



ITU-D

STUDY GROUP I

4th STUDY PERIOD (2006-2010)

QUESTION 10-2/1:

*Regulation for licensing
and authorization
of converging services*



THE STUDY GROUPS OF ITU-D

In accordance with Resolution 2 (Doha, 2006), WTDC-06 maintained two study groups and determined the Questions to be studied by them. The working procedures to be followed by the study groups are defined in Resolution 1 (Doha, 2006) adopted by WTDC-06. For the period 2006-2010, Study Group 1 was entrusted with the study of nine Questions in the field of telecommunication development strategies and policies. Study Group 2 was entrusted with the study of ten Questions in the field of development and management of telecommunication services and networks and ICT applications.

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QUESTION 10-2/1

Regulatory trends for adapting licensing frameworks to a converged environment

1 Introduction

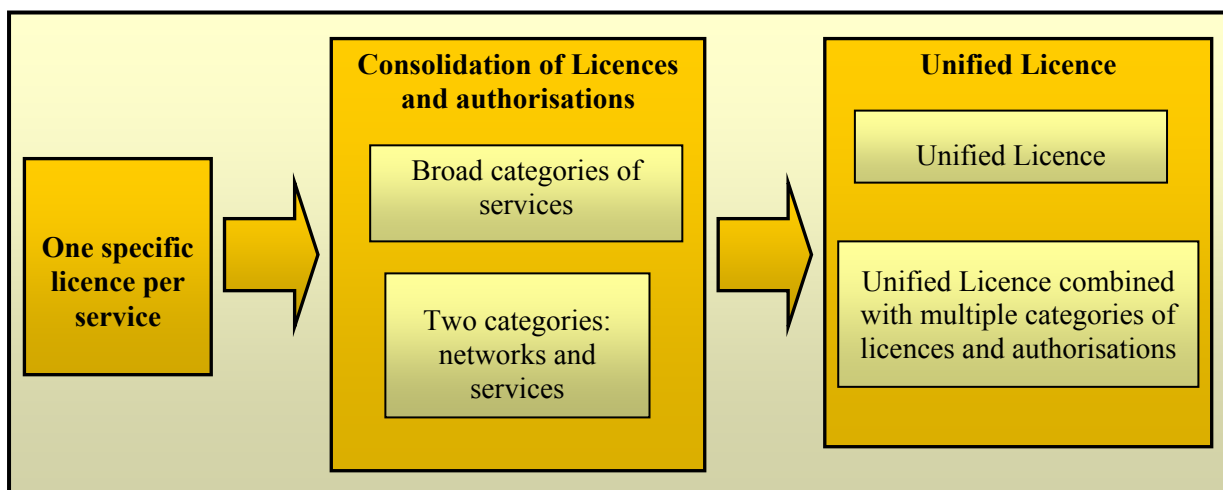
With the advent of convergence in telecommunications and broadcasting markets, diverse countries have been modifying their telecommunications regulations to support the development of convergent services and the expansion of markets and competition, with the objective of promoting the provision of new and innovative services, the reduction of prices and an increase of efficiency in the provision of services, as well as increasing the variety of offerings for subscribers.¹

Traditional regulatory systems focused primarily on the specific means of telecommunications or on the specific service provided by the operator. Regulatory frameworks were often based on wireline, wireless or broadcasting services or were divided into local and long distance markets. Now with converged networks, such distinctions are no longer practical. Therefore, reforms directed at adapting traditional regulatory systems to convergence have consistently focused on two key elements: the introduction of the principles of technology and service neutrality, and the establishment of greater flexibility in key aspects of their existing regulatory frameworks.

These reforms have followed similar tendencies around the world which have had great impact on diverse aspects of telecommunications regulation, but above all on service licensing and the rights and obligations of providers, including interconnection, numbering and universal service, and spectrum use.

Service licensing reform towards convergence has followed two main trends that have been implemented both separately and jointly. The first consists of simplification of licences that traditionally have been established for individual services, which would generally mean that a single telecommunications operator would have to hold as many licences as the different services it provided. Simplification involves the consolidation of different services in a generic categorisation or the unification of all services under a single licence or concession, what is often called a unified licence.

Figure 1: Simplification of Licences²

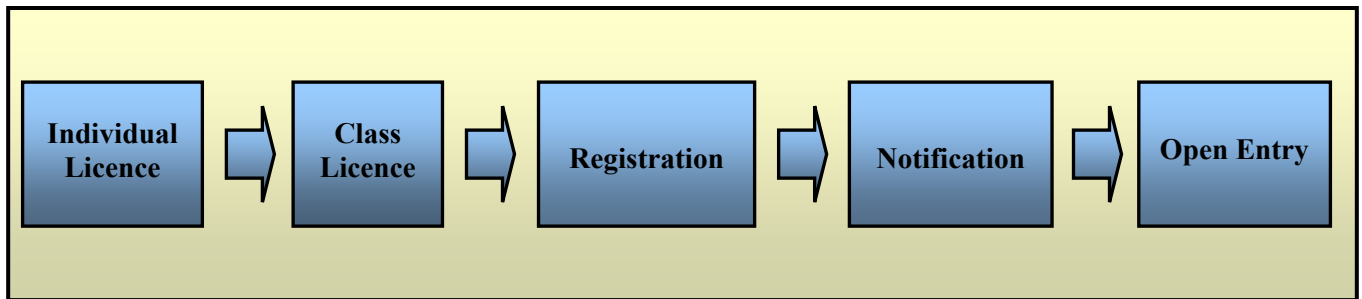


¹ For more information, see infoDev/ITU, ICT Regulatory Toolkit, Module 6, Legal and Institutional Aspects of Regulation, Chapter 4 Impact of Convergence (2006), available at <http://www.ictregulationtoolkit.org/en/Section.1254.html>. See also, Mindel De La Torre and Sofie Maddens, "Transitioning Regulation From Old to New" in the ITU's Trends in Telecommunications Reform 2004/2005: Licensing in an Era of Convergence (December 2004).

