service operators. The balance of the rules governing these operators is set out in other regulatory instruments.

Countries that do not have a clear regulatory framework and that intend to license new operators, or attract investment in incumbents, will need to develop fairly comprehensive licences. Some countries that have initiated privatization and liberalization without clear and detailed licences or other regulatory instruments have experienced serious problems due to regulatory uncertainty.

In other countries, without a clear regulatory framework, certainty has been achieved at an early stage through the use of comprehensive licences. Examples include Hungary, Uganda, Morocco and Jordan. The more detailed licences have contributed to the success of privatization and new competitive entry. Table 2-5 provides an example of the fairly comprehensive contents of a PSTN licence in a developing country without a clear regulatory framework.

With increasing competition in telecommunications markets, it should be possible to reduce the detail of the regulatory framework included either in licences or in other regulatory documents. This trend is recognized in the 1997 European Union Directive on Licensing, and the subsequent July 2000 licensing proposals, which favour minimal licence conditions and the eventual elimination of the licensing requirement.

However, the situation remains different in less developed telecommunications markets, and especially in those with perceived high country risk, economic and governance problems. Most of these markets do not have clear or consistent regulatory policies or frameworks. In such markets, it will be important to develop clear and detailed licences as part of privatization and liberalization initiatives. There should be two key goals in preparing such licences:

- **Regulatory Certainty** – Where privatization and licensing transactions are implemented before a clear regulatory framework has been developed, the rights and obligations of operators should be clearly defined in licences. Regulatory certainty on key issues (such as interconnection, price regulation and competitive safeguards) will promote success of privatization and initiatives to promote new market entry. Uncertainty will reduce investor interest. It will also reduce

proceeds to governments from privatization sales or licensing fees.

- **Defining Exclusivity Rights** – Sector policy may call for the licensing of multiple operators, or it may 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, 4 and 6, maintaining monopolies can limit sector growth and reduce operator efficiency to the detriment of consumers. Whatever policy is adopted on exclusivity, it should be clearly reflected in the licences of new operators in order to provide certainty to them, their investors and lenders.

2.1.4 Multilateral Trade Rules

The *General Agreement on Trade in Services* (GATS) and the 1997 *WTO Agreement on Basic Telecommunications* (ABT) of the World Trade Organization (WTO) include trade rules applicable to telecommunications regulation and licensing. Signatories to the ABT, as well as countries wishing to join the WTO, must bring their regulatory and licensing practices into compliance with WTO trade rules.

The trade rules relevant to the licensing process are summarized below. Further detail is provided in other Modules (e.g. trade rules affecting interconnection, fair competition and universal service). The central themes of all of these rules are evolution towards open competitive markets and transparent licensing processes.

(i) General GATS Requirements

All WTO member states are bound by the “general obligations and disciplines” of the GATS. Three of these are directly relevant to the licensing process:

- (a) Most Favoured Nation (MFN) Treatment (GATS Article II)– A licensing regime must grant market access to operators from a WTO member country on terms “no less favourable” than the terms applicable to operators from “any other country”.

- (b) 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 licensing 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 do business lawfully in a member country.
- (c) Barriers to Trade (GATS Article VI) – Licensing requirements must not “constitute unnecessary barriers to trade”.

(ii) Specific ABT Commitments

The schedules to the GATS contain additional trade commitments by individual member countries concerning specific services, including basic telecommunications services. Further, national commitments made as part of the *WTO Agreement on Basic Telecommunications* require many countries to provide greater telecommunications market access. In many cases, implementation of these commitments is phased in over a period of several years.

The *WTO Regulation Reference Paper*, which was annexed to many countries’ ABT commitments, binds them to adopt certain regulatory practices applicable to basic telecommunications services. Two of these commitments, which are set out in Box 2-1, are directly relevant to licensing.

The complete text of the *WTO Regulation Reference Paper* is set out in Appendix A.

2.1.5 The EU Licensing Directive

The 1997 EU Licensing Directive provides a detailed framework for telecommunications licensing in Europe. This framework is consistent with the WTO commitments of the EU. While it is only binding within the EU, the Directive provides a good approach for other countries to consider in developing their own licensing regimes.

The EU has recently published a proposal for new licensing Directive (*Proposal for a Directive on the authorization of electronic communications networks and services*, 12 July 2000). However, as discussed below, this new proposal largely represents a renewed effort to implement the harmonized and

Box 2-1: Licensing Rules in *WTO Regulation Reference Paper*

WTO Regulation Reference Paper – Commitments on Licensing Process

4 Public Availability of Licensing Criteria

Where a licence is required, the following shall be made publicly available:

- (a) All the licensing criteria and the period of time normally required to reach a decision concerning an application for a licence, and
- (b) the terms and conditions of individual licences.

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

6 Allocation and Use of Scarce Resources

Any 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 current state of allocated frequency bands will be made publicly available, but detailed identification of frequencies allocated for specific government uses is not required.

deregulatory approach set out in the 1997 Directive. Therefore, we will focus on the 1997 Directive below.

The objectives of the EU in adopting the Directive are set out in Box 2-2.

The Directive encourages the use of general authorizations, which the British refer to as class licences. The proposed use for individual licences is restricted to public voice telephony and services using scarce resources. Conditions of general authorizations should be limited to those relating to “essential requirements”. The contents of this type of condition are described in Box 2-3. The licence conditions and eligibility criteria for general authorizations are to be published by the licensing authority. Any person who meets the criteria will be authorized to provide service without any further selection process, regulatory decision or individual licensing requirement.

Under the 1997 Licensing Directive, restrictions are also placed on the types of conditions that may be applied to individual licences. These conditions are described in Box 2-4. Specific provisions of the Directive relating to the form and content of licences are discussed in more detail later in this Module.

In its July 2000 proposal for a new Licensing Directive, the European Commission renewed its efforts to harmonize and reduce European licensing requirements. Although the 1997 Licensing Directive gives priority to general authorizations, the EC determined that it still leaves too wide a margin for Member States to use individual licences. In fact, the EC found that individual licences have become the rule rather than the exception in most European national licensing regimes. In order to further promote market entry, the EC’s July 2000 proposal would cover all services and networks under a general authorization scheme, and would limit the use of individual licences to the assignment of radio frequencies and numbers only. The proposed directive would also further limit the number of conditions that may be imposed on service providers. It requires strict separation between conditions established under general law (applicable to all operators), conditions under the general authorization and conditions attached to individual licences.

Box 2-2: EU Licensing Objectives

Objectives of the 1997 EU Licensing Directive

To extend competition in telecommunications markets by means of a licensing regime which:

- Eliminates all barriers to entry except for objective, transparent, non-discriminatory and proportionate restrictions relating to the availability of scarce resources, such as numbers, spectrum and rights of way,
- Simplifies and harmonizes licensing processes across the EU, and
- Establishes licence conditions that are transparent and constitute “the lightest possible regulation, compatible with the fulfillment of applicable requirements”.

