The convergence of telecommunications, broadcasting, and information technology is blurring previously distinct disciplines and technologies, requiring regulatory reform for the information and communication sector. This Module provides resources on various regulatory approaches for regulators, policymakers, and practitioners within the current ICT environment.

6.1 INTRODUCTION

The telecommunications sector has undergone extensive changes in recent years. Many state-owned operators were privatized and the sector experienced a trend of liberalization worldwide, motivated by the evolution of new technologies and services, the growing importance of telecommunications for national economies and the development of international trade in telecommunications services. As a result, in most countries, the telecommunications sector has experienced a fundamental change in structure, from that of monopoly to competition.

Following the period of growth in the telecommunications industry in the late 1990s, the “dot com bubble” burst at the beginning of the 21st century, resulting in a steep drop in stock market value for major operators. The crisis in the telecommunications market affected numerous companies, but did not deter the development of new technologies and the evolution of the information and communications technology (ICT) sector. In order to adapt to these new developments, countries have been undertaking a review of their existing frameworks, enacting new legislation and creating new regulatory authorities to implement the legal and regulatory framework. Such a framework is essential for the sector, particularly as countries move from state control to market competition, and is necessary to attract new entrants as well as private investment.

Based on analysis of legal and regulatory frameworks worldwide, studies conducted by industry experts and institutions such as the World Bank, and information collected by the International Telecommunication Union, this report provides an update of the 2000 Telecommunications Regulation Handbook published by infoDev. It serves as a best practice toolkit for regulators and policymakers in the context of the current ICT environment.

The importance of conducting this study is evidenced by the significance of the legal and regulatory framework as an enabler of development of the sector. Effective regulation requires the implementation of a supporting legal and regulatory framework to create an environment that promotes public confidence and ensures stability, transparency, competition, investment, innovation, and growth in the sector. Many of the laws, regulations, and best practice examples examined in this study address the fundamental change in the telecommunications industry from that of monopoly to competition and its evolution within the ICT sector, and provide guidelines for effective regulation for competition. However, while the toolkit highlights best practices for effective regulation, it is important to realize that the implementation of such practices may vary from country to country, requiring consideration of local political, economic, social and other conditions and circumstances in designing the appropriate legal and regulatory instruments.

The study of regulatory reform in today's converged ICT environment can be analyzed by considering three main interdependent and mutually reinforcing aspects: (i) the general legal context of regulatory reform; (ii) the institutional and organizational aspects of regulation; and (iii) the regulatory processes.

This study begins by addressing the question: Why regulate? Regulatory intervention is necessary to ensure the successful transition of a monopolistic telecommunications market to a competitive one, to safeguard consumer interests, to maintain an effective competitive marketplace, and to foster the long-term development of the ICT sector. Effective regulation has resulted in many benefits, such as greater economic and technological growth, increased investment in the sector, better quality of service, lower prices and higher penetration rates. The level of regulatory intervention will vary from country to country, and will depend on various factors, including the level of market maturity, the legal and regulatory framework, and the regulatory issues arising from new technologies and services.

In Chapter 3, the question of how to regulate is addressed. How regulatory activities are conducted depends on the level of maturity of the market, and the particular cultural, legal and regulatory framework of each country. Regulation does not occur in a vacuum, and is determined to a great extent by different factors such as: (i) the different legal traditions and systems existing in a particular country that determine the structure of the legal and regulatory framework; (ii) the international commitments undertaken by governments that need to be harmonized with national legal and regulatory frameworks; (iii) the impact of other legislation affecting the sector, which can influence the effectiveness of the legal and regulatory framework, and (iv) the level of maturity of the market, which affects the interaction between sector-specific telecommunications legislation and overall competition policy.

Chapter 4 addresses the impact of convergence on regulation. The union of telecommunications, broadcasting, and information technology is dissolving the once clear lines that distinguished the mode of delivery and allowed for the distinct regulation of these different sectors. Convergence can create uncertainty with respect to the regulation and classification of services, to the extent that it occurs at different levels: (i) at the service level, with bundled services (such as the “triple play” of voice, data and video); (ii) at the industry level with mergers among entities of different industries; and (iii) at the network and terminal equipment level, such as the ability to use computers for telecommunications, as well as the introduction of new means of providing traditional services, such as Voice over Internet Protocol (VoIP). Regulators have responded to convergence by adopting more streamlined legislation and regulatory procedures, which allow for greater flexibility in dealing with new technologies and services. Additionally, as regulators revise legal frameworks, they must consider existing rules that are spilling over into the ICT sector such as intellectual property rights, as well as new activities such as spam or computer viruses, which
impact consumers in a negative way. Chapter 5 identifies what it means to be an effective regulator, and the different dimensions of effectiveness, including structural and financial independence and functionality. One of the main benchmarks for assessing the effectiveness of a regulator is the degree of actual and perceived autonomy from government control and industry influence. To be effective, regulators must gain credibility and have the authority to enact and enforce their decisions. Regulatory procedures must be transparent, accountable and predictable and ensure integrity of the process. An effective regulator strengthens public and investor confidence that all market players will be treated equally, and increases the stability and objectivity of the regulatory process. Additionally, Chapter 5 provides an analysis of the organizational and institutional approaches to regulation, and discusses institutional design options, the separation of power and relationship of the regulator with other entities, the legal status of regulators, their funding and staffing process, and the application of an ethics regime. There is no one single model, since each regulator’s institutional design, powers, degree of autonomy, composition, and jurisdictional authority depends on the country’s legal, political and institutional framework. However, a strong legal framework needs an efficient institutional and organizational framework to support it. To regulate effectively, regulators must create institutional frameworks that provide structural, political, and budgetary independence, as well as sufficient competency and the necessary organizational structure to carry out its functions. As such, regulators must have an adequate number of staff with the proper skills and capacity to carry out the regulatory activities. Moreover, they must be perceived by stakeholders as objective and unbiased. This can be enhanced by ensuring that ethics codes or rules are in place and the regulatory staff has no perceived or actual conflicts of interest.

Lastly, Chapter 6 addresses the functional aspects for effective regulation including the clear definition of the functions and competencies of the regulator, accountability of regulators, and the implementation of open and transparent regulatory processes. Effective regulation requires that the decision-making process be conducted in a transparent and participatory manner, so that the regulator is accountable to the government and to the public. Transparency in regulation, and the encouragement of public participation in the decision-making process, legitimizes the regulator’s actions and fosters consensus building in the industry, which facilitates compliance with regulatory decisions. To function effectively, regulators also need the proper authority and power to intervene in the operation of the telecommunications market, such as licensing operators and services, enforcing laws and decisions, and resolving disputes among licensees. In addition, enforcement of compliance with regulatory decisions is crucial for effective regulation, because without the ability to enforce laws, a regulatory regime is practically meaningless. As markets mature, many regulators are encouraging industry self-regulation, such as industry self-reporting, for enforcement purposes and reliance on alternative resolution techniques to resolve conflicts, which helps regulators to maintain oversight over the growing number of competitors in the ICT sector.

6.2 WHY REGULATE?

To understand the role of regulation in enabling the growth and development of the information and communications technology (ICT) sector and the requirement of a strong legal and regulatory framework for effective regulation, first it is necessary to discuss the need for regulation. This Chapter provides an overview of the reasons for regulation given the structural changes in the telecommunications sector from monopoly to competition, and the importance of regulation in transitioning to an effective competitive environment and fostering the long-term development of the ICT market.

Reference Documents

- Creating the “Right” Enabling Environment for ICT
- European Competitive Telecommunications Association Regulatory Scorecard 2005
- Feedback to Regulators from the Private Sector
- Introducing Telecommunications Competition through a Wireless License
- Morocco: Effective Regulation Case Study
- Organisation for Economic Co-operation and Development - Regulatory Reform as a Tool for Bridging the Digital Divide
- Regulation and Investment - Sri Lanka Case Study
- Subscribing to Monopoly, The Monopolist’s Lexicon-Revised

6.2.1 EVOLUTION OF REGULATORY REFORMS

Prior to the telecommunications sector reforms undertaken in many countries during the last two decades, telecommunications services were largely provided under monopoly conditions, either by state entities or, to a lesser extent, by private companies. Often the operator and regulator for telecommunications services was the government; therefore, no regulatory independence existed. This classic model of supply generally concentrated policy-making, regulatory, frequency management and network operating responsibilities in a single entity.

This model worked well for many years in the more developed economies, where long-distance and international tariffs, which stayed high despite significant decreases in costs due to technological change, basically subsidized local services and led to relatively high levels of universal service. However, the model did not work as well in developing countries where networks were generally restricted to urban areas and more accessible to middle/high income consumers. Cross-subsidization kept local prices low for the wealthy, but did not generate sufficient income for infrastructure investment, and low-income consumers were subject to long waiting lists and poor quality of service.

In the 1980s, countries began to recognize the increasingly important role of the telecommunications sector for economic growth. As a result, in primarily developed nations, policies evolved to introduce competition – albeit, often limited in scope, in an effort to inject dynamism into the sector, spur innovation, increase choice, enhance availability, and lower tariffs. In the 1990s, partly as a result of national, regional and multilateral efforts (further discussed in Chapter 3), many countries introduced the first wave of reform by privatizing their national operators. In the second wave of liberalization, which sometimes occurred simultaneous with the privatization or followed soon thereafter, governments began allowing the introduction of new services (e.g., mobile services and value-added services) into the market. These new services generally did not compete directly with the privatized basic telecommunications operator, which often had been granted an exclusivity period, or the
non-privatized government-owned incumbent operator. The third wave of liberalization occurred once the incumbent operator’s exclusivity period was over and full competition could be introduced.

As shown in the figures below, there has been a global trend towards greater liberalization and the introduction of competition across ICT sectors. In both the mobile services and international gateway markets, for example, full competition is the norm worldwide and has been steadily increasing over the last several years. At the same time, monopolies have declined in favor of the introduction of at least partially competitive markets.