² Document 1/123, Regulatory trends for adapting licensing frameworks to a converged environment, 11 September 2007.

The second has consisted of the reduction or elimination of the administrative and formal requirements to enter the market and provide a service. This trend involves modifying the general authorisation category to allow more services to be provided or the establishment of notification or registration systems that replace licences or general authorisations altogether, therefore simplifying the process of obtaining them and, in some cases, making it automatic. Finally, some countries have opted for deregulation of services, which comprises the elimination of licences or concessions and even of the need to notify or register with the regulator.

Figure 2: Models for Reduction of Administrative Requirements³



Usually, both trends are combined in order to achieve greater simplification and flexibility. It is important to note that any modification must be managed to minimise inconsistencies between new and existing rules. Also, licensing reforms are most effective in addressing the challenge of convergence if the guiding principles of technology neutrality and flexibility are applied to the rights and obligations of the telecommunications operators as well as to the other essential elements of the regulatory framework, including, interconnection, numbering, universal service, and spectrum use.

The increasing implementation of converged licensing frameworks has been a recognition of two key trends, as noted by the GSM Association: convergence is enabling disparate technologies (including fixed, cable and mobile) to offer competing services, and the increase in competition has been shown to deliver such services at a lower cost and higher quality, as well as encouraging introduction of new services.⁴

2 Approaches to Authorisations

In light of the regulatory issues that flow from convergence and the transition to a next generation network (NGN) environment, regulators have begun to adapt the traditional, service-specific approach to authorisations.⁵ There are now three broad approaches to authorisations in the information and communications technology (ICT) sector:

- **Service-specific authorisations:** these authorisations allow the licensee to provide a specific type of service. Usually, the licensee is required to use a specific type of network and technological infrastructure. However, some service specific authorisation regimes are technology neutral (*e.g.*, the fixed and mobile services authorisation regime in Saudi Arabia and the Canadian basic international telecommunications services licences). These types of authorisations are sometimes issued as individual licences (particularly in developing and transitional economies) and sometimes issued as general authorisations.
- **Unified (or global) authorisations:** these authorisations are technology- and service- neutral. They allow licensees to provide all forms of services under the umbrella of a single authorisation, using

³ Document 1/123, Regulatory trends for adapting licensing frameworks to a converged environment, 11 September 2007.

⁴ Document RGQ10-2/1/008, 10 December 2007.

⁵ Document 1/178, Licensing practices in a converging ICT environment, 28 August 2008.

any type of communications infrastructure and technology capable of delivering the desired service. In most countries, unified authorisations are issued as individual licences. However, in some countries, the process for issuing the unified authorisation blends aspects of general authorisation processes and competitive licensing regimes. These hybrid processes can best be described as non-competitive individual licensing processes: while applicants do not compete for a limited number of authorisations, they must meet a variety of criteria to qualify for a licence and their applications are subject to close regulatory scrutiny.

- **Multi-service authorisations:** these authorisations allow service providers to offer multiple services under the umbrella of a single authorisation, using any type of communications infrastructure and technology capable of delivering the services in question. Like unified authorisations, multi-service authorisations are technology neutral. However, multi-service authorisations are more limited than unified authorisations; licensees are permitted to provide any of a designated set of services, but not any and all services. Multi-service authorisations are sometimes issued as general authorisations and, in other cases, are issued as individual licences. It is not uncommon for a country to have both general authorisation regimes and individual licence regimes for their multi-service authorisations. Individual multi-service authorisations are often issued using a non-competitive individual licensing process.

3 Overview of Legislative Frameworks

3.1 Simplification of Licences

3.1.1 Consolidation of Licences

The consolidation of licences involves the reclassification of existing telecommunications services into different categories based on technology neutrality. As a result, the number of licences is reduced and the services included in each expanded. This has been the option followed by many countries, including Malaysia, Tanzania, Uganda, and Singapore.

In Malaysia, the previous regulatory system recognised a total of 31 different licences based on networks and services, such as operators of international and national networks, mobile communications, trunking, Internet service providers, value-added services, broadcasting, etc. To adapt its licence regime to convergence, Malaysia reduced these 31 licences into the following four technology neutral categories.⁶

- Network facilities provider includes all network infrastructure operators of any nature (satellite earth station systems, fibre optics, mobile communications systems base stations, etc.)
- Network services provider covers those that provide basic connectivity and broadband to support applications. These licences allow connectivity and backhaul among different networks.
- Application service provider is assigned to those operators that provide functions such as voice, data, content and electronic commerce services, among others. Generally, applications services are understood as the functionalities and capabilities offered to the end users.
- Content application service provider includes the traditional broadcast services (radio and television) and new services such as information services.

Within these four categories, two types of licences exist: individual licences are granted for activities with a high degree of regulation (*e.g.*, the need to grant rights of use for spectrum) and registration, which is renewed yearly and recorded in the registry administered by the Communications and Multimedia Commission of Malaysia. Furthermore, lesser activities within each category are exempt from the requirement of obtaining a licence.

As in Malaysia, Tanzania also simplified its licence regime with the introduction of the Converged Licensing Framework (CFL) in February 2005. The CFL includes the same four categories of licences as those

⁶ See Malaysia Communications and Multimedia Act 1998, available at: http://www.mcmc.gov.my/mcmc/the_law/ViewAct.asp?cc=31478525&lg=e&arid=900722.

established in Malaysia, namely, Network Facility Licence, Network Service Licence, Application Service Licence and Content Service Licence.⁷

Uganda has also developed a new streamlined technology-neutral licensing regime that was implemented in January 2007. Under the regime, there are three categories of licences: (i) public service provider licence; (ii) capacity provider licence; (iii) infrastructure provider licence; and (iv) general authorisation (Chart 1).