The EC’s July 2000 proposal aims to ensure that no information is required as a prior condition for market entry. It also places limits on subsequent verification of compliance with conditions. In addition, the proposed Directive would reduce administration charges considerably, and would require regulators to publish annual overviews of costs and charges. If charges collected by regulators exceeded their administrative costs, the regulators would be required to adjust the level of charges the following year.

2.2 Types of Licensing Regimes

In general, there are three approaches to authorizing telecommunications operators and services:

1. individual operator licences;
2. general authorizations; and
3. no licensing requirements (i.e. open entry).

These 3 categories are reflected in the regulatory framework of a number of countries. The categories are used in the EU’s 1997 Licensing Directive. While the existing legal framework in all countries does not

Box 2-3: EU Rules on Conditions for General Authorizations

1. Any conditions which are attached to authorizations must be subject to the principle of proportionality and consistent with the EU's competition rules.
2. Conditions which may be attached to all authorizations:
 - 2.1 Conditions aimed at ensuring compliance with relevant essential requirements,
 - 2.2 The provision of information reasonably required for the verification of compliance with applicable conditions and for statistical purposes,
 - 2.3 Conditions intended to prevent anti-competitive behaviour in telecommunications markets, including measures to ensure that tariffs are non-discriminatory and do not distort competition,
 - 2.4 Conditions relating to the effective and efficient use of numbering capacity.
3. Specific conditions which may be attached to general authorizations for the provision of publicly available Telecommunications services and networks:
 - 3.1 Conditions related to the protection of users and consumers, in particular, in relation to:
 - The prior approval by the national regulatory authority of the standard subscriber contract,
 - The provision of detailed and accurate billing,
 - The provision of a procedure for the settlement of disputes,
 - Publication and adequate notice of any change in access conditions, including tariffs, quality and the availability of services.
 - 3.2 Financial contributions to the provision of universal service, in accordance with Community law.
 - 3.3 Communication of customer database information necessary for the provision of universal directory information.
 - 3.4 Provision of emergency services.
 - 3.5 Special arrangements for disabled people.
 - 3.6 Conditions relating to the interconnection of networks and the interoperability of services, in accordance with the EU's Interconnection Directive and obligations under Community law.

Source: CEC (1997)

reflect this categorization, it is a useful approach for considering licensing requirement. (Once again, the North American situation is different. There have generally been no licensing requirements for telecommunications operators or services, except for spectrum licences, FCC Section 214 facilities certifications, CRTC international service licences, and, historically, public convenience and necessity certificates in some states and provinces.)

The main features of each of the three approaches to licensing are outlined in Table 2-1.

The form of a licence depends on the legal regime of each country. Matters of form are largely irrelevant to good licensing practice. What is more important is that the licence conditions are clear, proportionate and enforceable.

In many countries the grant of a telecommunications licence is a unilateral act of the regulatory authority. The licence is granted to one or more licensees subject to the terms and conditions specified in the licence. The grant of the licence is a purely administrative act.

Box 2-4: EU Rules on Conditions for Individual Licences

Specific conditions which may be attached to individual licences, include:

- Specific conditions linked to the allocation of numbering rights (compliance with national numbering schemes).
- Specific conditions linked to the effective use and efficient management of radio frequencies.
- Specific environmental and specific town and country planning requirements, including conditions linked to the granting of access to public or private land and conditions linked to collocation and facility sharing.
- Maximum duration, which shall not be unreasonably short, in particular in order to ensure the efficient use of radio frequencies or numbers or to grant access to public or private land, without prejudice to other provisions concerning the withdrawal or the suspension of licences.
- Universal service obligations.
- Conditions applied to operators having significant market power, intended to guarantee interconnection or the control of such significant market power.
- Conditions concerning ownership which comply with European Community law and the Community's commitment vis-à-vis third countries.
- Requirements relating to the quality, availability and permanence of a service or network.
- Specific conditions relating to the provision of leased lines.

Source: CEC (1997)

In other countries, a licence is a contract between the regulator and the operator. This approach is used where licences are granted by way of traditional “concessions”. Licences in this form generally set out rights and obligations of both the regulator and the operator in some detail and are signed by both parties. This “contractual” form of licence is most common and useful in countries where the legal and regulatory framework is less developed.

Over time the need for individual licences will diminish in many liberalized markets. In a highly competitive market the main justification for individual licences will be the need to fairly allocate scarce resources such as spectrum. This is one reason to separate the licensing of spectrum from the other aspects of licensing.

Whatever the legal form and process of licensing, good licensing regimes have common features. These include clarity, transparency and the avoidance of unnecessarily burdensome conditions. These features are discussed further in Section 2.4 of this Module.

2.3 The Licensing Process

The last section considered different types of licensing regimes. In this section, we consider the different processes by which licences are issued. The process will depend on the sector policies, laws and market structure in a particular country. Five common types of licensing process are discussed below.

2.3.1 Licensing Incumbent Operators

The telecommunications reform process in most countries includes privatization of PTTs and the granting of competitive licences 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 a licence to incumbent operators. This step generally

Table 2-1: Types of Licensing Regimes

Type of Licensing Requirement	Main Features	Examples
Individual Licences (Operator Specific Licences)	<ul style="list-style-type: none"> ➤ usually a customized and detailed licence document ➤ frequently granted through some form of competitive selection process ➤ useful where: <ul style="list-style-type: none"> (i) a scarce resource or right is to be licensed (e.g. spectrum) and/or (ii) the regulator has a significant interest in ensuring that the service is provided in particular manner (e.g. where the operator has significant market power) 	<ul style="list-style-type: none"> ➤ basic PSTN services in a monopoly market ➤ mobile and fixed wireless services ➤ any service requiring spectrum
General Authorizations (Class Licences)	<ul style="list-style-type: none"> ➤ useful where individual licences are not justified, but where there are significant regulatory objectives which can be achieved by establishing general conditions ➤ normally contain provisions relating to consumer protection and other essential requirements ➤ generally issued without competitive selection process; all qualified entities are authorized to provide service or operate facilities 	<ul style="list-style-type: none"> ➤ data transmission services ➤ resale services ➤ private networks
Services which may be provided without a licence (fully liberalized services)	<ul style="list-style-type: none"> ➤ no licensing process or qualification requirements ➤ useful where an activity is technically caught within the definition of activities subject to regulation (e.g. offering a telecommunications service to the public) but where there is no justification for imposing licence requirements ➤ general requirements (e.g. registration with the regulator) can be imposed through a general regulation or order 	<ul style="list-style-type: none"> ➤ Internet service providers (ISPs) ➤ Value-added services

does not involve competitive selection or other formal public process. New telecommunications laws or amendments often authorize the licensing of the incumbent operator. The licensing process involves the detailed identification of existing and new rights and obligations of the operator. In some cases, incumbent operators may be granted general

authorizations. Others, including the PTT, generally receive individual licences. While the EC licensing proposals advocate a move away from individual licences in mature competitive markets, there are still good reasons for individual licences for incumbents in less competitive markets with less well-defined regulatory frameworks.