6.2.2 REGULATION IN TRANSITION TO COMPETITIVE MARKET

The introduction of competition in the marketplace does not mean regulation is unnecessary. Quite the contrary, the role of the regulator actually increases once governments authorize competition (See Figure 2-C), particularly during the early stages of transition from the former model of monopoly provision to one of effective competition. In order to transition to an effective competitive environment, regulators must establish a regulatory framework that can resolve disputes, address anticompetitive abuses, protect consumers, and attain national goals such as universal access, industrial competitiveness or economic productivity and growth.

As noted in Figure 2-D below, regulation is not an end in itself. Rather it is the vehicle to attain, and subsequently sustain, widespread access, effective competition and consumer protection. The liberalization and introduction of competition in the market requires strategic policies and regulations that establish an effective regulator (as discussed in Chapter 5), remove explicit barriers to entry (e.g., the inability to interconnect with the incumbent operator), and dismantle implicit barriers (such as the potential influence of the incumbent telecommunications operator over the regulator). As such, regulatory reform must include measures aimed at:

- creating independent entities to oversee the introduction of competition in the market and establish regulatory mechanisms for issues such as interconnection, licensing, and tariff rebalancing,
- preparing the incumbent operator to face competition, including timetables setting deadlines for the termination of market exclusivities,
- allocating and managing scarce resources such as numbers and spectrum resources in a non-discriminatory way within the liberalized

![Figure 2-A: Status of Completion in the Mobile Services Market Worldwide (2000-2010)](source)

![Figure 2-B: Status of Competition In International Gateways Worldwide (2003-2010)](source)

![Figure 2-C: Need for Regulation during Transition from Public Monopoly to Fully Competitive Environment](source)
market,

- expanding and enhancing access to telecommunications and ICT networks and services, and
- promoting and protecting consumer interests, including universal service and privacy.

As effective competition in ICT markets develops around the world, regulators are finding that an overarching ex ante approach to regulation, which seeks to prevent market failures through the implementation of sector-specific, forward-looking rules, can be less effective than ex post, competition-based frameworks at fostering more innovative markets. Rather than apply blanket prohibitions or obligations on certain activities as found under an ex ante framework, ex post regulation uses competition law to remedy specific instances of anti-competitive conduct. Currently, about 100 countries have adopted competition laws, of 25 percent are developing countries.

In transitioning from an ex ante to ex post regulatory framework, it is necessary to ensure that an effective framework is in place capable of identifying, reviewing and enforcing alleged anti-competitive behaviors. As the ICT markets in a country mature and regulators begin phasing out certain ex ante regulations, it is important to consider, on a case-by-case basis, sunset provisions or transition periods so that stakeholders, including service providers and consumers, are able to adapt to the new ex post regulatory environment.

Countries that have traditionally relied on strong state intervention, especially where ICT providers have been largely owned or supported by the government, may face particular challenges in the development and implementation of an ex post, competition-based framework due to lack of legal precedent and experience in this area. For countries without a general competition law regime, it is possible for the ICT regulatory authority to establish an ex post framework for the ICT sector.

However, even where competition in ICT markets is robust, policy makers may find that targeted ex ante rules are needed to direct certain market activities, such as wholesale access or unbundling obligations on the physical network layer (see Box 2-1). When adopted, ex ante regulation should be narrowly tailored to address the specific instances of expected market failure and should follow three broad guidelines: 1) ex ante rules should reflect the country’s stated policies and objectives in the activities to be regulated; 2) ex ante rules should first seek to resolve potential market failure at the wholesale level; and 3) ex ante rules should be reviewed on a regular basis and withdrawn once effective competition in the relevant market exists or the rules are no longer warranted. In other words, ex ante regulation should be considered a temporary measure meant to facilitate a competitive market.
**6.2.3 REGULATION IN A FULLY COMPETITIVE ENVIRONMENT**

In a fully competitive environment, there is a more limited need for regulation. However, regulatory authorities still have a critical role to play, particularly given the dynamic role of the sector and the unsettled issues that new technologies may introduce into the regulatory environment. Moreover, in certain areas, regulators need to maintain a prominent role because market forces often fall short of creating the conditions necessary to satisfy public interest objectives such as universal access and service.

Universal access/service policies are generally directed at achieving objectives such as the promotion of economic productivity and growth; the promotion of political and social cohesion through the integration of isolated communities into mainstream society; the improvement of delivery of government services; and the elimination of economic and social disparities between the “information rich” and the “information poor.” In certain areas of a country, however, significant upfront investments, high operating costs, and uncertain demand make it difficult to reach these objectives on commercial grounds. Thus, government initiatives directed at providing telecommunications access and services to rural, remote, and unserved areas may need to be adopted. In such cases, regulators should narrowly define and identify the areas and services that will benefit from government subsidies or incentive programs so as to avoid closing the door to private investments in areas where market forces alone do not provide an incentive to offer services in such areas.

Similarly, despite the increased reliance on market forces in the telecommunication sector, regulatory agencies must ensure that spectrum use is properly managed and allocated. This role cannot be left solely to market forces, since the introduction of new technologies may be limited by interference, inefficient spectrum use, or lack of access to spectrum (e.g., introduction of digital television).

Despite the benefits of new technologies, regulators also must be attentive and responsive to the regulatory issues that arise from the implementation of these new technologies and their related services. For example, in today’s environment, regulators are grappling with how to address issues such as spam and consumer concerns regarding privacy, which were not issues of concern to regulators ten years ago. In addition, while new technologies often offer consumers greater choices at lower prices, regulators have a responsibility to ensure that consumers are aware of the potential limitations that may exist with these lower-price offerings (e.g., emergency services may not always be available through such services; services offered may be of a lower quality of service). Moreover, as these new services gain prominence regulators also will need to consider whether they should be subject to obligations imposed on other providers (e.g., universal service).

**6.2.4 BENEFITS OF REGULATION**

Effective regulation has proven to result in greater economic growth, increased investment, lower prices, better quality of service, higher penetration, and more rapid technological innovation in the sector.

Increased Investment

Liberalization in the telecommunications sector has been greatly encouraged by World Trade Organization (WTO) commitments and obligations, particularly the WTO Reference Paper on regulatory principles. Early evidence of the impact of liberalization under the WTO’s Basic Telecommunication Agreement (BTA) in low income Sub-Saharan African countries shows that growth in telecommunications revenues...
as a percentage of GDP is higher in countries that have made GATS commitments in telecommunications. Thus, investors are likely to be more willing to commit capital and technology in countries with WTO telecommunications commitments, as they are likely to be rewarded with higher revenues. Uganda, for example, reformed its telecommunications sector and enjoyed healthy revenue growth, while Ethiopia, which had not reformed, experienced much lower revenue growth.

Morocco understood how important effective regulation was to attract foreign investment to developing economies as it began laying the groundwork for privatization and liberalization of its telecommunications market in the late 1990s. It passed the Post Office and Telecommunication Act (Loi sur la poste et les télécommunications) in August 1997 and created the National Agency of Telecommunications Regulation (Agence Nationale de Réglementation des Télécommunications, ANRT) in February 1998. By designing its vision for a liberalized market in a clear and transparent way, the Moroccan framework inspired investor confidence, which was reflected in the country’s auction of a second mobile digital cellular licence in 1999. The winner, Medi Telecom (a joint venture of Spain’s Telefónica and Portugal Telecom along with local investors) paid USD 1.1 billion for a 15 year license. This was the largest investment ever in Morocco and one of the highest prices ever paid for a mobile licence (in relation to the population). From being the country with the second lowest telephone penetration in the North Africa region, Morocco became the country with the one of the highest (Figure 2-E). The number of mobile subscribers grew from 375,000 in 1999 to over 9 million by year-end 2004. By 2009, there were over 25 million mobile subscribers in Morocco. While just over 1 percent of the population had a mobile phone in 1999, this had risen to almost one-third by 2004 and exceeded 100 per cent mobile penetration by 2010. In December 2000, the incumbent operator, Maroc Télécom, was partially privatized through the sale of 35 per cent of its equity to Vivendi Universal, a French conglomerate. The privatization was regarded as one of the most successful ever in a developing country, generating MAD 23 billion (USD 2.3 billion). Morocco’s success clearly illustrates how effective regulation of the sector can trigger dramatic increases in ICT development.

As shown in Figure 2-E, mobile penetration rates in other North African countries have also soared since 2003, particularly Algeria and Tunisia, which surpassed Morocco around 2005. Notably, both Algeria and Tunisia initiated comprehensive liberalization reforms prior to achieving higher mobile penetration rates. In 2000, the Algerian government issued a draft telecommunications policy providing a roadmap toward liberalization and market reforms and a draft Telecommunications Law creating a separate, independent ICT regulator and providing for a multi-operator market. At the time, the telecommunications sector, including fixed line and mobile telephony, operated under full monopoly market structures and investment in the telecommunications sector as a whole was less than USD 150 million per year. Algeria requested assistance from the World Bank to design and implement market reforms. By 2002, the new telecommunications law and all key secondary legislation were adopted and privatization was achieved by 2004. In addition, two new mobile licences were awarded to private operators in 2004 through a transparent and competitive bidding process, which led to tremendous growth in the mobile services sector. As shown in Figure 2-E, Algeria’s mobile penetration rate increased from fewer than five in 1999 to nearly 42 subscriptions per 100 inhabitants by 2005, soaring to 100 percent penetration by 2011. The World Bank concluded that one of the main lessons of Algeria’s reforms is that “competition, brought about by liberalization in the telecommunications sector, is the most effective driver for sector performance.” Investors consider the regulatory environment to be a critical factor in their analysis of whether or not to invest in a country. They often have a set of regulatory conditions that must be present for them to consider an investment in a particular country. A report presented at the ITU’s 2002 Global Symposium for Regulators summarizes several key findings from the private sector on this issue:

- Regulatory issues are a key factor in market entry and expansion decisions;
- Interactions between regulators and operators are most challenging during times of transition;
- Companies look at the overall regulatory environment – not just specific regulations. Transparency and responsiveness are important factors in the willingness of companies to enter and stay in markets;
- Companies employ a variety of ways to ensure that regulatory information is factored into business planning and decision-making.