Chart 1: Uganda's new licensing regime⁸

Type of Licence	Services Covered Under Licence
Public Service Provider Licence	<p>Category 1: Public Voice and Data – Cellular, Fixed voice, GMPCS, Internet access (including IP telephony + Virtual Private Networks), Internet exchange services, Virtual Private Networks (VPNs) that are not provided over the Internet</p> <p>Category 2: Capacity Resale – Local and international capacity resale, calling cards</p>
Capacity Provider Licence	<p>Category 1: Licensees already permitted to install infrastructure of the type they have already invested in, for example Internet Access Providers with wireless networks</p> <p>Category 2: Persons whose core business is not in telecommunications but who possess private communications facilities with surplus capacity and wish to resale this to third parties</p> <p>Category 3: New entrants in the Internet Access market operating their networks using the Industrial, Scientific and Medical frequency (ISM) band, e.g., 2.4 GHz and 5.7 GHz bands</p>
Infrastructure Provider Licence	<p>Public Infrastructure Provider</p> <p>Private Network Infrastructure</p>
General Authorisation	<p>Category 1: Public Pay Communication Services (e.g., Internet Cafés, Payphones, telephone bureaus, etc.)</p> <p>Category 2: Private Networks</p>

Finally, in Singapore, the simplified licensing system is composed of only two types of licences:

- Facilities-based operator (FBO) and
- Service-based operator (SBO).

The first is awarded to those telecommunications services providers that deploy their own infrastructure, such as operators of fixed and mobile telephone networks, trunking, etc. The second type is awarded to those operators that provide services over a third party's infrastructure, as for example, resellers of services, providers of virtual private networks, Internet access, etc. While the FBO always takes the form of an individual licence, the SBO may be awarded via an individual licence or general authorisation or notification, depending on the service.

Other countries, such as India or Kenya, have also adopted proposed simplification plans and reductions in the number of service licences as a stepping stone to a unified licence system, as addressed in the following section.

⁷ For further details of the CFL, see the contribution of Tanzania to this Question 10-2/1, Tanzania's Experience in Licensing of Communication Operators under Converged Licensing Framework, Document RPGQ10-2/1/006-E (May 31, 2007).

⁸ See UCC, Communications Licensing Application Guidelines, available at www.ucc.co.ug/licensing/default.php.

3.1.2 Unified Licence

A second trend consists of introducing a unified licence system, in which a single licence is created that covers an extensive range of services, although definitions vary by country. This trend has been adopted, or is being adopted, with certain variations, in many countries, including Argentina, Botswana, EU member states, Hong Kong China, India, Jordan, Kenya, Nigeria, Peru, Trinidad and Tobago, and Uganda.⁹

In this regard, in 2000, Argentina introduced a unified licence that authorises the provision, to the public, of all telecommunications services, whether fixed or mobile, wireline or wireless, national or international, with or without infrastructure.¹⁰ If spectrum is required for provision of service, the corresponding authorisation and/or permit must be obtained as well.

In the European Union, the new regulatory framework¹¹ created a system similar to that of a unified licence, although refined by means of simple notification, which eliminated the division of the different licences by networks and services. The unified licence only requires a prior notification, as further addressed in the following section. The unified licence also allows the provision of any kind of telecommunications service and the deployment and operation of any telecommunications networks. Similar to Argentina, the assignment of spectrum rights requires a specific permit independent of the single licence.

The Telecommunications Regulatory Authority of India (TRAI) has proposed the adoption of a hierarchical unified licence regime that can be represented as an inverted pyramid, in which the major licence comprises all the services, while the minor licences cover a smaller number of services.¹² It should be noted that under the TRAI proposal, broadcasting services are to be offered through a stand alone or autonomous licence. The proposed system includes the following classification of licences:

- Unified (Single) licence
- Class Licence
- Licence by authorisation
- Stand alone licence for broadcasting and cable television services

The unified (single) licence allows for the provision of all the telecommunications services, including those authorised services through the remaining categories of licences (class licence and licence by authorisation). The class licence covers the services granted under the licence by authorisation, VSAT services and niche services (services in rural zones with teledensity lower than one percent). The licence by authorisation includes the remaining services, among them, Internet access and paging. Finally, for the case of the broadcasting and cable television services, the licence system requires a stand alone licence.

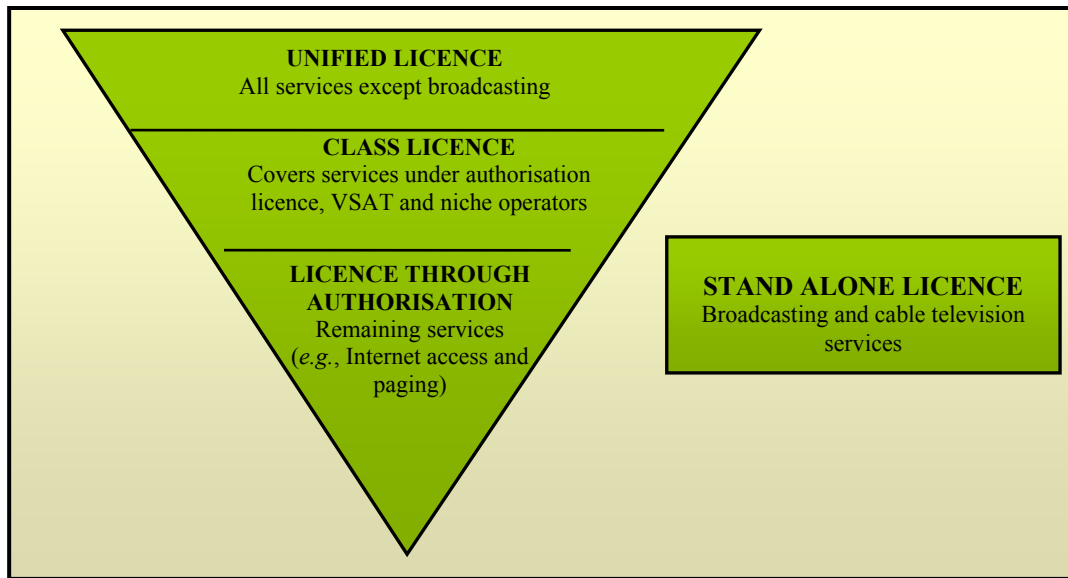
⁹ Document 1/178, Licensing practices in a converging ICT environment, 28 August 2008. Tanzania has been included in the previous category as the system that has been adopted is one of consolidation of licences.