Table 2-2: EU Licensing Directive: Types of Regulation of Competitive PSTN Operator

Type of Regulation	Form of Regulation
> Allocation of spectrum	> individual spectrum licence issued through competitive selection
> essential requirements	> general operating authorization or class licence available to all qualified operators
> anti-competitive practices and universal service	> general laws and regulations applicable to all operators in the sector

The rights and obligations incorporated in new licences for incumbents must generally be adapted to a new sector policy and regulatory regime. In particular, they must often be adapted to the realities of a market based economy, especially where the operator is to be privatized and to face competition for the first time in some markets. It is generally advisable to obtain good market input before settling the terms of such licences. This can be achieved through a public process, although it is more common to do so by retaining good professional advisors with experience in privatization and liberalization in other markets.

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

Parallel Licences for PTO and New Entrants

In some countries, established PTOs are granted licences for new services (e.g. cellular, data communications, ISP, value added services) while licences for those services are also granted to new entrants. The PTOs generally receive the licence outside the competitive selection process that may be used to select new entrants, such as new mobile operators. This has been the case for cellular mobile licences in both developed and less developed countries.

Issues of competitive fairness arise in this process. Often the new entrant pays a significant amount for the licence under a competitive selection process but the incumbent does not. This issue has sometimes been addressed by requiring incumbent operators to pay a fee equal to the amount of the winning bid or a fixed percentage of that amount. This occurred recently when Jordan licensed a second GSM operator. When Colombia licensed second cellular operators in each of three regional markets, the existing operators were required to pay 95% of the amount of the winning bid in the applicable region.

In other countries the incumbent operator has not been required to pay licence fees, even though new entrants do pay. Some argue that the incumbent was awarded a licence 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 licence fee may be considered inappropriate. While there is not always a right answer in these situations, care must be taken to provide a level playing field. If preferential treatment is granted to an incumbent, there should be clear benefits to the public for doing so. These may include maintenance of network rollout obligations or other specific universal service objectives.

2.3.2 Licensing New Entrants - Individual Licences

The issuance of individual licences to new operators requires some form of selection process. Where no existing operator holds a licence, it is best to implement a competitive and transparent licensing process in accordance with the practices discussed in detail later in this Module (especially in Section 2.4).

2.3.3 General Authorizations

Issuance of general authorizations (class licences) involves the definition of licence eligibility criteria and licence conditions. Ideally, both processes should involve prior public consultation. This improves the transparency of the licensing process and ensures all relevant information is taken into account. No selection process is required for general authorizations, since all eligible operators or service providers will be licensed.

Implementation of a general authorization regime can be more complicated where existing individual licences 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, many PTO operators are also authorized to offer value added services under their individual licences.

To ensure fair competition, regulators should ensure that any differences between general authorizations and individual licence conditions are competitively neutral. A good solution is to indicate that individual licences 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 same service are subject to the same licence conditions.

2.3.4 Spectrum Licences

Many telecommunications services require an authorization to use radio frequencies. Spectrum licences that are required to provide a service are often granted as part of an individual licensing process. It is necessary, for instance, to authorize cellular operators to use the required spectrum as well as authorizing them to operate the cellular networks.

Authorizations to operate a telecommunications 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 licences are issued, they should be issued simultaneously. A good approach is to attach a draft spectrum licence as well as a draft operator's licence to a call for applications for licences. This approach is discussed later in this Module.

One reason for retaining two separate licences is administrative convenience in 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 licence, technical, reporting and compliance requirements can be standardized across all users of the radio spectrum.

2.3.5 Spectrum Auctions, Lotteries and Comparative Evaluation Processes

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

spectrum. These approaches have similarities with other licensing processes, but there are also differences.

In the era of public telecommunications monopolies, PTTs were often responsible for spectrum assignment, and they assigned spectrum for their own use as the need arose. Many countries have since developed new approaches to spectrum assignment to replace those used in the era of public monopolies. The development of new approaches was spurred on by the *WTO Regulation Reference Paper*. Section 6 of the paper requires that procedures for the allocation and use of scarce resources, including frequencies, be carried out in an objective, timely, transparent and non-discriminatory manner.

Different approaches have been adopted to assign spectrum where demand exceeds availability. No consensus exists as to which approach is best in which cases.

Traditionally, governments often allocated spectrum to particular applications and then assigned parts of the spectrum to entities to use for specific purposes on a “first come, first served” basis. This approach is fast, practical and inexpensive, but not appropriate in today’s competitive environment. The increase in the number of competitors and demands for spectrum have led to the development of competitive approaches for its assignment. These approaches include lotteries, comparative evaluation approaches and auctions. Various combinations of these approaches have also been used. For example, applicants may be short-listed using a “comparative evaluation” approach and then participate in an auction or lottery for the final assignment of spectrum.

Lotteries

Lotteries provide a fast, inexpensive and transparent approach for selecting from substantially similar or equally qualified applicants. Lotteries should generally be preceded by a formal qualification process to select lottery participants. Otherwise, their use may hinder sector development. In the US, for example, experience demonstrates that some past lottery participants had no intention of operating telecommunications services, but simply planned to resell their spectrum licences for a profit. Other lottery

winners proved to be financially incapable of starting up service.

Comparative Evaluation Processes

Under a comparative evaluation approach, the regulator (or another government agency) decides to whom the relevant spectrum is to be assigned. Comparative evaluation provides an approach for choosing among multiple applications that are substantially equal. It also allows regulators to match specific sectoral objectives with the operators in charge of achieving them.

There are many forms of comparative evaluation schemes. In some cases, spectrum licences are awarded to applicants expected to make the best use of spectrum to serve the public. Comparative evaluation processes may involve the application of a variety of qualification and selection criteria. In most cases, these criteria will be published in advance, and applicants will strive to demonstrate how their applications meet the criteria better than other applications.

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

There have been many criticisms of the comparative evaluation approach. Criticism generally focuses on lack of transparency. No matter how stringent the evaluation criteria, there is a subjective element to most comparative evaluation processes. Hence they are sometimes referred to as “beauty contests”. Because of the subjective element, it is often suspected that regulators or other decision-makers may not exercise their judgement impartially. In some cases these suspicions have led to litigation. In others, the suspicions are not acted upon, but they nevertheless undermine the credibility of the licensing process and the government or regulator.

Other criticisms of the comparative evaluation process focus on its speed. The process is often slow. Careful evaluations of financial capability, technical plans, etc. can take time. Finally, comparative evaluation processes are sometimes criticized as involving inappropriate or questionable regulatory intervention in the selection of winners and losers. It is often said that auctions provide a better alternative to comparative evaluations, in that they rely on market forces rather than regulatory fiat to determine competitive outcomes.

Auctions

Auctions are increasingly used by regulators to grant spectrum licences to the highest bidders. In the case of auctions, the market ultimately determines who will hold the spectrum licences. However, in many auction schemes, bidders are pre-qualified using criteria similar to those used in comparative evaluation processes. As a result, participation in some auctions is limited to bidders with proven financial and technical capabilities.