Further, as noted by the European Competitive Telecommunications Association (ECTA), a link exists between good regulation and the amount of investment attracted into a country. ECTA has designed a “scorecard” to assess regulation in the European Union. It compared the results of the scorecard to investment in the ICT sector and found that “...effective regulation continues to have a strong and positive impact on the level of investment in telecommunications networks and services.” Countries that rank high in the scorecard tend to have higher levels of telecommunications investment in relation to total investment in the economy (Figure 2-F). ECTA reiterated the relationship between...
liberalization and investment in its 2009 Scorecard, stating that "Once again, therefore we find that pro-competition regulation is strongly associated with higher levels of investment in the electronic communications market."

**Economic Growth and Consumer Benefits**

Developing economies in Asia have made significant strides towards pro-competitive regulation and in return have achieved considerable progress in bridging the digital divide. One such country is India, where the Telecom Regulatory Authority of India (TRAI) has made a comprehensive reform of the regulatory framework to promote technological neutrality and take advantage of inter-modal competition. Competition was enhanced by issuing additional mobile licenses in 2001 and 2002 and awarding wireless local loop (WLL) licenses in 2002. Another relevant measure taken by TRAI was to move from a receiving-party-pays (RPP) to a calling-party-pays (CPP) structure in an effort to spur mobile take-up. The results of these policies have brought economic growth to the sector and produced a marked increase in mobile subscribers and a fall in mobile tariffs (see Figure 5-F). By contrast, the failure to adopt such measures, along with other factors such as delay in the introduction of a sufficiently pro-competitive interconnection regime between fixed and mobile services, has been identified as one of the causes that slowed investment and customer growth in the mobile market in Sri Lanka.

**Growth of New Services**

In order to promote the growth of new products and services, a flexible regulatory framework capable of adapting to the rapid pace of technological developments is needed. As such, the implementation of a unified licensing or general authorization regime helps to stimulate the growth of new and innovative services by allowing licensed operators to offer a broad range of services under a single authorization. In some instances, however, it may be unclear how current regulations and licensing rules apply to new services, particularly those involving converged technologies. In these cases, it is important that ICT regulators act as quickly as possible to offer guidance on the regulatory treatment of these technologies and services, keeping in mind that liberalization provides the greatest opportunity for investment and growth. Voice over Internet Protocol (VoIP), also called IP telephony or Internet telephony, has been one of the most successful converged technologies over the last decade, despite the fact that the rules regarding the general provision and use of VoIP is unclear or explicitly banned in many countries. Nonetheless, over 60 per cent of countries worldwide have reported to the ITU that specific VoIP policies are in place (see Figure 2-H).
Converged technologies, including VoIP, promote facilities-based competition by allowing DSL, cable modem, fiber network and wireless service providers to compete directly with one another. VoIP boosts service-based competition by enabling new service providers, such as Skype, to compete with incumbent operators without owning their own network infrastructure, which is likely to result in new and better services, as well as improve incentives for domestic and foreign investment. VoIP also offers substantial cost advantages to facilities-based operators since the "transmission over IP-based networks can cost as little as a quarter of equivalent PSTN transmission." In addition, VoIP can reduce maintenance costs for network operators by 50 to 60 per cent since an IP call typically requires only 10 per cent of the bandwidth required for a PSTN call. Ultimately, "if policy frameworks restrict competition, or stop convergence from playing out in a market, they lead to suboptimal outcomes that reduce the development impact of ICT. Consequently, developing countries can increase access to advanced technologies and innovative, high-quality services by opening markets, promoting competition, and removing regulatory barriers to new technologies and business models."

**Lower Prices for Consumers**

In a competitive market, operators typically pass on cost-savings to consumers through lower retail tariffs, such as by replacing circuit-switched telephony with VoIP. Even if some operators choose not to reduce retail tariffs, consumers can take advantage of lower prices in a liberalized environment by switching to other service providers and/or technologies. For example, it has been shown that lower prices for international telephone calls are highly correlated with the level of competition. In Africa, one of the regions of the world where competition in long-distance telephony is lowest, prices for both international telephone calls and broadband services are much higher than in other regions of the world. A 2009 survey conducted in the United States by the Pew Research Center found that retail prices for broadband services are closely correlated to the number of broadband providers available—the average monthly bill was USD 32 in areas with four or more providers as compared to USD 45 in areas with only one provider (see Figure 2-I). Regulators must often intervene to remedy shortcomings in competition that may include imposing some form of regulation, such as setting interconnection rates, to force incumbent operators to charge competitive operators wholesale cost-oriented rates. It may also be necessary to eliminate restrictions on resale to allow entry of multiple operators and stimulate competition.

Liberalized markets in the same region and at similar income levels typically have penetration rates higher than those with non-liberalized markets. For example, the Latin American countries of Belize and Brazil have similar income levels but fixed-line penetration rates varied considerably, as of 2011. In Belize, where the incumbent operator maintains a monopoly on fixed-line provision, the fixed-line telephony penetration rate is 9.07 lines per 100 inhabitants while the fixed-line broadband penetration rate only 3.05 lines per 100 inhabitants. In contrast, Brazil’s fixed-line markets are considered fully competitive—the country’s fixed-line penetration rates are more than double that of Belize, at 21.88 lines per 100 inhabitants for fixed-line telephony and 8.56 lines per 100 inhabitants for fixed-line broadband.

As demonstrated in Chapter 3, regulation is impacted by a variety of factors, including legal traditions, multilateral and regional commitments, other legislation and the nature of the marketplace. Thus, while the design of the regulatory framework may vary, certain critical elements should be included in an effective regulatory framework. These features, discussed in Chapters 5, 6, and 7, relate to elements for effective
regulation, aspects to consider when designing the regulatory framework, functional aspects of the regulatory authority, and decision-making, accountability, consumer protection, dispute resolution and enforcement powers. Consideration and proper implementation of these features are the formula for success and will facilitate the benefits to consumers, the market, and the economy that have been achieved in many countries that have undergone regulatory reform.

6.3 LEGAL CONTEXT OF REGULATORY REFORM

The development of an effective regulatory framework for the ICT sector requires the establishment of a comprehensive set of laws, rules, and regulations that clearly identifies the contractual obligations and property rights of governments and stakeholders. The structure of this framework is determined, in part, by the legal and constitutional system of each country. This Chapter discusses these issues and other factors that impact the legal context of regulatory reform, including international and regional commitments, telecommunications-related legislation, and competition policy.

Practice Notes

- Box 3-5: United States Tripartite Review [3.3.2]
- Foreign Ownership in Canada [3.4.2]
- Foreign Ownership in the United States [3.4.2]
- Spam Legislation in Australia, China, Malaysia, and the United States [3.4.4]
- Table 3-1: Countries Committing to WTO Reference Paper with Different Legal Traditions [3.1.2]
- Table 3-2: Jamaica and Brazil - Comparison of Telecommunications Laws in Civil and Common Law System [3.1.3]
- Table 3-5: Entity with Jurisdiction over Competition Issues in the Telecommunications Sector in Certain Countries with both a Telecommunications Regulator and Competition Authority [3.3.2]
- Table 3-6: Foreign Telecommunications Ownership Restrictions in Selected Countries [3.4.2]
- Understanding GATS [3.2.1]

Reference Documents

- Armenia World Trade Organization Schedule of Specific Commitment
- Australia - Foreign Ownership in the Telecom Sector
- Australia Telecommunications Competition Regulation - Inquiry Report
- Bangladesh - World Trade Organization Schedule of Specific Commitments
- Black Economic Empowerement ICT Charter - Draft 4
- Brazil - Perspectives on the Expansion and Modernization of the Telecommunications Sector
- Central American Free Trade Agreement - Chapter 13
- Chile - Decreto Ley 211 - Ley de Competencia
- Chile - Ley General de Telecommunicacines
- Comments of FCC General Counsel Wright - Introducing the Transactions Team Presentation on Timely Consideration of the Applications Accompanying Mergers
- Competition Law and Policy in Chile - A Peer Review
- Consolidated Version of the Treaty Establishing the European Community
- Creating the “Right” Enabling Environment for ICT
- Directorate General Competition - Best Practices on the Conduct of EC Merger Proceedings
- Dominican Republic - Proyecto de Ley de Defensa de la Competencia
- Draft Black Economic Empowerment Charter for the ICT Sector
- EC Merger Regulation
- EU Accession Negotiations Guide
- EU Directive on Competition in the Markets for Electronic Communications Networks and Services
- European Commission Recommendation on Relevant Product and Service Markets Susceptible to Ex Ante Regulation
- Federal Communications Commission - Foreign Ownership Guidelines
- Foreign Direct Investment in Developing Asia
- Foreign Direct Investment in Latin America
- Foreign Direct Investment in Least Developed Countries
6.3.1 IMPACT OF DIFFERENT LEGAL TRADITIONS ON THE REGULATORY FRAMEWORK

3.1.1 SNAPSHOT OF DIFFERENT LEGAL TRADITIONS

Regulation does not occur in a vacuum, and the establishment of a legal and regulatory framework is determined in large part by a country’s specific legal tradition. The conception of law and legal system differs depending on the country and is often rooted in perceptions based on customs, culture, religion, and politics. For example, in certain countries, law is viewed as a “model code of behaviour,” while in others it is considered an “instrument of compulsion.” Today, we have numerous classes of legal systems: civil, common, socialist, Islamic, Hindu, and
6.3.1 SNAPSHOT OF DIFFERENT LEGAL TRADITIONS

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It is difficult to point to one country that has a pure legal tradition without influence from other systems. For historical reasons, as well as political and economic influences, the legal systems of countries are often an amalgamation of various legal systems, incorporating elements of different legal traditions. For example, many countries in the Middle East and Africa have legal systems based on a mixture of legal traditions. Algeria has a mixed legal system (i.e., socialist, French civil law, and Islamic law) whereas Cameroon has a civil law system, with elements of common law. Moreover, sometimes two countries may have different legal systems, but may have similar elements in their legal frameworks; for example, both may have the same type of government structure (e.g., federal republic versus unitary state). This occurs in countries such as Brazil, the United States, and Germany, where there is a distinction between federal law and state law, as opposed to countries that follow a unitary state model, such as China, France, and United Kingdom.