¹⁰ Telecommunication being defined as any transmission, emission or reception of signs, signals, writings, images, sounds or information of any nature, by wire, radio electricity, optical mediums and/or any other electromagnetic systems. Article 3 and Article 5.1 of the Telecommunications Services Licence Regulations. This definition is almost the same as the ITU definition of telecommunication.

¹¹ Official Journal of the European Communities, Directive 2002/21/EC of the European Parliament and of the Council of March 7, 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive), available at http://ec.europa.eu/information_society/topics/telecoms/regulatory/new_rf/index_en.htm#reg.

¹² According to TRAI's "Consultation Paper on Licensing Issues relating to Next Generation Networks" issued on January 27, 2009, the government has not accepted TRAI's recommendations for the unified licensing regime. (Consultation is available at <http://www.trai.gov.in/WriteReadData/trai/upload/ConsultationPapers/163/cpaper27jan09no3.pdf>). As of Mar. 24, 2009, TRAI has posted the "Comments of Stakeholders received on Consultation Paper on Licensing Issues related to Next Generation Networks (NGN)" (available at http://www.trai.gov.in/ConsultationPapers_content.asp).

Figure 3: Hierarchical system of unified licence proposed in India¹³



The Nigerian Communications Commission (NCC) in March 2006 introduced a unified licensing regime covering several telecommunications services. The licence is issued as an individual licence under Nigeria's communications law.¹⁴ Specifically, Nigeria's Unified Access Service Licence covers fixed telephony (wired or wireless), digital mobile services, international gateway services, national long distance services, and regional long distance services. The NCC also set criteria which existing licensees must meet in order to transition to a unified licence.¹⁵

3.2 Reduction and elimination of administrative and formal requirements for obtaining licences

As previously explained, the second trend followed for adapting licensing regimes to convergence consists of the reduction or elimination of the formal and administrative requirements for the provision of services. This trend follows various stages, from enhancing the scope of general authorisations or implementing a notification or registration system to the deregulation of services. The registration or notification system replaces the process of granting licences or general authorisations, making the process for obtaining licences simpler and, in some cases, automatic, while the deregulation of services eliminates the requirement of obtaining a prior licence or concession. Each of these stages has the following characteristics.

Individual licences include the specific conditions of the service, specifying the rights and obligations of the licensed service. In addition, each individual licence is approved on a case by case basis for a particular service and licensee. General authorisations, however, establish a general system of rights and obligations that applies to all the operators by means of the same authorisation, and the process of awarding them is more straightforward, not requiring an exhaustive examination of the request as in the case of the individual licence.

¹³ See TRAI Recommendations on Unified Licensing (January 13, 2005), available at <http://www.trai.gov.in/trai/upload/Recommendations/13/recom13jan05.pdf>. See also, Document 1/123, Regulatory trends for adapting licensing frameworks to a converged environment, 11 September 2007.

¹⁴ Nigerian Communications Act of 2003, available at <http://www.ncc.gov.ng/index4.htm>.

¹⁵ See Nigerian Communications Commission, Licensing Framework for Unified Access Service in Nigeria, <http://www.ncc.gov.ng/RegulatorFramework/unifiedLicensingFramework.htm>.

The registration system implies a step beyond the authorisation, where general service conditions are applied to operators that only require the registration of their request to provide the service. The analysis and approval of the operator's request is minimised to almost a mere formality.

Finally, notification is the last step prior to deregulation of the service. In this stage, an operator does not even have to wait for the administrative agency's approval to provide service, being free to provide the service as soon as the notification has been filed. The service terms and conditions are also of general application.

As detailed above, the majority of the simplification and unified licence systems limit the individual licence to specific services often including use of spectrum, and expand the services that are granted by means of a general authorisation. In some cases, as in Malaysia and Singapore, some services just require a notification.

In other countries, such as the EU member states, a complete registration and notification regime has been established for the provision of telecommunications services. In the European Union, the provision of electronic communications services as well as the deployment or operation of networks is subject to a notification to the corresponding national regulation authority under a general authorisation regime. General authorisations for the provision of electronic communications networks or services replaced individual licences in 2002.¹⁶ Although an entity may be required to submit a notification, a national regulator may not require an entity to obtain explicit approval prior to beginning operations. However, there continues to be a special scheme for issuing rights to frequencies, numbers and other scarce resources as well as provisions for the designation of certain universal service functions.