Experience with spectrum auctions in the US illustrates the importance of using rigorous technical, financial and commercial criteria to pre-qualify bidders. In that country, some successful bidders later proved to be incapable of financing their aggressive bids. It appeared that others had neither the technical capability nor the intention of operating telecommunications services utilizing the frequencies they had successfully bid on.

There are different types of spectrum auctions. The most common are:

- One round or simple auctions (open or closed); and
- Multiple-round auctions (sequential or simultaneous).

Initially developed in the US in the mid 1990s, the simultaneous, multiple-round auction has become the most widely used auction approach. While there are variations from country to country, the approach generally involves a simultaneous auction for different spectrum licences. There are “rounds” of bidding, that is series of consecutive bids, for each licence. The bids continue to increase during these

rounds until a high bidder is determined for each licence.

At the beginning of each round, every bidder receives information about its eligibility to bid and about the standing high bid on each licence. New bids must normally be higher than the standing high bid by at least a minimum pre-set amount. In some cases, bidders may have the opportunity to withdraw bids made in earlier rounds, although this action is usually subject to penalties. Sometimes an “activity rule” penalizes bidders who are inactive by reducing their “bidder eligibility points”. The rounds continue until there are no new bids on any licence.

The bidding process in simultaneous multiple round auctions is usually computerized, so that bids and other auction information can be posted and calculations made quickly. Bids are typically encrypted for security and submitted electronically.

Some key features of simultaneous multiple round auctions are illustrated in Box 2-5, which describes the Canadian auction process.

There are many arguments in favour of spectrum auctions. Auctions provide an efficient, transparent and objective means of awarding spectrum licences to the bidders who value them most highly. A proper pre-qualification process can ensure that successful bidders have the technical and financial capabilities to implement services quickly and efficiently. The high investments required to win an auction can be viewed as incentives for rapid roll-out of infrastructure and services, since that is the only way the successful bidder can recoup its investment in the licence fee. Another argument in favour of spectrum auctions is that they provide the means to provide the public with the highest “rents” for the use of a public resource. Governments can use the proceeds of auctions for deficit reduction and other public priorities.

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

Box 2-5: Features of Multiple Round Auctions: 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 an 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 (1998)

infrastructure. While it is arguable that a well-financed applicant should be able to pay for both, it is not possible to prevent strategic bidding to obtain spectrum. Banks, rating agencies and financial advisors have been critical of recent record-high auction fees paid for UMTS mobile spectrum in several European countries. Share prices and debt ratings of some successful bidders have dropped due to widely-held perceptions that too much was paid by them in the auctions. Finally, high auction fees may discourage smaller participants from entering a telecommunications market. The result may be increased market concentration, and ultimately also higher consumer prices.

Simultaneous multiple round auctions have recently been used to license wireless service providers in Australia, Canada, Spain, the Netherlands, the United Kingdom and Germany. The recent UMTS (3G Cellular) licensing process provides some interesting case studies in different spectrum licensing approaches. Box 2-6 describes the quite different UMTS licensing processes utilized in a variety of European countries.

2.4 Licensing Practices

While telecommunications licensing approaches vary considerably from country to country, there are common features, particularly among better licensing practices. The following sections review good practices that will help ensure the success of a licensing process.

2.4.1 Transparency

Procedural transparency is one of the fundamental requirements of a successful licensing process. The importance of transparency in the licensing process is evidenced by its inclusion in the *WTO Regulation Reference Paper* (see Box 2-1).

Transparency requires that a licensing process be conducted openly and that licensing decisions be made based on criteria published in advance. These requirements apply to all licensing decisions, including ones to award or revoke a licence. The licensing processes described later in this Module

Box 2-6: Auctions and Comparative Evaluations – UMTS Case Studies

Germany – In August 2000, Germany auctioned off 12 blocks of UMTS spectrum. The German regulator (RegTP) published the rules applicable to the award of the UMTS licences on 18 February 2000. The rules provided that eligibility to take part in the auction would be governed by the basic eligibility requirements of the Telecommunications Act. Bidders were required to bid successfully for at least two blocks of spectrum to qualify for a licence. Minimum bid increments were set at 10 percent. Additional rules were established to prevent bidders from influencing the outcome or controlling the pace of the auction. While the auction took place, for example, small groups of representatives of each bidder were isolated from 8 a.m. to 6 p.m. each day, with two observers from RegTP present with each group at all times. Bidders were not able to see what rivals were bidding. Only the highest bids for each block were made known to bidders.

Germany's UMTS spectrum auction lasted for 14 days and 173 rounds of bids. At the end, six operators each obtained two blocks of spectrum and 20-year licences. The licences require operators to provide coverage of at least 50 percent of the German population by the end of 2002. This auction concluded with record bids for UMTS licences: a combined total of over USD 46 billion. As a result of the enormous amounts paid, concerns were expressed that some operators may well end up spending more on acquiring the licences than on building their networks.

United Kingdom, Spain and Netherlands – The UMTS spectrum auction held in the United Kingdom in April 2000 raised USD 32.58 billion. That process continued for more than 100 rounds over a period of more than four weeks. The Netherlands auctioned off five licenses for USD 2.3 billion in July 2000. Spain, on the other hand, raised only USD 425 million from its sale of four UMTS licences in March 2000.

Norway – In Norway, a comparative evaluation process was used instead of an auction to grant UMTS spectrum licences. Applicants were required to meet minimum eligibility requirements, such as a commitment to meet specific coverage and roll out obligations, and proof of financial strength/capability. The two main selection criteria were coverage (geographical and in terms of population) and roll out. Financial aspects, quality of service, environmental impact and previous experience were secondary criteria.

Norway's emphasis was not on raising as much money as possible from the licensing of spectrum for 3G mobile systems. Rather the goal was to encourage rapid network development and to increase the country's overall competitiveness. In Norway, wireless operators are required to pay moderate administrative and frequency management fees. Operators awarded 3G spectrum licences were required to pay a special annual fee of approximately USD 2 million. In addition, subject to parliamentary approval, 3G licensees were required to pay a one-time lump sum of approximately USD 11 million. These sums are very small compared with the results of the spectrum auctions in the United Kingdom and Germany.

Sweden – In Sweden, spectrum licences for 3G mobile communications systems will also be awarded using a comparative evaluation process. Swedish law provides that spectrum licences must be awarded based on specific criteria. As in Norway, the main selection criteria for the award of 3G spectrum licences in Sweden are coverage and roll out. Modest fees will be charged for the spectrum licences. This approach is considered beneficial in that it will enable operators to invest in network development. High spectrum fees paid by operators will not be passed on to customers.

reflects the principles of transparency. Key features of such processes include:

- advance publication of a call for applications, with application process (tender) rules, qualification and selection criteria;

- separation of qualification and selection processes;

- return of unopened financial offers (bids) to applicants who do not meet the published qualification criteria; and

- public opening of sealed financial offers from qualified applicants.