Note that this map only includes Civil law, Common law, Customary law, Muslim law, and Mixed law systems. Other legal systems such as the African legal system and the Socialist Legal System are not depicted in this map.

Figure 3-A: Legal Traditions Around the World
Source: Université d’Ottawa (University of Ottawa) Faculty of Law,
http://www.droitcivil.uottawa.ca/world-legal-systems/eng-monde.php

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The conception of law and legal system differs depending on the country and is often rooted in perceptions based on customs, culture, religion, and politics. For example, in certain countries, law is viewed as a “model code of behaviour,” while in others it is considered an “instrument of compulsion.” Today, we have numerous classes of legal systems: civil, common, socialist, Islamic, Hindu, and African, to name a few. Among these, the most prominent in modern times are common law and civil law legal traditions. The map on Figure 3-A shows some of the predominant legal systems around the world.

It is difficult to point to one country that has a pure legal tradition without influence from other systems. For historical reasons, as well as political and economic influences, the legal systems of countries are often an amalgamation of various legal systems, incorporating elements of different legal traditions. For example, many countries in the Middle East and Africa have legal systems based on a mixture of legal traditions. Algeria has a mixed legal system (i.e., socialist, French civil law, and Islamic law) whereas Cameroon has a civil law system, with elements of common law. Moreover, sometimes two countries may have different legal systems, but may have similar elements in their legal frameworks; for example, both may have the same type of government structure (e.g., federal republic versus unitary state). This occurs in countries such as Brazil, the United States, and Germany, where there is a distinction between federal law and state law, as opposed to countries that follow a unitary state model, such as China, France, and United Kingdom.
Note that this map only includes Civil law, Common law, Customary law, Muslim law, and Mixed law systems. Other legal systems such as the African legal system and the Socialist Legal System are not depicted in this map.

6.3.1.2 REGULATORY FRAMEWORKS IN DIFFERENT LEGAL SYSTEMS

The last two decades have resulted in dramatic changes in the telecommunications regulatory frameworks of many countries as a result of market liberalization. Some degree of regulatory reform has been implemented in most countries, including the establishment of independent regulators in 131 countries by 2005. As a result of these changes, regulatory models have been developed incorporating internationally recognized best practices, despite the countries having different legal traditions. In implementing these models, the legal tradition has influenced the procedure and approach towards the achievement of the policy and regulatory goals that support such best practices, but has not necessarily determined the content of the telecommunications regulatory framework.

Similarly, the process of globalization and world trade has played a significant role in shaping the content of a country’s regulatory framework. As further discussed in Section 3.3, countries seeking to attract investment in their telecommunications sectors, strengthen their economies and engage in bilateral and multilateral trade integration, are often required to fulfill several regulatory preconditions aimed at the removal of market barriers. For example, the World Trade Organization (WTO) Reference Paper, which articulates the principles of a telecommunications regulatory framework, has been adopted by close to 90 countries throughout the world. (See Table 3-1 for examples of countries with different legal traditions that have committed to the WTO Reference Paper.) This Reference Paper requires countries to establish an independent regulator, as well as incorporate fundamental tenets into their telecommunications regulatory framework regarding interconnection, universal service, competitive safeguards, licensing criteria, and allocation and use of scarce resources.

Practice Notes

| Table 3-1: Countries Committing to WTO Reference Paper with Different Legal Traditions [3.1.2] |

6.3.1.3 IMPLEMENTATION OF REGULATORY DESIGN

The design of legal instruments used to regulate the telecommunications sector may vary depending on the legal tradition of a country. Generally, however, the legal framework follows a hierarchy beginning with primary legislation, such as laws and decrees from which secondary legislation such as regulations, resolutions and guidelines follow (see Figure 3-B). This legislation, in turn, provides the legal basis for the regulator or the relevant ministry to issue authorization instruments such as licences, concessions, and permits to operators. This legal hierarchy provides certainty and predictability to consumers and other stakeholders because it specifies the rights and obligations (i.e., the rules of the game) that apply to the sector. Such hierarchy provides assurances to stakeholders that secondary legislation (e.g., rules, decrees and instructions) cannot be used by the government to nullify certain rights and obligations set forth in primary legislation. This stable environment, in turn, encourages investment and increases consumer confidence in the sector.
Primary Legislation

The primary legislation for the sector should consist of the framework that will be used to regulate the sector. To the extent possible, this should be issued through a legal instrument not susceptible to easy revocation by a government authority in order to ensure stability and predictability. It should lay out the basic elements and framework, such as the establishment of the regulator, the powers and responsibilities of the regulator, the role of the minister responsible for communications (if applicable), enforcement powers and ability to sanction. While the primary legislation should address fundamental regulatory issues such as universal service and interconnection, the details of such issues are better addressed through secondary legislation. When looking at primary legislation in both civil and common law traditions, many of the same elements are included, as noted in Table 3-2.

In countries with civil law traditions, however, subject areas covered by the principle of legal reserve (i.e., subject matters that have been constitutionally reserved to regulation by an instrument with the hierarchy of a law) also may need to be included within the text of primary legislation. Such subject areas typically encompass direct limitation of individual rights (e.g., the right to free enterprise and property, or freedom of speech) as well as the regulation of prohibited conduct and applicable sanctions. Moreover, in civil law jurisdictions it is often the case that in order to regulate certain matters through secondary legislation, they must be referred to in the primary legislation. Further, the extent of specificity contained in the primary legislation from civil law jurisdictions is mixed. In certain countries, such as Bulgaria, the primary legislation is quite comprehensive, including extensive details regarding the licensing framework, universal service, interconnection, consumer interests, fees, and sanctions; whereas, in countries such as Algeria, the primary legislation address similar issues, but the provisions are much less detailed.

Secondary Legislation

The more detailed elements of regulatory issues may be addressed best in secondary legislation, which can be amended and modified more easily to complement the pace of technological development without the intervention of the legislature. Typical regulatory issues addressed through secondary legislation include interconnection, competitive safeguards, numbering, universal service, and tariffs.

Secondary legislation may take different forms (e.g., regulations, instructions, decrees, guidelines) and depending on the jurisdictions there may be a hierarchy with regard to the secondary legislation. For example, in Spain, regulations may only be issued by the minister, as the regulator only has authority to issue “instructions.” This challenges the independence of a regulator to establish its own policy because the ministry can always issue a regulation that modifies an “instruction” issued by the regulator.

Authorization Instruments

A variety of “authorization” instruments are used by governments to grant an entity the right to undertake certain activities in the telecommunications sector (e.g., provide telecommunications services, operate networks, and use spectrum). These instruments include concessions, franchises, delegations, licences, permits, and other forms of authorizations. Typically, the general authorization framework is set forth in the primary legislation and further expanded upon and described in specific detail in secondary legislation.

Administrative acts and administrative contracts

In civil law jurisdictions, the “authorization” instrument often is either a unilateral administrative act or a bilateral administrative contract. A bilateral administrative contract when used as an “authorization” instrument generally is a concession, franchise, delegation or other type of agreement. However, not all contracts entered into with public entities are administrative contracts. In comparison to licences, concessions, franchises and delegations are more often in the form of an administrative contract than a unilateral administrative act. Typically, an administrative contract requires the consent of the parties to be amended. Thus, some investors find concessions (as well as franchises and delegations) to be a more attractive vehicle than a licence.

Usually, a telecommunications licence is a unilateral administrative act, rather than an administrative contract. Although different views exist as to whether an administrative act can be unilaterally amended or revoked, it is considered a more flexible instrument than an administrative contract.

In certain jurisdictions, such as Jordan, the “licensing” instrument consists of a licence and an administrative contract (i.e., licensing agreement). Jordan’s Telecommunications Law provides that “the licence shall be issued by virtue of a resolution by the Board, provided that a contract of an administrative nature is drawn including the following terms and conditions: (...).”

Shift away from concessions

While moving towards liberalization, some countries permitted the delivery of telecommunications services through the unilateral issuance of licences or concession contracts between the relevant government authority and the private party authorized to provide a particular service. As countries implement regulatory reforms, however, they are typically shifting away from concessions and moving to licences, permits, notifications and registrations which tend to be more straightforward and uniform. Moreover, in many countries, licensing instruments are much more streamlined, with the terms and conditions associated with the licence generally addressed in secondary legislation rather than the licence. From a regulator’s standpoint, this is a less cumbersome process because changes do not have to be introduced to each licence that has been issued, rather changes can be introduced by amending, or issuing new secondary legislation.

Practice Notes

- Table 3-2: Jamaica and Brazil - Comparison of Telecommunications Laws in Civil and Common Law System [3.1.3]

6.3.2 IMPACT OF MULTILATERAL AND REGIONAL COMMITMENTS
Significant developments have taken place on a global (e.g., WTO) and regional (e.g., EU) level to foster the trend of market liberalization and competition. As countries make global and regional commitments to open their telecommunications markets to foreign investment and harmonize local legislation with that of other countries in similar geographic or economic situations, such commitments may serve as a means to accelerate regulatory reform, facilitate global or regional best regulatory practices, and provide telecommunications investors with a level of certainty and predictability. A list of countries that established independent regulators after undertaking WTO and other regional commitments can be found at the ITU ICT Eye. In addition, such multilateral and regional frameworks also serve to establish government accountability in ensuring a certain level of transparency and market-oriented regulation.

The extent and consequences of such commitments vary by country and generally have less to do with a country’s legal system, and more to do with a country’s political and economic situation and the level of development and competition in its telecommunications market.