Finally, there are countries that have effectively eliminated authorisations as well as notifications and registrations for the provision of certain services, arguing that such services are beyond the regulator's scope of jurisdiction or, merely, based on an explicit decision of the regulator exercising its discretion not to regulate a specific service. In general, this is the approach followed in the United States with regard to Internet access, which has been classified by the FCC as an information service not regulated under the Communications Act, with the purpose of promoting the continuous development of the Internet.¹⁷

4 Evaluation of Telecommunications and Competition Regulator Experiences

4.1 Experiences with converged licensing

According to the survey responses incorporated into the ITU World Telecommunication Regulatory Database, in addition to the cases noted above, 11 countries have introduced unified licensing for at least some services: Botswana, Bhutan, Egypt, Equatorial Guinea, Latvia, Maldives, Mali, Mauritania, Namibia, Senegal and Slovenia. In addition, 81 respondents reported use of individual licences, 28 reported use of general authorisations or class licences, and ten allow some services to operate on a licence-exempt basis. These categories are not mutually exclusive; regulators may use a mix of different licensing methods depending on the service and the relevant legal framework. Further, as noted above, definitions of unified licensing vary among countries.

The following sections highlight the experiences reported by telecommunications and competition regulators with respect to licensing frameworks for converged services.

¹⁶ Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive) and Directive 2002/20/CE of March 7, 2002, on network and electronic communications services authorisation (Authorisation Directive).

¹⁷ 47 U.S.C. § 230 (b). Also see, with regards to cable modem and wireline broadband services: (i) In Re Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities and Internet Over Cable Declaratory, and Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities, and Appropriate Framework for Broadband Access to the Internet Over Cable Facilities, Declaratory Ruling and Notice of Proposed Rulemaking (NPRM), GN Docket No. 00-185, and CS Docket No. 02-52 (FCC released March 15, 2002); and (ii) In Re Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities; Universal Service Obligations of Broadband Providers; and associated dockets, Report and Order and NPRM, CC Docket No. 02-33, CC Docket No. 01-337 et al. (FCC released September 23, 2005).

4.1.1 Democratic Republic of Congo¹⁸

In the Democratic Republic of the Congo (DRC), licensees have the right to use the technologies and equipment of their choice to provide telecommunication services. This principle serves to make the licensing system flexible so as to be able to adapt to rapid technological change in the sector.

With regard to next-generation networks, the current law makes no mention of licensing for converging services. In practice, however, convergence is being accommodated de facto in the licensing process, through the granting of WiMAX and 3G licences, which is currently underway. Indeed, the current philosophy is based on service convergence (telephony, Internet, data, multimedia, etc.), moving from triple-play to quadruple-play in a single offering with a single customer connection, thus tending towards a unified market.

DRC has granted two WiMAX licences on the basis of the principle of a negotiated contract, in the absence of a formal procedure. A draft for the sale of the 3G licence had already been initiated through a public consultation for which a number of operators had already expressed their interest.

Regarding the procedure for granting this type of licence, the regulator is considering a regulated procedure based on either a call for bids or an auction, or possibly a beauty contest.

At the government level, a draft national ICT policy document is under development that will pave the way for setting target indicators and objectives that may serve as a basis for the licensing of converging services. Not all these steps have been able to be completed as yet, on account of a number of difficulties encountered, such as lack of an overall government policy.

4.1.2 Republic of Guinea¹⁹

In 2005, the Republic of Guinea adopted several new communications and radiocommunications regulations that sought to liberalise the ICT sector and promote the development of advanced and convergent technologies.²⁰ The Ministère des Télécommunications et des Nouvelles Technologies de l'Information (MCNTI) reformed the communications framework to favour convergence by establishing a regime of licences and authorisations. The telecommunications law established a licensing regime of four categories:

- Licences;
- Authorisations;
- Declarations; and
- Unregulated services.

Under the law, licences must be obtained for the:

- Establishment and/or operation of public telecommunications networks or services;
- Establishment and operation of independent networks using the public domain (rights of way over public land) and utilising radiocommunications systems; and
- Provision of Internet access.

The MCNTI issues licences upon the recommendation of the Autorité de Régulation des Posts et Telecom (ARPT). The general conditions in the licences provide the licensees' rights and obligations and are uniformly applied to all licensees in the same network or service category to ensure equitable treatment of all operators. The operators are required to uphold the principles and rules, including those regarding non-discrimination, confidentiality and technology neutrality and non-interference with others' networks and services. Dominant operators have further obligations including contribution to universal access and provision of free-of-charge emergency call services.

¹⁸ Document RGQ 10-2/1/020, 2 March 2009.

¹⁹ Document RGQ10-2/1/023, 19 March 2009.

²⁰ La loi L/2005/018/AN portant modification des dispositions de la loi L/92/016/CTRN relative à la Réglementation générales des télécommunications; La loi L/2005/019/AN du 08 septembre 2005 portant modification des dispositions de la loi L/95/018/CTRN portant réglementation des radiocommunications en République de Guinée.

There are currently five telecommunications operators in Guinea – Sotelgui, Areeba, Intercel, Orange and Cellcom – as well as a dozen Internet access providers. The government plans to reduce poverty and meet the objectives of the U.N.'s Millennium Project by improving equitable and non-discriminatory access to services by all populations. The government also seeks to reduce the digital divide by increasing penetration rates of the following ICT services:

- NGNs from 0.5% to 25%
- Telephone service from 7.6% to 25%
- Radio coverage from 75% to 95%

4.1.3 Republic of Korea

The Republic of Korea submitted a case study on mobile voice over IP (VoIP) regulation, presenting information on the current status of regulation and the service and business classifications in use.²¹ Korea uses three business classifications for telecommunications providers: facilities-based telecommunications business (responsible for installation of telecommunications lines), resale business (uses lines provided by facilities-based telecommunications businesses and installs telecommunications facilities within buildings), and value-added communications businesses (leased line telecommunications facilities from facilities-based telecommunications providers). In terms of telecommunications services, Korea uses two classifications: facilities-based telecommunications services and value-added communications services. Facilities-based telecommunications services include telephone and leased line services, wireless services with spectrum allocations, Internet connection services, VoIP and other services. Value-added services include all other telecommunications services.