A transparent process can be different in the case of electronic applications or auctions. These are discussed above under the heading Auctions.

Transparency is best measured from the point of view of the participants in the licensing process. It is good practice for a regulator to take all reasonable steps to ensure that participants in the licensing processes, including applicants, existing licensees, and competitors as well as the general public, perceive the process to be fair.

Conducting a transparent licensing process is sometimes perceived to be more time consuming and difficult than less transparent alternatives. The process, for instance, of publishing procedural rules and selection criteria in advance can be difficult for a newly formed regulator in a country where procedural transparency is not entrenched in government practice.

However, the absence of transparency undermines investor confidence in the fairness of the entire regulatory process and in the telecommunications market itself. Lack of transparency can significantly slow the process of liberalization and reduce the benefits of privatization.

2.4.2 Public Consultation

It is good practice to engage in public consultation before and during a licensing process. To start, it is often useful for a regulator to invite public comment on the approach to be taken in a proposed licensing process before it starts. Consultation with stakeholders reinforces the perception of a transparent process. Consultation allows the regulator to receive directly the views of consumers, existing operators and prospective applicants on a proposed licensing initiative. This allows licence terms and conditions and licensing procedures to be fine-tuned to maximize the prospects for a successful licensing process.

Consultation is particularly important where a general authorization is to be issued. Advance publication of proposed conditions of general authorizations provides the main opportunity for

public comment. By contrast, in a competitive licensing process there are usually other ways for stakeholders to make their views known, such as pre-bid conferences and written exchanges of questions and answers.

Consultation can be formal or informal. In the context of any major licensing initiative, it is generally advisable for the regulator to establish a formal and transparent consultation process. A good approach is for the regulator to publish a notice stating its intention to launch a licensing process, and inviting comments on the proposed approach. The notice should set forth in some detail the proposed approach and any specific issues on which comments are sought. Where the regulator is unsure of the best approach, comments can be invited on different options.

Notices of this kind should be sent to all interested parties, including prospective applicants, existing licensees, consumer and industry interest groups. In some cases, a public meeting is held to allow a public exchange of views by interested parties. Copies of written comments can also be published.

A pre-licensing consultation process increases the likelihood that the regulator's approach to licensing 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.

2.4.3 Licence Fees

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

- a fee paid as a premium or "rent" to a government or licensing authority for the right to operate a network, provide a service or use a limited resource, such as radio spectrum or numbers;
- administrative charges to compensate a regulator for its costs in managing and supervising use of the radio spectrum; and

- administrative charges to compensate a regulator for costs incurred in performing other regulatory functions, such as licensing operators, ensuring compliance with licence terms, resolving interconnection disputes, establishment and supervision of other aspects of the regulatory framework, etc.

It is good practice to differentiate the above-noted types of fees. This improves transparency and makes it easier to determine that the administrative charges related to cost recovery are indeed cost-based. Separating administrative licence 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 telecommunications regulator.

It is generally accepted that administrative fees should not impose unnecessary costs on the telecommunications sector. The most transparent manner by which to achieve this objective is an explicit cost-recovery scheme. Cost recovery schemes involve establishment of licence 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 telecommunications revenues, licensed coverage areas or types of services. The most common allocation factor is revenues.

The July 2000 EC proposal to replace the 1997 Licensing Directive criticized the “lack of transparency and high fees” of its European Member States. It provides the following proposal:

“(15) Administrative charges may be imposed on providers of electronic communications services in order to finance the activities of the national regulatory authority in managing the authorization system and for the granting of rights of use. Such charges should be limited to cover the actual administrative costs for those activities. For this purpose transparency should be created in the income and expenditure of national regulatory authorities by means of annual reporting about the total sum of charges collected and the

administrative costs incurred. This will allow undertakings to verify that administrative costs and charges are in balance. Administrative charges should not act as a barrier to market entry. Such charges should therefore be distributed in proportion to the turnover on the relevant services of the undertaking concerned as calculated over the accounting year preceding the year of the administrative charge. Small and medium sized undertakings should not be required to pay administrative charges.

(16) In addition to administrative charges, usage fees may be levied for the use of radio frequencies and numbers as an instrument to ensure the optimal use of such resources. Such fees should not hinder the development of innovative services and competition in the market.”

2.4.4 Balancing Certainty and Flexibility

Telecommunications licences should balance regulatory certainty with the flexibility necessary to address future changes in technology, market structure and government policy.

In many countries, a balance between regulatory certainty and flexibility is achieved by using regulatory instruments other than licences as main elements of the regulatory framework. However, where a country’s regulatory regime is not well developed, it is often necessary to include a reasonably comprehensive codification of the basic regulatory regime in a licence. This is necessary to provide the certainty required to attract new entrants and substantial investment to the sector.

Licence conditions should be sufficiently flexible to allow their integration into the general regulatory framework for the sector as it develops. Licensing an operator should not preclude future regulatory reform.

There are several approaches to providing such flexibility, including:

- permitting unilateral licence amendment by the regulator;
- establishing short licence terms;

- permitting licence amendments with the mutual consent of the licensee and regulator; and
- permitting unilateral amendments by the regulator only of specific licence conditions that should constitute part of the country's 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 licence, such as a fixed line or cellular licence.

The fourth approach is more attractive in this regard. To implement it, a distinction can be made between licence conditions that are of a regulatory nature and those which can only be amended with the agreement of the licensee. For example, licence 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 licence may be subject to modification only on consent of the operator. These would normally include conditions such as the term of the licence and the licence acquisition fee payable.

Where the regulator has the right to amend the general regulatory conditions of a licence, 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.

2.4.5 Distinguishing Licensing from Procurement

The process of licensing a telecommunications operator 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 licensing process.

In licensing a telecommunications operator, a regulator is not buying goods or services using public money. In essence, licensing involves offering a business opportunity to qualified investors who agree to comply with the licence conditions. The regulator is more a seller than a buyer.

This observation leads to two important recommendations for licensing processes:

- The regulator must offer to licence applicants an opportunity that is financially attractive to experienced and competent telecommunications operators. While some licensing 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 telecommunications licences will attract some bidders. However, many are not financially or technically capable of meeting the regulator's objectives to expand and improve services.
- Government procurement procedures are generally not suitable for a telecommunications licensing 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, and delay and confusion about the real goals of the licensing process. For example, government procurement officials generally want to see detailed specifications for every aspect of the goods and services being purchased and a careful inspection and monitoring of installation and performance after selection and delivery. This kind of micro-management is inappropriate in a telecommunications licensing process. As discussed below, clear qualification requirements should be established. However, the regulator is generally concerned only with results. What matters is whether - not how - licence conditions are complied with. From this perspective, such issues as technology choices, management structures and marketing strategies should not be the subject of licence conditions or selection criteria.

Other problems are experienced in trying to apply standard government procurement procedures to a telecommunications licensing process. It is generally best to avoid such procedures, and to use a simple and transparent competitive licensing process, based on internationally accepted telecommunications licensing procedures.