### 6.3.2.1 ROLE OF THE WORLD TRADE ORGANIZATION

Created in 1994 as a result of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), the World Trade Organization (WTO) is a global international trade organization that develops international commerce rules and mediates trade disputes among its members. The WTO brings together 148 members1 that participate in negotiations and binding commitments concerning the promotion of competition and the liberalization of international trade of goods and services.

**General Agreement on Trade in Services**

Concluded in 1997 under the auspices of the WTO, the Fourth Protocol to the General Agreement on Trade in Services (GATS) represents one of the major steps towards liberalization of the global telecommunications marketplace and the establishment of liberalization.2 The purpose of GATS is to facilitate liberalization of trade in services. Two types of obligations exist under GATS: (i) general obligations that apply to all members and all service sectors covered under GATS regardless of whether or not specific commitments have been made; and (ii) sector-specific commitments regarding market access and national treatment for sectors and activities that members agree to open to international trade.

- Under the general obligations, there are two main principles: (i) WTO member countries must afford each other most favored nation (MFN) treatment (i.e., prohibition on discrimination that requires countries to afford “treatment no less favourable than that accorded to like services and service suppliers of any other country”);3 and (ii) countries must ensure transparency of local regulations (e.g., countries should publish measures of general application, and allow a period of public comment prior to their issuance).

- Sector-specific commitments are made regarding market access;4 national treatment;5 and other additional commitments.6 WTO members make commitments on market access and national treatment based on one of the following four modes of supply: (i) cross border supply;7 (ii) consumption abroad;8 (iii) commercial presence;9 and (iv) presence of natural persons.10 Studies show that since 1997, countries that made GATS commitments have experienced faster levels of fixed-line penetration, mobile subscribership, and telecommunications sector revenues.11 In particular, just between 1997 and 2001, low-income Sub-Saharan Africa countries that scheduled commitments out-performed those that did not (see Figure 3-C).12

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* Development/Economic Impact of WTO on Low-Income Countries in Sub-Saharan Africa

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**Basic Telecommunications Agreement**

The series of telecommunications commitments that make up a portion of the GATS are referred to as the WTO Basic Telecommunications Agreement (BTA).13 (See Box 3-1.) The BTA established the basis for structural reform of the telecommunications sector aimed at removing barriers to entry and competition, and the adoption by the majority of members of certain pro-competitive regulatory principles that are set out in the “Reference Paper on Regulatory Principles.”14

These telecommunications commitments apply to basic telecommunications and certain value-added services, but not to audiovisual services. To date, 105 of the 148 WTO members have made commitments under the BTA. Ninety-eight WTO members have made specific commitments on basic telecommunications and 89 members with respect to value-added telecommunications services.15
Definitions/Coverage:

Telecommunications services (covered under the BTA):

- **basic telecommunications** services are public and private telecommunications services that involve end-to-end transmission of customer supplier information. These include voice telephone services, packet-switched data transmission services, circuit-switched data transmission services, telex services, telegraph services, facsimile services, and private leased circuit services.
- **value added-services** are services for which suppliers enhance the form or content of the customer's information, thereby "adding value" to the customer's information, and include electronic mail, voice mail, on-line information and data base retrieval, Electronic Data Interchange (EDI), enhanced/value-added facsimile services, including store and forward, and store and retrieve, code and protocol conversion, on-line information and/or data processing (including transaction processing), and other services.

Audiovisual services involve the dissemination of content, including motion picture and video tape production and distribution services, motion picture projection services, radio and television services, radio and television transmission services, and sound recording.

Key Documents:

- GATS (general obligations and Fourth Protocol);
- GATS Annex on Telecommunications;
- Schedules of specific commitments and exemptions (country-specific); and
- Reference Paper.

The purpose of GATS is not to regulate competition, but to ensure that members that have made commitments do not establish regulations that would hinder the international trade of services.

WTO membership does not entail automatic submission to the BTA as countries must expressly make commitments through their respective schedule of commitments. These schedules may contain modifications or derogations from the overall text. Members are free to include in their schedules the sectors and activities that will be covered under the commitments. Commitments are made by identifying a particular subsector in the respective schedule and therefore only the services listed in a schedule are open to international trade, subject to any limitations or conditions set forth in the applicable schedule. As a result, if a sector or activity does not appear listed in a schedule it means that a commitment has not been made regarding that sector or activity, and it is not open to international trade.16

Countries can make BTA commitments as part of their accession to the WTO, as part of a formal round of negotiations (e.g., the Doha round of negotiations launched in November 2001), or unilaterally. As a result of the MFN treatment imposed under GATS, a telecommunications commitment made by a WTO member benefits all members regardless of whether or not such other members have made commitments. GATS rules also apply to the provision of services by monopoly service providers, to the extent the provider has been granted special or exclusive rights to provide the service under monopoly (i.e., the rules do not apply to de facto monopolies).17

Telecommunications services and audiovisual services appear as different subsector classifications under the main “Communications” sector heading of the GATS Services Sector Classification List.18 While the structure of these schedules is the same, countries were given the flexibility of creating distinctions or sub-divisions within the telecommunications sector heading (i.e., local, long distance and international; wire and radio-based; public or non-public; and resale or facilities-based services), making limitations on market access or national treatment, and in certain cases, adding technological conditions (e.g., for satellite access). As a result, the items and terms included under each classification vary among members, creating potential discrepancies in the manner in which countries classify different types of services.19

These commitments are important documents that establish international obligations undertaken by countries and are a clear reference for potential foreign investors on the countries’ liberalization strategy. Countries may decide to gradually open their market to competition or to take a more aggressive approach. However, they must clearly specify in their commitments where and for how long they wish to restrict their commitments.

Ghana, for example, undertook commitments aimed at phasing in competition over a given period. More specifically, Ghana committed to:20

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

However, Ghana stated in its commitments that the government would conduct a review of its policy after the duopoly period so as to determine whether to license additional telecommunications services suppliers. Pursuant to the country’s Telecommunications Policy implemented in 2005, Ghana has opened several markets to competition, including international gateway, mobile services, and fixed satellite services.21

This is different from Jordan’s WTO commitment where the Government specified that no restrictions would exist after 1 January 2005. Jordan’s commitments are based on a WTO Chairman’s Note S/GBT/W/2/Rev.1 dated 16 January 1997. This Note foresees that unless otherwise noted in the sector column, any basic telecommunications service listed encompasses local, long distance, and international services for public and non- public use; that it may be provided on a facilities-basis or by resale; and that it may be provided through any means or
Jordan's commitments also indicate that it has removed market access limitations on spectrum availability pursuant to another WTO Chairman's Note S/GBT/W/3 dated 3 February 1997. This Note recognizes the right of all WTO members to exercise spectrum/frequency management that may affect the number of service suppliers provided this is done in accordance with the relevant provisions of GATS.

The effects of the BTA extend beyond the countries that have made commitments thereunder, with some countries, such as the United States, adopting parallel commitments under bilateral agreements beyond the scope of the WTO (see Box 3-2).

Given the slow progress of the Doha Round of negotiations and the uncertainty as to the treatment of certain converged services under the WTO classification framework, the United States has sought to fulfill certain of its trade objectives by means of such bilateral and regional trade agreements. As a result, numerous countries have adopted telecommunications commitments outside the scope of the WTO that are similar to, or which extend beyond, those under the BTA pursuant to these bilateral and regional free trade agreements.

In 2002, the U.S. Congress passed the Trade Promotion Authority Act allowing the executive branch to negotiate trade agreements where Congress can only vote to approve or reject the agreements, without making any modifications (this process is referred to as “fast-track authority”). Within this authority is the mandate for the United States Trade Representative (USTR) to ensure that the agreements concluded foresee and prevent trade barriers in digital services, including the trade of digital services and goods (the “digital trade agenda”). Under such fast-track authority and the USTR mandate, to date the United States has concluded eight free trade agreements and is in the process of negotiating three other agreements, including the U.S.-Andean FTA with Peru, Ecuador and Colombia, and the U.S. SACU FTA, with five member countries of the Southern African Customs Union (SACU) – Botswana, Lesotho, Namibia, South Africa and Swaziland where countries have generally agreed to an open and competitive telecommunications market, and removing barriers to the trade of digital goods and services. To broad terms, all trade commitments under the FTAs (except for few carve outs – e.g., Costa Rica, under the CAFTA), provide for: (i) reasonable and non-discriminatory access to the networks of the signatory parties; (iii) the right of telecommunications companies to interconnect with networks in the signatory countries at nondiscriminatory, cost-based rates; (iii) non-discriminatory access to facilities, e.g., submarine cable landing stations; (vi) the ability to lease elements of telecommunications networks on non-discriminatory terms and to resell such telecommunications services; (v) the recognition by each signatory of the importance of supplying services by electronic means as a vehicle to establish a vibrant e-commerce environment; (vi) non-discriminatory treatment of digital products; and (vii) the protection of intellectual property rights. To a large extent, these principles parallel those under the WTO’s Reference Paper, but extend these obligations to digital services and goods that may not be covered under certain countries’ WTO commitments.

The United States has also used the FTA as a means to further expand the scope of WTO commitments of certain countries or to achieve some of the same objectives sought under the WTO. For example, the recently approved U.S.-Central American Free Trade Agreement (CAFTA) is directed to promote trade liberalization between the United States and Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua. Although some of the CAFTA countries are WTO members, they had not fully adopted the BTA or the WTO Information Technology Agreement. However, in signing CAFTA these countries committed to a chapter on telecommunications services that incorporates many elements of the BTA and the Reference Paper. In addition, CAFTA, which was substantially modeled after the ten-year old North American Free Trade Agreement (NAFTA), also contains a relevant section directed to the liberalization of telecommunications among the signing parties. Thus, through CAFTA, Costa Rica, for the first time made a commitment to open its market to foreign competition in Internet services, private data networks, and wireless services. CAFTA also requires the Dominican Republic, Guatemala, Honduras and Nicaragua to join the WTO ITA so that U.S. high-tech exports enter their markets duty-free.