While VoIP was first introduced as a fixed-line service, technological advances have made it feasible to introduce mobile VoIP (*i.e.*, VoIP over wireless Internet or broadband wireless networks). This development made it incumbent upon Korean regulators to determine how to address the entry of mobile VoIP providers into the existing mobile service market. At the time of Korea's contribution to the Rapporteur's Group, regulators were considering different scenarios for regulation of this converging market.

The Republic of Korea also provided a case study on IPTV and the various barriers to its adoption in Korea, including the regulatory environment.²² In Korea, demand for regulation regarding IPTV differs between telecommunications operators and broadcasters, and between telecommunications regulators and broadcast regulators. Telecommunications regulators and telecommunications operators perceive IPTV as a total service, *e.g.*, a new converged service that is different from existing ones, thereby calling for light regulation. Meanwhile, broadcasting regulators and broadcasters see IPTV as being identical to the existing cable service, citing the scheduled television programs contained in IPTV as evidence of this, thereby calling for the same regulation as that applied to the cable service in accordance with the principle of applying the same regulations to the same services.²³ Moreover, they insist that since a satellite broadcasting provider and digital cable TV operators provide video on demand (VOD) service only after obtaining approval from the broadcasting regulators, a telecommunications operator seeking to offer VOD service should also obtain approval as a broadcasting operator.

With respect to the regulatory agencies involved in a converged environment, Korea's regulatory organisations were somewhat complicated until the establishment of the Korean Broadcasting and Communication Commission (BCC) in February 2008. Prior to the BCC, authority over the broadcasting and communications sectors were shared among ministries and agencies. The Ministry of Internal Affairs and Communication (MIC) and the Korea Communications Commission (KCC) regulated communications while the Ministry of Culture and Tourism was responsible for some broadcasting policies and the right to permit and approve broadcasting business. This unintegrated regulatory environment hindered the development of converged technologies such as IPTV since, structurally speaking, it was very difficult to discuss and reach agreement on the agenda concerning the convergence of telecommunication and broadcasting.

²¹ Document RGQ10-2/1/009, 13 December 2007.

²² Document RGQ10-2/1/010, 13 December 2007.

²³ The telecom sector names IPTV as a broadband convergence service, and the broadcasting sector as a fixed multimedia service.

4.1.4 Liechtenstein²⁴

The European Union Telecommunications package of 2002 (Framework Directive, Authorisation Directive, Universal Service Directive, Access Directive, Directive on privacy and electronic communications, Competition Directive and a decision on management of frequency spectrum) was adopted in the Communications Act of 2006 and the relevant national regulations in Liechtenstein.

The objective of the Communications Act is to provide a technology neutral framework for the electronic communication and entire electronic communications networks and services, whether in fixed and mobile communication networks, satellite and broadband networks or terrestrial mobile networks and the services offered.

The innovative changes in the new framework of electronic communications require no licensing regime, and the new services and activities in the electronic communication industry could be offered without a licence, however these must be registered with the national regulatory authority.

4.1.5 Lithuania²⁵

According to the 2002 Law on Telecommunications, licensing of telecommunications activities has been abolished since 1 January 2003. The right to engage in these activities is granted without an individual authorisation, following the requirements laid down in legal acts. According to the General Terms and Conditions for Engaging in Telecommunications Activities, all undertakings intending to engage in the provision of the public fixed telephone network and/or services, the provision of the mobile public telephone network and /or services, as well as the provision of leased lines services, must submit a notification about the commencement of telecommunication activities only. Lithuania was one of the first EU countries to abolish the licensing system and move to the general authorisation system in the telecommunication sector.

Since the liberalisation of Lithuania's public fixed telephone networks and services market in January 2003 and the introduction of the new law, Lithuania's telecommunication sector has undergone a quick and successful transformation. It should be noted that low administrative charges created preconditions for the low service prices on the retail market.

The 2004 Law on Electronic Communications came into effect on 1 May 2004. Its key objective was to transpose the 2002 EU Directives on the New Regulatory Framework for Electronic Communications and Associated Services into national legislation. The Law introduced technological neutrality as an objective in regulation.

With respect to broadcasting, in 2006, the Law on Provision of Information to the Public regulating broadcasting activities was amended to end the licence requirement for certain broadcasting activities, *i.e.*, the Law does not require licences for activities not intended for programme broadcasting and/or re-broadcasting or for broadcasting for non-commercial purposes. Further adaptation of the regulatory system to convergence conditions is envisaged with transposition of the modernised 2007 EU legal framework for audiovisual media services (Directive 2007/65/EC). The aim of the new directive 2007/65/EC is a modernised and flexible framework for television broadcasts, including other linear (scheduled) audiovisual media services, and to introduce a set of minimum rules for non-linear (on-demand) audiovisual media services.

With respect to spectrum, when liberalising radio frequency usage conditions, the Communications Regulatory Authority of the Republic of Lithuania (RRT) is striving to encourage market participants to provide the widest range of modern wireless services and use the available limited national resources as efficiently as possible. As markets and new technologies evolve under convergence conditions, the regulation inevitably tends towards becoming more liberal and technology/service neutral.

The general authorisation regime implemented since January 2003 has produced favourable results in market development. Those segments to which the general authorisation system has not yet been fully applied will be regulated under this system in the future once the relevant amendments to the legal acts are finalised.

²⁴ Document RGQ10-2/1/014, 5 January 2008.

²⁵ Document RGQ10-2/1/016, 21 February 2008.