2.4.6 Concessions, BOTs and Similar Arrangements

A licence is a grant by a public authority of a right to operate a service, subject to the terms and conditions specified in the licence or in other regulatory instruments. The issuance and enforcement of a licence is therefore always, to some extent, a matter of public or administrative law. As indicated above, licences, concessions and other types of government permits to operate telecommunications facilities and services have more in common than not.

However, in some cases, private sector investors have entered into business arrangements with governments or state-owned operators that are more in the nature of joint ventures with government entities than independent rights to operate telecommunications facilities or provide services.

Before describing these arrangements, the term “concession” should be discussed. In most countries, this term is used to refer to a document that establishes a commercial agreement between a government and the private builder, owner or operator of an element of public infrastructure (such as a toll road, power plant or telecommunications network) or a business located on public property. Contractual remedies, such as money damages, are available for breach of a concession through civil courts or arbitration. Governments can fine tune concession terms to establish the protections and incentives necessary to attract investors and to guarantee performance by the concession holder.

Some licences have both regulatory and concession features. It is 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 term concession has different meanings in different countries. For example, in some Latin American countries, such as Mexico, the term concession is used to refer to a document (e.g. the Telmex Concession) that is essentially a licence, not a commercial agreement, although it is signed by the government and the concession holder.

Some countries, particularly in Asia, have granted concessions that are in the nature of joint venture agreements rather than granting full licences to operate telecommunications networks independent of the government.

Many variations are possible on the theme of “joint ventures” between private sector investors on the one hand and governments or PTTs on the other. These include Build-Operate-Transfer (BOT), Build-Transfer-Operate (BTO), Build-Operate-Own (BOO), and an alphabet soup full of alternatives limited only by the imagination of project finance lawyers and bankers. Some examples of countries where such arrangements have been implemented are listed below:

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

In general, these are all project finance structures aimed at attracting investment and management expertise required to develop telecommunications infrastructure. 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 operator 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”.

Most of the types of structures discussed in this Section have experienced initial success in promoting network expansion. In part this was because they were not characterized as licences to private operators but rather as contracts under which

private contractors would build and operate telecommunications services “owned” by the government or by a state-owned operator. This arrangement allowed for private sector participation in telecommunications operators without breaching laws or policies that prevented private sector ownership of operators.

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 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 licence. If the investor withdraws, the operator may or may not be able to continue to expand and manage the service on its own. If the concession is converted to a licence, serious questions may arise regarding the fairness and transparency of the licensing process.

2.4.7 Service Areas

The definition of geographic service areas to be covered by a new licence presents unique challenges. Different approaches have been taken in different countries. In some cases, national licences are issued, while in others, a distinction is made between regions or between rural and urban areas. In some cases, national licences are offered in parallel with competing regional licences for the same service.

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 operators to serve only financially less viable rural areas. In some cases, the failure of the private sector operators to perform well in such areas has been used as evidence to argue against further sector liberalization.

The following points are relevant in selecting licensed service areas:

- Financial viability must be a key factor. If financially non-viable rural or high cost areas are licensed, 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 6.
- Experience shows that regional licensees often merge with, or are acquired by, other regional licensees to serve larger regions or form national operators. Examples range from the Colombian cellular operators 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 license several competing national operators at the outset, rather than numerous financially weaker regional operators. The result will be lower transaction costs for the sector, and less disruption due to integration of different operating systems.
- Licensing operators 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 operator retains the right 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 5.
- National licences 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.

2.4.8 Qualification Criteria

It is important to distinguish between criteria relating to the qualification of an applicant to participate in a licensing process and criteria for the selection of a

successful licensee from among the qualified applicants.

In the case of a general authorization, only the qualification criteria are relevant because there is no selection to be 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. Only qualified applicants participate in the second phase – the licensee selection process.

Qualification criteria are minimum requirements for the right to participate in the selection process. Generally, qualification criteria are limited to ensuring applicants have the financial and technical resources and experience to successfully operate the licensed service.

Some countries impose foreign ownership restrictions that establish minimum levels of local ownership for licensed operators. Foreign ownership restrictions are generally contrary to the spirit, if not the letter of foreign trade agreements, including the GATS. However, various WTO signatory countries have registered exceptions permitting them to continue to apply foreign ownership restrictions. Over time, such restrictions are likely to be phased out in most countries.

The importance of establishing clear and rigorous qualification criteria is related to the level of competition in the applicable service. In the case of individual licensees that will enjoy monopoly or other exclusive rights, it is of critical importance to ensure that the licensed operator is financially and technically able to meet its licence obligations. Otherwise, the licensee may fail to meet important licence conditions, such as those related to network rollout, service coverage and quality. The process of enforcing licence compliance or revoking and re-tendering a licence in the case of default is time consuming, costly and disruptive for consumers.

In the case of competitive services, competition will generally discipline the market. If a market is sufficiently competitive, consumers will switch from an operator that fails to provide adequate service to

another operator that does provide it. A qualification process is therefore less important.

Recent experience in spectrum auctions demonstrates, however, that even in relatively competitive markets, such as mobile services in Brazil and the US, 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 public with service using such resources.

Some licensing processes involve more than one qualification phase. In issuing a large individual licence, a pre-qualification requirement is often established. This limits the eligibility of applicants who can participate in the final qualification process. It is justified, for example, where there are high costs incurred by the regulator (and applicants) in conducting a detailed qualification process or where confidential access to information or facilities is granted to applicants.

In those circumstances it makes sense to discourage participation in the process by applicants who are unlikely to meet the qualification criteria or to submit a competitive application. Various pre-qualification options exist. These include:

- payment of a substantial registration fee;
- a substantial document purchase fee; and
- use of a proxy indicator of experience and resources (e.g. minimum number of customers or lines in service for similar services in other markets).

It is important to specify whether qualification criteria are in any way relevant to selection. Transparency requires that applicants be told whether minimum compliance with qualification criteria is sufficient. There has been litigation against regulators in some countries where certain qualification criteria were specified, and then some qualified applicants were rejected on the basis that they were less qualified than others.

Table 2-3 sets out possible qualification criteria for a variety of different services.

2.4.9 Selection Criteria

There are two basic types of selection processes:

- Competitive selection based on a single quantitative criterion. Examples include:
 - an auction where the highest bidder wins; and
 - a subsidized rural service competition, where the operator that bids the lowest subsidy wins.
- Comparative evaluation where based on a more subjective evaluation of one or more quantitative or qualitative criteria.

Advantages and disadvantages of both approaches are discussed above under the heading Spectrum Auctions, Lotteries and Comparative Evaluation Processes. The single criterion approach is clearly the most transparent and simplest to use. It is the most consistent with international trade agreements, and the most frequently recommended approach of international financial institutions and international development organizations that promote telecommunications sector reform. However, it may not always result in the selection of the best qualified applicant, and, in the case of an auction, it may result in the imposition of excessive costs on the sector.