WTO Reference Paper

The Reference Paper, which consists of six principles that serve as a "checklist of success of telecommunications reform in many countries," was conceived as a necessary instrument for the removal of regulatory barriers to market access, and its implementation is aimed at preventing anticompetitive practices by major suppliers. Members may adopt the Reference Paper in whole or in part, and by doing so, they commit to maintain appropriate regulatory measures to ensure a competitive marketplace, as well as transparent and fair regulatory procedures. The six Reference Paper principles are:

- **Competitive safeguards**: Members are required to establish competitive safeguards preventing major suppliers from engaging in anticompetitive conduct. The Reference Paper does not define competitive safeguards or anticompetitive practices; this is left for each member to determine in its national legislation. However, the Reference Paper lists certain examples of anticompetitive practices including: anticompetitive cross-subsidization; use of information obtained from competitors with anticompetitive results; and withholding technical data.
- **Interconnection**: Major suppliers (i.e., those with the ability to materially affect the terms of price and supply in the market by exploiting their control over "essential facilities" or their position in the market) of members are required to provide interconnection upon request.

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*Box 1 Beyond the WTO: U.S. Harmonization Efforts*
under non-discriminatory terms and conditions, and at cost-orientated rates that are transparent and feasible.

- **Universal service**: Members have the right to define the kind of universal service obligation they wish to maintain, provided such obligations are not anticompetitive per se, and are administered in a transparent, non-discriminatory and competitively neutral manner. Universal service obligations may not create unnecessary burdens on service suppliers.

- **Public availability of licensing criteria**: To the extent a licence is required, members should make publicly available: (i) the licensing criteria and the time it will take to decide on a licence application; and (ii) the terms and conditions of individual licences.

- **Independent regulators**: Members should ensure that the regulatory authority is separate from, and not accountable to, any supplier of basic telecommunications services, and that their decisions are impartial with respect to market participants. This requirement seeks equal, transparent and objective treatment of all operators in the market.

- **Allocation and use of scarce resources**: Allocation and use of scarce resources (i.e., frequencies, numbers, and rights of way) should be carried out in an objective, timely, transparent and non-discriminatory manner, and the allocation of frequency bands should be made publicly available. Details of government-use frequencies do not have to be made publicly available.

To date, close to 90 countries have committed to adopting the Reference Paper. “The Reference Paper has been criticized for its general nature and the fact that it does not prescribe the manner in which these principles should be applied. However, it has provided countries with a baseline approach of what are considered the “minimum standards of international good practice.” Moreover, it can be, and has already been, used as a vehicle to evaluate the appropriateness of existing measures or the lack thereof under the WTO’s dispute settlement mechanism (the decisions of which are binding upon WTO members). (See Section on “WTO Dispute Settlement Mechanism” below for a discussion on the U.S.-Mexico Panel Report.)

**Annex on Telecommunications**

Concluded at the Uruguay Round, the GATS Annex on Telecommunications recognizes that access to and use of public telecommunications networks are essential to the effective provision of services covered under GATS and requires WTO members to allow suppliers of scheduled services to use the “public telecommunications transport network and services” on reasonable and non-discriminatory terms. This obligation extends to any kind of service sector for which a schedule has been made accepting specific market access and national treatment (e.g., value-added services, banking services, legal services, and computer services) regardless of whether the particular country has liberalized its basic telecommunications sector. As a result, the Annex on Telecommunications does not deal with market access to basic telecommunications (as this is dealt with in each member’s schedule) and does not specifically require liberalization of telecommunications services; rather it deals with the ability of service suppliers to access such services. Such ability is limited by the right of the network owner to establish access and use conditions that address public service responsibilities, the protection of the technical integrity of the network or to deny use of the network for services not covered under any schedule of commitments.

**Audiovisual Services**

Also under the “Communications” sector list are audiovisual services (i.e., motion picture and videotape production services, motion picture projection services, radio and television services, sound recording, and others). These services are not covered under the BTA, and the national laws of each country are used to interpret the services that fall under the audiovisual subsector (e.g., for most WTO member countries, satellite services fall under broadcasting/audiovisual activities, but under U.S. legislation these are considered telecommunications services). Audiovisual services are not as liberalized as telecommunications services and many countries maintain rules prohibiting foreign ownership of broadcasters and reception of foreign satellite television programming. Some countries expect to achieve greater liberalization of these services through the Doha Round of negotiations; however, there have been challenges in achieving a unified approach since a division exists between those countries with a strong interest to export audiovisual services and those whose cultural and/or economic objectives direct them to protect their domestic industries.

**New Round of Services Negotiations**

WTO members commit to progressively liberalize trade in services through periodical rounds of negotiations.33 The Doha Round of negotiations launched in 2001 (i.e., Fourth Ministerial Conference in Doha, Qatar) included negotiations of telecommunications services and audiovisual services, and there were proposals to: (i) update the listing of services; (ii) negotiate an e-commerce classification; (iii) limit licensing and universal services fees. More generally, the 2001 Doha Ministerial declaration reaffirmed the GATS Treaty and adopted the position that the negotiations on trade in services must be “conducted with a view to promoting the economic growth of all trading partners and the development of developing and least-developed countries.”

Although further Ministerial discussions on the Doha negotiations have taken place in Cancún in 2003, Geneva in 2004, Hong Kong in 2005 and Geneva in 2006 and 2008, negotiations are still underway. In the current Doha Round of negotiations, the objectives of many of the negotiating requests made by WTO members to their trading partners regarding telecommunications are related to additional reforms to open markets and the binding of recent reforms, including a commitment to refrain from increasing a rate of duty beyond an agreed-upon level.

At the 2005 Hong Kong Ministerial, a new sector-specific negotiating mechanism was mandated by the trade ministers, including the following negotiating objectives as outlined by WTO members in the Chairman’s note to the Trade Negotiations Committee:

- achievement of broad telecommunications coverage in a technology-neutral manner and significant commitments in all modes of supply;
- cooperation with least-developed countries and developing countries to promote new and improved offers and to provide technical assistance to support this process;
- reduce or eliminate exclusive rights, economic needs tests (i.e., tests using economic criteria to decide whether the entry into the market of a new foreign firm is warranted), restrictions on the types of legal entity permitted and limitations on foreign equity;
Provided in GATS. WTO Dispute Settlement Body (DSB) rulings are binding for the members upon which judgment has been passed, and are binding for the members of the WTO.

2003. The impact of WTO commitments in the shaping of national legislation also can be seen in the context of the dispute settlement mechanism.

WTO Dispute Settlement Mechanism - Effects of the DSB decision within Mexico

Liberalization of the fixed-line market began in 1997 when it awarded a second licence to a fixed-line operator, Uganda began its telecommunications liberalization process in 1994 with the introduction of competition in the mobile sector where three operators currently compete. Liberalization of the fixed-line market began in 1997 when it awarded a second licence to a fixed-line operator, granting it “shared-exclusivity” with the incumbent telecommunications operator until 2005. In 2006, a new, technology-neutral licensing regime was adopted that further liberalized the telecommunications sector, including the licensing of more than a dozen facilities-based operators.

Other countries that were not WTO founding members, but have acceded to the WTO post-BTA, have been required to undertake significant market restructuring as part of their accession, including dismantling of their monopoly telecommunications operators. For example, Croatia and Georgia, which entered telecommunications commitments in 2000, were required to open their telecommunications market to competition by removing existing monopolies by 2003 and 2004, respectively. In 2001, Moldova also agreed to lift the existing monopoly by 2003.

WTO Dispute Settlement Mechanism - Effects of the DSB decision within Mexico

The impact of WTO commitments in the shaping of national legislation also can be seen in the context of the dispute settlement mechanism provided in GATS. WTO Dispute Settlement Body (DSB) rulings are binding for the members upon which judgment has been passed, and are binding for the members of the WTO.
automatically adopted unless there is a consensus to the contrary. In this sense, dispute settlement constitutes a coercive mechanism for enforcing members’ WTO commitments in such cases where voluntary compliance is not forthcoming. Hence, such disputes may arise, for example, when one member takes, or omits to take, certain actions that another member state deems a breach of pre-existing WTO commitments. WTO rules exclude individual service providers from directly seeking relief, but the service provider may seek its country of origin government to put pressure on another country’s government to comply with its GATS obligations, and ultimately activate the dispute settlement procedure.

To date, only one telecommunications case has been submitted to the DSB: a case involving trade of services between the United States and Mexico, which resulted in the Report of the Panel on Mexico’s Measures Affecting Telecommunications Services (the Panel Report). In 2000, after failed bilateral talks, the United States initiated a WTO consultation proceeding claiming Mexico’s failure to comply with its commitments under the GATS Annex on Telecommunications and the Reference Paper with respect to basic and value-added services. Mexico’s schedule of commitments (adherence to the Reference Paper, market access, and national treatment) required it to:

- ensure cost-orientated interconnection;
- prevent anticompetitive practices; and
- ensure that foreign service suppliers have access to Mexican public telecommunications networks.

The United States claimed that Mexico:

- Failed to ensure that local operator, Telmex, provide interconnection to U.S. suppliers on cost-orientated, reasonable rates, terms and conditions (i.e., inconsistency with interconnection principles under the Reference Paper).
- Maintained legislation that failed to prevent anticompetitive practices by Telmex, allowing it to establish international interconnection rates on behalf of all of the suppliers in the market (i.e., inconsistency with the competitive safeguards principles under the Reference Paper).
- Failed to comply with the Annex on Telecommunications, as U.S. suppliers were unable to access Mexico’s public telecommunications network for the provision of certain international services (i.e., non-facilities based services through Mexican commercial agencies, “comercializadoras,” and international simple resale through cross-border leased circuits).