Since technology-neutral regulation, as witnessed by the traditional telecom services sector, fosters market incentives to invest and develop advanced technologies, users are provided with the best service offers in terms of price and quality. This also helps to better ensure user interests and increases overall economic competitiveness.

4.1.6 Tanzania²⁶

In February 2005, the Tanzania Communications Regulatory Authority (TCRA) introduced the Converged Licensing Framework (CLF) after the end of the exclusivity period granted to the incumbent fixed line operator. Under the Communications (Licensing) Regulations (2005), the CLF encompasses technology and service neutrality and seeks to ensure regulatory flexibility, efficient utilisation of network resources, and market entry of small scale operators.

As shown in Chart 2 below, the Schedule to the Regulations provide services in four market segments – international, national, regional and district – for the following four licence categories:

- Network facility: authorises licensees to install, own, control and provide access to electronic communications facilities such as fixed links, radio communications transmitters, satellite stations, submarine cables, fibre/copper cable, towers, switches, etc.;
- Network services: authorises licensees to operate and maintain public electronic communications networks using any technology such as GSM or CDMA;
- Application services: authorises licensees to provide electronic communications services to end users via private facilities or reselling services from licensed facilities/network service providers; and
- Content services: authorises licensees to provide content services for broadcasting.

Between December 2005 and June 2008, TCRA issued over 150 licences under the CLF, which has been embraced by both existing licensees (who have migrated into the CLF) and new entrants who have decided to venture into the communications sector.

In addition to the increase in operators, the number of subscribers has increased from 3,118,157 in 2005 to 9,523,392 in March 2008, which the TCRA attributes to the increased number of telecommunications licensees.

A number of lessons may be learned from Tanzania's CLF which may be useful to countries intending to introduce converged licensing procedures.

- Flexibility: TCRA engaged stakeholders, especially operators, in dialogue and gave a flexible timeframe for implementing the CLF. Although the initial grace period for existing communication operators to migrate to the CLF was 12 months, TCRA extended the grace period another six months since operators were unclear about which licence category to pursue. TCRA held several meetings with operators to educate them about the CLF and explain its advantages to them. Further, licensees are required to submit roll-out plans as an appendix to their licence, and a licence condition allows the plan to be reviewed annually, giving licensees an opportunity to change roll-out plans to accommodate new technologies and services.
- Incentive Regulations: Migrating operators were given incentives by excluding application fees and initial licence fees, and by offering longer licence durations – specifically that the term of the new licence would begin from the licence issuance date regardless of the remaining duration of existing licences.
- Slow Pace in Deployment of Converged Network: Although the CLF was introduced over four years ago, deployment of converged networks, particularly NGN, has occurred slowly. One possible reason is the lack of understanding of the CLF, the migration path to the NGN.

The CLF has also faced a number of challenges. The most critical challenge is to ensure that the prices of communication goods and services are affordable so as to meet consumers' expectations. Another challenge is for TCRA to maintain a clear, comprehensive and transparent licensing framework. Finally, after

²⁶ Document RGQ 10-2/1/021, 25 February 2009.

introducing competition and the CLF, it became more critical to ensure that spectrum is assigned to applicants with sound business and technical plans, as well as with the financial and technical capability to provide communication services.

Chart 2: Number of Licensed Operators under Tanzania's CLF (30 June 2008)²⁷

	Type of Licence	Market Segment	Number of Licences Issued
1.	Network Facility	International	4
		National	8
2.	Network Services	International	4
		National	8
3.	Application Service	International	12
		National	41
		Regional	5
4.	Content Service	National Television	5
		National Radio	5
		Regional Television	1
		Regional Radio	6
		District Television	18
		District Radio	30
		Community Television	0
		Community Radio	2
		Support services for satellite content services by subscription	3

4.1.7 United Kingdom²⁸

To prepare the United Kingdom for the challenges of converged communications between information technology and broadcasting, the Government introduced the Communications Act of 2003. The Act addressed the convergence of telecommunications and broadcasting by reforming the regulatory frameworks, including the introduction of a single regulator for the entire electronic communications sector. The Act sought to create a future-proof framework by creating a regulator that collaborates with stakeholders and accommodating the rise of convergent services in communications and broadcasting. The Act provided for:

- The Office of Communications (Ofcom), the single regulator combining the roles of five previous regulators (Ofcom, the Independent Television Commission, the Radiocommunications Agency, the Radio Authority, and the Broadcasting Standards Commission).

²⁷ Document RGQ 10-2/1/021, 25 February 2009.

²⁸ Document 1/048, 6 September 2006.

- Ofcom to apply the powers of the Competition Act and other competition legislation to the communications sector.
- Freedom for new entrants to provide communications networks and services without having to apply for a licence.
- Trading of radio spectrum.
- A new and more coherent system for regulation of broadcasting.
- Greater freedom for public service broadcasters to regulate themselves.

Complementing trading and liberalisation policies, the United Kingdom pursues market mechanisms in spectrum management by seeking to make licences more flexible by liberalising licence terms to allow licence holders to change the use without applying to the regulator. Ofcom is working on defining licences to be flexible and technology-neutral while protecting other licensees against interference.

As a light-touch regulator, Ofcom seeks to move away from central management and increase the use of licence-exemption. Licence-exemption is being carefully examined in particular for low power devices and will be implemented as much as practicable as it is a key area for innovation and growth.

4.2 Future plans for converged licensing

4.2.1 Bangladesh

According to its contribution to the Rapporteur's Group,²⁹ Bangladesh plans to migrate to a technology-neutral and service-neutral licensing regime in 2011, which would allow operators to incorporate new technological developments and be more flexible and creative in developing communications services. Currently, the Bangladesh Telecommunication Regulatory Commission (BTRC) has no plans to issue converged licences, but it will consider convergence for a new licensing regime in the future. In the meantime, Bangladesh will look to the ITU for guidance on a smooth migration from the present licensing regime to a converged licensing regime.