There are many variations on these two basic approaches. For example, in some cases, there is more than one quantitative criterion, with a weighting scheme for the various criteria that will result in a single “score”. In other cases, numerical scores are given for essentially subjective measures, such as the experience record of an applicant, or the quality of its management

Several observations can be made about the choice of selection criteria:

- 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 selection is a zero-sum game. Each applicant has a finite amount of cash and other resources to devote to the

proposed service. Resources which are allocated to one aspect of an application on which selection is based (i.e. the financial offer or accelerated roll-out commitments) are not available to fund other aspects of the operation which are not related to selection criteria (i.e. universal service, lower prices, introduction of enhanced services).

- Transparency is increased by use of simple quantitative selection criteria. A competitive selection 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, 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.

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 indirectly included in the qualification process. For example, coverage, rollout and universal service commitments can be specifically incorporated as licence conditions that any successful applicant will have to comply with. All applicants will then incorporate these minimum requirements into the calculation of their financial bid.

Table 2-4 describes possible types of selection criteria and summarizes their advantages and disadvantages.

2.5 Contents of Licences

The contents of licence documents vary considerably depending on the country, the service and the operator. As indicated above, much depends on the state of development of the regulatory regime in a country. Where it is well developed, licences tend to be shorter. Where it is not well developed, licences must often include considerably more detail, in order to provide a comprehensive regulatory framework for the operator or service being licensed. For

Table 2-3: Possible Qualification Criteria

Licence Type	Possible Qualification Criteria	Rationale
First new competitive fixed network (local or international service)	<ul style="list-style-type: none"> ➤ Applicant not currently licensed to offer a competitive service; not associated with the incumbent ➤ Applicant has a minimum number of fixed lines in service in other countries/markets (an international PTO as partner) ➤ Relevant experience in similar markets (direct or by contract) ➤ Financial comfort letter from recognized bank ➤ Business plan, including pro forma financial statements and a marketing plan ➤ Technical plan, including details of network planning and roll out and technology selections 	<ul style="list-style-type: none"> ➤ Effective competition will not develop between related entities ➤ Only experienced operators can meet the significant challenges facing a start up fixed line competitor ➤ Experience and contacts in local market increases prospects of successful start-up ➤ Evidence of access to required financing ➤ Evidence of financial viability and likelihood of success of the project; disadvantage in that it is costly to prepare plan ➤ Business plan and technical plan can demonstrate detailed and viable service plans and knowledge of local economic and other conditions
Competitive cellular service (first new entrant in an emerging market)	<ul style="list-style-type: none"> ➤ Similar to, but less onerous than, above 	<ul style="list-style-type: none"> ➤ Presence of competition reduces (but does not eliminate) public costs of failure ➤ Significant economic and sector development objectives will be achieved by successful launch ➤ Valuable and scarce spectrum will be allocated to the selected operator on an exclusive basis
Data transmission service in highly competitive market	<ul style="list-style-type: none"> ➤ None 	<ul style="list-style-type: none"> ➤ General authorization is best approach ➤ No scarce resources involved ➤ Existing competition makes success or failure of this operator relatively unimportant
Broadband wireless services in highly competitive market	<ul style="list-style-type: none"> ➤ Financial comfort letter ➤ Evidence of experience in successful operation of similar businesses in any market 	<ul style="list-style-type: none"> ➤ Spectrum is a scarce and valuable resource. Regulator has a important role to play in ensuring efficient use and avoiding warehousing

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example, if a price regulation regime already exists in a country, it will not be necessary to spell it out in a licence. However, where no rules on price regulation exist, it is essential that they be spelled out in

the licence document (even to say that prices will be unregulated). Certainty is the key theme in good licensing practice.

Table 2-4: Possible Selection Criteria

Selection Criteria	Advantages	Disadvantages
Comparative Evaluation – based on subjective assessment and comparison by the regulator of applications based on a list of qualitative and/or quantitative criteria	<ul style="list-style-type: none"> ➤ Maximum flexibility and discretion to select the most attractive application ➤ Allows applicants to focus on factors they believe are important and to convince regulator accordingly 	<ul style="list-style-type: none"> ➤ Non-transparent ➤ Subject to accusations of bias or corruption from losing bidders which are hard to refute and damage regulatory credibility ➤ Risk of confusion among bidders who may not clearly understand regulatory priorities
Pure Auction – selection from among qualified bidders based on the highest financial bid	<ul style="list-style-type: none"> ➤ Maximum transparency ➤ Market efficiency – licence awarded to the bidder which values it most ➤ High bidder will have strong incentive to roll out service quickly to recover its bid ➤ Suited to licensing in competitive markets 	<ul style="list-style-type: none"> ➤ Payment of fee can divert financial resources from service provision to auction fees (government revenue) ➤ Encourages applicants to minimize resources devoted to other important priorities (i.e. rollout, coverage etc.)
Pure Auction – selection based on quantitative criteria, other than cash, relating to the service (i.e. time required to meet roll-out target, commitments on maximum prices for consumers)	<ul style="list-style-type: none"> ➤ As above ➤ Regulator can focus bidder resources on service development or other priorities as opposed to government revenues 	<ul style="list-style-type: none"> ➤ Encourages applicants to minimize resources devoted to priorities which are not selection criteria, unless they make business sense
Combined auction/comparative selection via weighted formula	<ul style="list-style-type: none"> ➤ A compromise which has many of the benefits of both auction and comparative selection ➤ Applicants are awarded points based on selection criteria 	<ul style="list-style-type: none"> ➤ Difficult to develop a sound formula that compares “apples to apples” ➤ Compromise has disadvantages of both comparative selection and auctions ➤ Less transparent than pure auctions

Table 2-5 provides an example of the contents of a fairly comprehensive licence. It is based on the contents of a PSTN operator'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 also covers many of the areas often dealt with in licences for other services, such as mobile services – except that licences for such other services can usually be much less comprehensive. Some additional and different conditions will be required in licences for particular services.

Not all of the matters included in Table 2-5 will be necessary in all licences for PSTN services. In many countries some of the matters included in the table will already be covered in general laws, regulations or policies. Examples include general regulations on universal service or licence fees, a competition law or general rules of practice and procedure governing licensee information reporting or licence termination and renewal. It generally does not matter which type of legal document is used to deal with these issues, provided the provisions are stated clearly and are enforceable under local law.