As a result of the failed consultation proceedings, in 2002, a Panel was constituted, concluding with the DSB Panel Report in June 2004 which found that Mexico had breached several of its WTO telecommunications obligations. As a result, the United States and Mexico agreed on an implementation timetable addressing the compliance issues laid out in the Panel Report. According to such compliance agreement, Mexico was required to:

- Revise its International Long Distance Rules (the ILD Rules), eliminating those aspects of the existing ILD Rules that implemented the “uniform settlement rate” system, the “proportional return” system, and the requirement that the carrier with the greatest proportion of outgoing traffic to a country negotiate the settlement rate on behalf of all Mexican carriers for that country. All such practices were deemed by the Panel Report to be a breach of Section 1.1 of the Reference Paper. Thus, the new ILD Rules had to allow the competitive commercial negotiation of international settlement rates.
- Maintain legislation that failed to prevent anticompetitive practices by Telmex, allowing it to establish international interconnection rates on behalf of all of the suppliers in the market (i.e., inconsistency with the competitive safeguards principles under the Reference Paper).
- Failed to ensure that foreign service suppliers have access to Mexican public telecommunications networks.

In light of this compliance schedule, Mexico has undertaken the following reforms:

- New international long distance telecommunications rules were approved providing for the competitive negotiation of settlement accounting rates or international interconnection rates, including prices for incoming and outgoing traffic. In addition, foreign operators now are free to decide which Mexican operator they wish to use to terminate their traffic in Mexico.
- With regards to the rules for licensing of “comercializadoras,” Mexico issued Regulations for the Resale of Long distance and International Long distance Telecommunications Services, allowing the commercial resale of long distance and international long distance services originating in Mexico. This regulation authorizes the issuance of licences for the resale of international long distance public switched telecommunications services.

Converged Services in the WTO Framework

Regulatory frameworks that are vertically structured around industries and more service-orientated, face greater challenges in adapting to and enabling convergence. While the WTO framework was an important step towards removing traditional barriers to trade and competition in the telecommunications market, its vertically segmented structure may lead to an un-harmonized approach towards convergence. As shown above, communications subsectors are technology oriented, and may not provide the flexibility necessary to accommodate new converged services.

A 1998 note by the WTO Secretariat highlighted that the GATS “classification of services [may be] inadequate […] to meet the rapid changes of the sector […] and any other list that might be devised could become quickly out of date.” Moreover, the lack of specificity regarding the scope and services under each commitment creates a degree of uncertainty about members’ commitments in connection with converged services. Moreover, WTO members have the flexibility to use their national legislation to interpret or define the category of services for which commitments have been made and therefore the treatment and liberalization of the same service may vary by country. The evolution of convergence has caused the vertical separation of services and industries to disappear, making the WTO’s service-based classification obsolete. This also leads to uncertainty regarding the commitments applicable to newly developed services, as such services may potentially fall
outside of the scope of existing classification headings and therefore not be subject to any commitment.

Practice Notes

- Understanding GATS [3.2.1]

6.3.2.2 REGIONAL FRAMEWORKS

Europe

i. Regional Framework

Beginning in the mid 1990s, the European Commission’s Convergence Green Paper 1 commenced the policy formulation debate on the regulatory implications of convergence. This process resulted in the 1999 Review2 that examined the existing regulatory framework for telecommunications, and presented a series of policy proposals for a comprehensive cross-border regulatory framework covering all transmission networks and services. As a result thereof, in 2002, the EC approved a new regulatory framework (NRF) consisting of a Framework Directive and four principal specific directives:

- the directive on the authorization of electronic communications networks and services (Authorization Directive);
- the directive on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive);
- the directive on universal service and users’ rights relating to electronic communications networks and services (Universal Service Directive); and
- the directive concerning the processing of personal data and the protection of privacy in the telecommunications sector (Data Privacy Directive) (hereinafter the Specific Directives).3

Also part of the NRF are the Commission Recommendation on Relevant Markets and the Commission Guidelines on Market Analysis which directs regulatory authorities to conduct market analysis of specific markets that may be susceptible to regulation.4 Specifically, the NRF seeks to achieve “sustained effective competition without on-going regulatory intervention”5 by removing regulation where competition has been determined to be effective and refocusing regulation where it does not exist. The general goals of the NRF are to encourage competition in the electronic communications markets, to improve the functioning of the internal market, and to guarantee basic user interests that would not be guaranteed by market forces.

The NRF is intended to be technology neutral, leaving behind such concepts as voice telephony and the distinctions between fixed and mobile communications previously relied upon by the EU for its telecommunications liberalization process during the 1990s. This is a corollary of the lessons derived from convergence, as it has been recognized that rigid regulatory concepts cannot evolve at the same pace as that of technological changes. The Framework Directive stresses the need for the EU member states to ensure that national regulatory authorities make regulation technologically neutral, “that is to say that it neither imposes nor discriminates in favor of the use of a particular type of technology.”6 It should be noted, however, that technological neutrality does not preclude member states from promoting specific services where this is deemed justified, (e.g., digital television as a means for increasing spectrum efficiency).

A relevant aspect of the NRF is that the EU has separated the regulation of transmission from the regulation of content. Therefore, content of services delivered over electronic communications networks using electronic communications services, such as broadcasting content, is excluded from the scope of the framework.7

ii. 2009 Telecoms Reform

Although the 2002 regulatory framework contributed to the development of a strong ICT sector across Europe by opening markets and providing greater consumer choice, the European Commission (EC) began the process of reforming the rules in 2007 in order to better facilitate cross-border competition, ensure more effective consumer protections and provide for more efficient utilization of spectrum resources in light of the rapid technological developments in the ICT sector, particularly VoIP and IPTV.8 The EC first proposed a review of the telecoms framework in 2007, which was followed by two years of consultations with service providers, national regulators, consumers and other stakeholders before being discussed and adopted by the Council and European Parliament in December 2009.9 The final telecom rules reform the 2002 directives relating to authorization, access, universal service and data privacy.10 The 2009 directives require all EU Member States to have transposed these new telecom rules by May 2011.

The 2009 telecoms reform package is comprised of 12 main elements:11

1. The right for consumers to obtain fixed and mobile number portability within one working day.

2. Better consumer information, including more detailed consumer contracts that specify, among other things, minimum service quality levels and compensation/ refunds if these levels are not met, as well as options for non-published information and clear information on the qualifying criteria for promotional offers.

3. A new Internet freedom provision explicitly requiring Member States to respect the fundamental rights and freedoms of citizens to access to or use of services and applications, including by respecting the presumption of innocence and the rights to privacy, fair and impartial proceedings and effective and timely judicial review.

4. New guarantees for an open and more “neutral” Internet by granting national regulatory authorities (NRAs) the power to set minimum quality levels for network transmission services, as well as implementing new transparency requirements that ensure, prior to signing a contract, consumers are informed about the terms of service, including traffic management practices and their impact on service quality and other limitations such as bandwidth caps or available connection speed.
5. Better consumer protections against personal data breaches and spam, including protections of subscribers’ names, email addresses and bank account information through mandatory notifications for personal data breaches, as well as new rules related to the use of “cookies” and other online devices for tracking, storing and sharing user information.

6. Better access to emergency services by extending the access requirements from traditional telephony to new technologies, including VoIP, and strengthening operators’ obligation to pass information about caller location to emergency authorities.

7. NRAs are provided greater independence by eliminating political interference in their day-to-day duties and adding protection against arbitrary dismissal for the heads of national regulators.

8. Improve regulatory harmonization by granting the EC the authority to oversee regulatory remedies proposed by NRAs, such as conditions of access to a dominant operator’s network, in order to avoid inconsistent regulation that could distort competition in the single EU telecoms market.

9. Permit NRAs to overcome competition problems by implementing functional separation rules as a last-resort remedy, which would require operators to separate communication networks from their service branches.

10. Bridge the digital divide through better management of radio spectrum, including a stronger emphasis on technology and service flexibility in spectrum use, as well as making more spectrum available for wireless broadband services in regions where building new fiber infrastructure is too costly. In addition, Member States may expand universal service obligations beyond narrow-band internet access.

11. Encourage competition and investment in next generation access (NGA) networks through new rules relating to open access and sharing of network elements, as well as provisions to ensure that telecom operators receive a fair return on their investments.

12. Creation of the Body of European Regulators for Electronic Communications (BEREC), a new European Telecoms Authority that will help to ensure fair competition and more consistency of regulation on the telecoms markets. The role of BEREC is addressed in the following section.

ii. Regional Regulatory/Supervisory Body

Part of the 2009 telecoms reform was the adoption of the regulation establishing BEREC, which replaced the loose cooperation of the European Regulators Group (ERG) created in 2002 with a more transparent and more efficient approach. Similar to ERG, BEREC is not a European Community agency, but acts as an advisory body for the European Parliament, the Council and the Commission in the field of electronic communications and provides the exclusive forum for cooperation among the NRAs, particularly for cross-border issues. In addition, BEREC, like the ERG, is composed of one member per Member State, which is typically the head of each Member State’s NRA. Greater transparency is one of the key differences between ERG and BEREC. In particular, the regulation establishing BEREC sets out the processes for issuing decisions and taking votes; requires BEREC to adopt and make publicly available its rules of procedure; and provides for public participation through consultations.

Overall, BEREC plays several roles as an advisory body, including developing best practices for NRAs to adopt; providing assistance to NRAs on regulatory issues; delivering opinions on the EC’s draft decisions, recommendations and guidelines related to the Directive and other telecom directives; and assisting the European Parliament, Council and Commission, as well as the NRAs, in discussions with third parties. Since its inception, BEREC has held several public consultations on a broad range of issues including best practices to facilitate the ability for consumers to switch service providers, ensuring equivalence in access and choice for disabled end-users and solutions for cross-border issues.

iii. Regional Harmonization Efforts

In 2005, the EC proposed the i2010 – European Information Society 2010, a strategic framework seeking to “build towards an integrated approach to information society and audiovisual media policies in the EU.” Specifically, the EC recognizes that to address digital convergence, EU rules on information society and media should be consistent, and as a result proposes the following general policies: (i) completion of Single European Information Space which promotes growth and more and better jobs; and (ii) an inclusive European Information Society that promotes growth, jobs and innovation in a manner that is consistent with sustainable development and that protects the interests of consumers and citizens. The Single European Information Space seeks to accelerate the economic benefits of digital convergence through various measures, including a review of the electronic communications framework in 2006, modernizing EU rules on audiovisual services, and defining a new efficient spectrum management strategy in 2005.