4.2.2 Cameroon³⁰

The government of Cameroon recognises that its telecommunications laws and regulations must be revised in order to adapt to and promote convergent technologies. Such reforms will require the cooperation of various ministries and agencies, including Ministère des Postes et Télécommunications (MINPOSTEL), Ministère de la Communication (MINCOM), Agence de Régulation des Télécommunications (ART), Agence Nationale des Technologies de l'Information et de la Communication (ANTIC) and Conseil National de la Communication (CNC). Cameroon must also harmonise its legal frameworks and regulations with the Communauté Économique et Monétaire des Etats de l'Afrique Centrale (CEMAC).

The 1998 telecommunications law began the process of liberalisation in Cameroon by establishing ART as an independent regulator responsible for the regulation and control of the telecommunications sector, including management of radio frequencies for telecommunications.³¹ Although ART manages radio frequencies for telecommunications, it does not have the authority to regulate spectrum. Instead, MINPOSTEL retains the authority to regulate spectrum for telecommunications while the authority to regulate broadcast spectrum is granted to MINCOM.

The licensing regime is contained in Cameroon's telecommunications law and provides for three categories: concessions, authorisations and declarations.

- Concessions grant entities the right to establish and/or operate public telecommunications networks.
- Authorisations allow entities to establish telecommunications networks with a view to offering a public telecommunications service other than basic telecommunications services, such as Internet

²⁹ Document RGQ 10-2/1/022, 18 March 2009.

³⁰ Document RGQ 10-2/1/012, 18 January 2008.

³¹ La loi N°098 du 14 juillet 1998 régissant les télécommunications au Cameroun.

and value-added services. Such authorisations require licences so that operators may have several types of licences.

- Declarations permit entities to establish private, low-range and low-capacity networks

4.2.3 China³²

A significant challenge to China's telecommunications regulation is how to adjust itself to the convergent market environment. With the development of new technologies and services, convergence has become the main trend in the telecommunication industry of the world. It includes the convergence of the fixed and mobile networks; the telecommunications, Internet and broadcasting and television networks; and the next generation network's industries.

The Chinese government has placed much importance on the convergence of three networks. In 2001, the fourth meeting of the National People's Congress, ratified as the "10th 5-year plan guidelines," put forward that the nation would promote the convergence of the telecommunications, television and computer industries. In 2005, the "11th 5-year plan" mentioned that the accommodation capacity of information infrastructure should satisfy the requirement of the informatisation, the universal service capacity will be significantly improved, the convergence of the three networks can be essentially obtained, and the preliminary mechanism of information sharing can be established.

With regard to China's regulatory system, there are two independent authorities. The Ministry of Industry and Information Technology (MIIT) is responsible for constructing, operating and managing telecommunications and Internet networks and was established by the 2008 National People's Congress, which merged several former ministries. The State Administration of Radio Film and Television (SARFT) is responsible for content in the broadcasting and television services.

In China, some new services, such as IPTV and mobile television, have been employed in certain cities, and MIIT has played an active role to encourage the deployment of these new applications.

4.2.4 Nepal³³

The main agencies in Nepal that regulate the telecommunications, broadcasting and information technology sectors are the Nepal Telecommunication Authority (NTA) for telecommunications, Ministry of Information and Communications (MOIC) for broadcasting, and the Ministry of Science and Technology (MOST) in the IT sector. Though NTA is the autonomous regulating body, in practice the MOIC has been the principal actor in the telecommunications sector. The MOIC is also the highest body responsible for formulating broadcasting policies in the country. Thus, MOIC and NTA share responsibility for governing telecommunications providers, while the MOIC has sole authority over radio and television broadcasters.

Regarding spectrum management, there is a high level committee comprising officials from different ministries and NTA under the umbrella of the MOIC. As a consequence, the administration of radiofrequency spectrum is not governed by a single agency.

In Nepal, convergence has raised several debates about classification of certain telecommunications and broadcasting services. As the lines between data transmission, broadcasting and voice transmission are eroded, regulators are faced with the tasks of how best to classify the converging segments of the communication sector. The regulatory system in Nepal is therefore experiencing difficulties with the trend of convergence. Since the division of the regulatory responsibility and jurisdiction is based on the distinction of whether the provider is primarily a telecommunications, broadcasting or IT service provider, the government is less than effective in regulating activities which are not easily categorised. This situation clearly indicates the need to overhaul the regulatory system and the organisation of the communications sector in Nepal.

³² Document 1/036(Rev.1), 29 August 2006.

³³ Document 1/014, 5 July 2006.

5 Guidelines and Recommendations

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

- whether a unified or multi-service authorisation regime is appropriate for the local ICT market;
- whether to adopt a unified or a multi-service authorisation regime;
- the categories of authorisations in a multi-service regime;
- the licensing procedures for issuing the new authorisations;
- the terms and conditions attached to these authorisations; and
- how to transition existing licensees to the new licensing regime.

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

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

Regulators are encouraged to consider the following principles when transitioning to and adopting a converged licensing framework:

- Fostering technology neutrality;
- Ensuring flexibility to allow the new licensing regime to accommodate future technological and market changes;
- Simplifying the number of licence categories;
- Reducing administrative burdens and fees on market players;
- Applying incentive mechanisms that encourage existing operators to transition to the converged licensing framework, *e.g.*, fee holiday;
- Ensuring transparency with regard to converged licensing responsibilities;
- Fostering close collaboration amongst appropriate entities with regulatory and oversight responsibilities regarding a converged licensing framework; and

Referring to international best practices and international regional organisations to help harmonise licensing approaches.

Printed in Switzerland
Geneva, 2010

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