Table 2-5: Contents of a PSTN Operator's Licence (Example for Emerging Economy)

Contents	Notes
Part 1 – Background and Identification of Parties	
Recitals	<ul style="list-style-type: none"> ➤ Provides background, governing law, licensing circumstances, etc. ➤ Important for posterity, and for courts and governments interpreting the licence
Naming of parties	<ul style="list-style-type: none"> ➤ Ensure licensed entity has legal and financial substance
Definitions	<ul style="list-style-type: none"> ➤ Key to clarity of licence conditions ➤ Should repeat relevant definitions from laws, regulations, etc., since these may change
Part 2 – Grant of Licence	
Describe scope of licence: services, facilities and spectrum licenses	<ul style="list-style-type: none"> ➤ Approaches may differ (e.g. licensing of facilities or services) ➤ Spectrum often licensed separately – refer to separate licence ➤ Sometimes useful to define exceptions – i.e. what licensee is not entitled to do ➤ Specify services licensee may not offer (e.g. to implement competition policy)
Exclusivity rights	<ul style="list-style-type: none"> ➤ Define precisely, including time limits, possible extensions and any pre-conditions for extensions
Term of licence	<ul style="list-style-type: none"> ➤ Duration of licence and renewal terms, if applicable ➤ Include effective date of licence
Part 3 – Licence Fees	
Licence acquisition fee	<ul style="list-style-type: none"> ➤ Usually based on competitive bid or fixed in advance ➤ One time fee ➤ May be payable in installments, with revocation penalty

Table 2-5: Contents of a PSTN Operator's Licence (Example for Emerging Economy) (cont'd)

Operating licence fees	<ul style="list-style-type: none"> ➤ Periodic fee (usually annual) ➤ Often intended to recover administrative costs of regulation ➤ Fees should not exceed demonstrable administrative costs ➤ Should be impartial assessment of fees across industry
Spectrum fees	<ul style="list-style-type: none"> ➤ Usually provided for in spectrum licence ➤ Cost recovery for spectrum management ➤ Sometimes higher fees (if no licence acquisition fee)
Part 4 – General Conditions of Licence	
Application	<ul style="list-style-type: none"> ➤ Include essential requirements and public interest matters applicable to all or most licences for telecommunications services
Eligibility	<ul style="list-style-type: none"> ➤ Cite requirements to retain eligibility to hold licence (if any)
Ownership and control rules	<ul style="list-style-type: none"> ➤ Cite any restrictions on ownership and control of licensee (e.g. cross-ownership with major competitors, foreign ownership restrictions)
Facilities and equipment	<ul style="list-style-type: none"> ➤ Rules on equipment that may be used (e.g. type approval rules)
Books, records and reports	<ul style="list-style-type: none"> ➤ Any applicable rules (e.g. to verify price or revenue cap regulation) ➤ Specify reporting requirements and rules on provision of information to the regulator
Co-operation with regulator	<ul style="list-style-type: none"> ➤ Specific obligations to provide access by regulator to information or premises, and to co-operate with regulator for specific regulatory purposes
Co-operation with other governmental authorities	<ul style="list-style-type: none"> ➤ 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)
Access to rights of way and other public property	<ul style="list-style-type: none"> ➤ Rights of operator 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)
Access to private property	<ul style="list-style-type: none"> ➤ Any rights of operator 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

Table 2-5: Contents of a PSTN Operator's Licence (Example for Emerging Economy) (cont'd)

Part 5 – Specific Conditions of Licence	
Use of radio spectrum	<ul style="list-style-type: none"> ➤ Often dealt with in separate spectrum licence ➤ Include rules on efficient spectrum use
Numbering	<ul style="list-style-type: none"> ➤ Assignment of numbers, if applicable ➤ Refer to national numbering plan, if applicable ➤ Rights and obligations regarding implementation of number portability arrangements
Directory and Emergency Services	<ul style="list-style-type: none"> ➤ Obligations to provide such services, and co-operate with other operators in providing them jointly
Universal Access and/or Universal Service Obligations	<ul style="list-style-type: none"> ➤ See Module 6 – Universal Service
Network roll-out and service coverage obligations	<ul style="list-style-type: none"> ➤ Specific obligations (usually set out in Appendix, including maps, number of access lines, etc.) ➤ See Module 6
Quality of service	<ul style="list-style-type: none"> ➤ 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
Security for Performance of Licence Obligations	<ul style="list-style-type: none"> ➤ Reference details of performance bond or other method used to secure performance of licence obligations ➤ Bond or security document(s) may be annexed to licence
Part 6 – Relations with Customers	
Terms and conditions of service	<ul style="list-style-type: none"> ➤ Terms and conditions usually set out in regulatory documents ➤ May include mandatory contents of customer contracts ➤ May include consumer “code of rights”
Customer complaints	<ul style="list-style-type: none"> ➤ Rules on handling and recording complaints ➤ May be set out in regulatory documents
Consumer protection	<ul style="list-style-type: none"> ➤ Provisions may be in regulatory documents or approved customer contracts (to provide notice to customers) ➤ Include protection of privacy ➤ Rules often published in telephone directories
Price regulation	<ul style="list-style-type: none"> ➤ 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 licence ➤ Details in appendices or referenced regulatory documents

Table 2-5: Contents of a PSTN Operator's Licence (Example for Emerging Economy) (cont'd)

	<ul style="list-style-type: none"> ➤ See Module 4 – Price Regulation
Dispute resolution	<ul style="list-style-type: none"> ➤ Method to resolve disputes over application of licence
Part 7 – Relations with Other Operators	
Interconnection	<ul style="list-style-type: none"> ➤ See Module 3 ➤ Include rights and obligations to interconnect
Anti-competitive practices	<ul style="list-style-type: none"> ➤ See Module 5 ➤ Include remedies and sanctions, if not specified elsewhere
Access to shared facilities (poles and conduits)	<ul style="list-style-type: none"> ➤ Rights and obligations regarding collocation and access to poles, towers, conduit, etc. ➤ See Module 3
Resale	<ul style="list-style-type: none"> ➤ Rights and obligations regarding resale by licensee and by other service providers (e.g. for payphones, Internet services, value added and simple resale)
Dispute resolution	<ul style="list-style-type: none"> ➤ Method to resolve disputes with other licensees, e.g. regarding interconnection (see Module 3)
Part 8 – Amendment, Renewal and Termination	
Amendment by regulator	<ul style="list-style-type: none"> ➤ See Section 2.4.4 ➤ Unilateral modifications should only apply to certain regulatory matters, not key commercial terms of licence ➤ Procedural safeguards ➤ Competitive neutrality should be maintained
Amendment by mutual agreement	<ul style="list-style-type: none"> ➤ Provides certainty, where needed ➤ Key commercial terms usually only subject to amendment by agreement between licensee and regulator ➤ Competitive neutrality should be maintained
Compliance	<ul style="list-style-type: none"> ➤ Specify sanctions and penalties for failure to comply with various terms of licence (e.g. fines, forfeiture of performance bonds, revocation)
Renewal	<ul style="list-style-type: none"> ➤ Include renewal rights (e.g. if certain performance targets met)
Termination for cause	<ul style="list-style-type: none"> ➤ 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
Termination if no renewal	<ul style="list-style-type: none"> ➤ Clarify surviving rights of licensee, property rights, treatment of assets, and other effects of non-renewal

Table 2-5: Contents of a PSTN Operator's Licence (Example for Emerging Economy) (cont'd)

Part 9 – General	
Force Majeure	➤ Excuses performance in case of specified types of events beyond control of licensee
Assignment	➤ Often no assignment (at least without consent) ➤ Rules and restrictions on assignment of licence
Transitional provisions	➤ Rules and timetable for coming into full compliance with licence (important in licensing of PTT or other incumbent operator)