All countries seeking accession to the European Union are required to align their legislation to the acquis communautaire, (i.e., the entire body of European laws, including treaties, regulations and directives passed by the European Union and decisions of the European Court of Justice). For many candidate countries with transitional economies, negotiating and adopting Chapter 19 of the acquis (the telecommunications and IT chapter) requires significant regulatory reform to accommodate the telecommunications acquis. Implementation of acquis required the establishment of an independent telecommunications regulatory authority and a “separation of policy and law making authorities from ownership interests.” As such, candidates are required to:

- Adopt a national telecommunications policy for the development of the sector consistent with EC policy;
- Prepare market players for the pressure of competition expected when they join the EU;
- Prepare the telecommunications market through the transposition and implementation of EC legislation, in particular through price rebalancing;
- Ensure the objective enforcement of the regulatory framework through an adequately resourced and well-trained independent regulatory authority; and
Address the communications needs of under-developed regions, especially the adoption of a universal service policy.17

Americas

MERCOSUR

i. Regional Framework

Mercado Común del Sur (Common Market of Southern Cone or MERCOSUR) created in 1995, is the economic block formed by Argentina, Brazil, Paraguay, and Uruguay, with Bolivia, Peru, and Chile as associate member states. The MERCOSUR treaty seeks commercial integration among member countries and in particular (i) the free movement of goods and services among the signatory countries; (ii) the coordination of macroeconomic policies in communications; and (iii) the harmonization of national legislation in the relevant areas to strengthen the integration process.18 MERCOSUR does not have a single body of telecommunications rules or directives. Instead, through its regional institutional process, decisions issued by the Common Market Council on relevant commercial matters governed under the MERCOSUR treaty are later adopted into the national legislation of the member states.19

The Common Market Group of MERCOSUR established Working Subgroup 1 (SGT1), which is responsible for the negotiation of communication related matters under the treaty (i.e., postal services, broadcasting, radio communications, and public telecommunications services). The Common Market Group issued a negotiating directive for SGT1 instructing it to identify adequate steps for harmonization and consolidation of rules and practices in telecommunications.20 The areas subject to review by SGT1 included:

- Ongoing identification of spectrum bands that could be subject to harmonization;
- Compilation and consolidation of laws and telecommunications rates of each member state;
- Advance mobile telecommunications services;
- Use of numbering resources within MERCOSUR;
- Convergence of telecommunications networks and services;
- Definition of the structure of common public telecommunications services to be provided in MERCOSUR;
- Establishment of interconnection criteria of the public networks of the member states; and
- The regulatory harmonization of converged services.

SGT1 is responsible for issuing regulatory recommendations to the Common Market Council on matters regarding postal services, radio communications, broadcasting, and public telecommunications services. SGT1 is comprised of four commissions, each one responsible for one of these four sectors of communications. These commissions hold joint meetings to discuss overlapping matters, propose ways of harmonizing legislation where their industries converge and remove legislation that hinders the integration of member states. SGT1 issues recommendations that must be ratified by the Common Market Council, and once ratified, member states must adopt the necessary measures to incorporate them into their national legislation.21 SGT1 has also issued general guidelines followed by the regulatory agencies of the member states with the objective of harmonizing administrative procedures and establishing common approaches on international forums.

iii. Regional Harmonization Efforts

Since its inception in 1995, SGT1 has issued several recommendations that have been incorporated into the national legislation of the member states. These include:

- The provision of basic public telephone services in the bordering areas of MERCOSUR;
- The adoption of common bands for paging and trunking services;
- Manuals and procedures for frequency coordination for radio communications and broadcasting services;22
- Adoption of a Unified Code of Emergency Services within MERCOSUR;23
- Regulatory framework for FM radio broadcasting;
- Harmonization of new technologies;24 and
- General rules for international roaming within MERCOSUR.

Other private efforts include the signing of a multilateral agreement, SINTONIA, among Brazil’s EMBRATEL, Uruguay’s ANATEL, Argentina’s TELINTAR and Chile’s CTC-Mundo, aimed at serving multinational business customers that operate in the MERCOSUR region in order to ensure integrated, homogeneous services throughout the region. This agreement has been further expanded to include Bolivia-based Entel, Paraguay-based Antelco, and Telefónica del Perú in Peru.

OECS

i. Regional Framework

In 1981, Antigua and Barbuda, the Commonwealth of Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines formed the treaty-based Organisation of Eastern Caribbean States (OECS).25 The OECS seeks to promote economic integration and cooperation among its member states, maximizing the benefits of their geographical position to facilitate their collective integration with the global economy. The OECS recognizes telecommunications as an essential tool for economic diversification and five countries (the Commonwealth of Dominica, Grenada, St. Lucia, St. Kitts and Nevis, and St. Vincent and the Grenadines) developed a Telecommunications
As such, the overarching objective of the CTU is to harmonize telecommunications policies and plans, as well as encourage cooperation among the Member States, to the greatest possible extent. Some of the specific objectives include: (i) facilitating the coordination of planning and development of intra-regional and international communications networks; (ii) promoting ICT awareness; (iii) encouraging the exchange of information and transfer of technology among Member States; and (iv) harmonizing, as much as possible, the positions of Member States in development.

ECTEL’s functions include:

- Coordinating with and advising the Contracting States on telecommunications matters to meet the objectives of the ECTEL Treaty;
- Issuing recommendations to the Contracting States on a harmonized regional radio spectrum plan;
- Preparing and recommending the adoption by the Contracting States of harmonized regulation including application forms and other forms in respect of licences, frequency authorizations and tender documents; and
- Designing and conducting open tender procedures for individual licences as requested by Contracting States.

At the recommendation of ECTEL, each Contracting State adopted harmonized telecommunications legislation and regulations liberalizing the industry and introducing competition. Each Contracting State also established National Telecommunications Regulatory Commissions (NTRCs), with the responsibility of formulating national telecommunications policy, and ensuring efficient, economic and harmonized development telecommunications and broadcasting services in each Contracting State. To date, each Contracting State has adopted harmonized telecommunications regulations dealing with equipment and public networks, interconnection, private network licensing, licensing and authorizations, spectrum management, numbering, tariffs, confidentiality in network and services, and fees. The new regulatory frameworks required all telecommunications licences to be issued on a non-exclusive basis, resulting in the termination of the monopoly service provider’s (Cable & Wireless) exclusive rights in the Contracting States. As a result, in 2001, the Contracting States entered into an agreement with Cable & Wireless establishing the terms for a joint collaboration and a gradual transition to full competition.

CARICOM

i. Regional Framework

In 1973, the Treaty of Chaguaramas established the Caribbean Community (CARICOM) and transformed the Caribbean Free Trade Association (CARIFTA) into the Caribbean Common Market. Between 1989 and 2000, the Member States worked towards ensuring greater freedom of movement of goods and services, resulting in the Revised Treaty including new issues such as e-commerce, government procurement, trade in goods from free zones, free circulation of goods, and the rights contingent on the free movement of persons. CARICOM has 15 Member States including the five ECTEL countries, as well as Antigua and Barbuda; The Bahamas; Barbados; Belize, Guyana; Haiti; Jamaica; Montserrat; Suriname and Trinidad and Tobago. In addition, there are five Associate Members, namely Anguilla, Bermuda, British Virgin Islands, Cayman Islands and Turks and Caicos Islands.

Among other areas, CARICOM is strongly focused on increasing the deployment and adoption of ICTs throughout the region. For example, the Directorate of Trade and Economic Integration (TEI) within the CARICOM Secretariat has implemented the Information and Communication Technology for Development (ICT4D) program. Although the ICT4D has the overarching goal of advancing the development of the people in the Caribbean Community through the use of ICTs as a catalyst for transforming the CARICOM Member States into a knowledge-based society.

ii. Regional Regulator/Supervisory Body

The Caribbean Telecommunications Union (CTU) was established by the Heads of Government of CARICOM Members in 1989. It has full legal personality and capacity to contract, acquire and dispose of real and personal property and to be party to legal proceedings. In addition, the CTU possesses immunities and privileges accorded to diplomatic and international organizations of equal status. The CTU was set up on the recommendation of the Ministers for Telecommunications to correct the fragmented policy frame of telecommunications sectors of member countries; the problems of frequency incompatibility between and among member countries; the lack of Caribbean input in major international issues, which disregarded rights and sovereignty of the Caribbean states, thereby denying them opportunity; and the absence of coordinating machinery to facilitate an increase in the impact of resources and assistance for Caribbean telecommunications development.

As such, the overarching objective of the CTU is to harmonize telecommunications policies and plans, as well as encourage cooperation among the Member States, to the greatest possible extent. Some of the specific objectives include: (i) facilitating the coordination of planning and development of intra-regional and international communications networks; (ii) promoting ICT awareness; (iii) encouraging the exchange of information and transfer of technology among Member States; and (iv) harmonize, as much as possible, the positions of Member States in
iii. Harmonization Efforts – HIPCAR

In response to requests by Member States, the CARICOM Secretariat, the CTU and the ITU, with funding from the EU and ITU, established the three-year project Harmonization of ICT Policies, Legislation and Regulatory Procedures (HIPCAR) in order to encourage competition and growth of ICTs throughout the region. The main impetus for the HIPCAR project was the recognition that although the Caribbean countries as a whole had liberalized their telecommunications sectors, they had taken different policy approaches. In order to help CARICOM countries develop similar regulatory frameworks, the HIPCAR project focused on two areas of ICT policy and legislative frameworks, namely information society issues and telecommunications, and is divided into two phases.

Phase I, completed in 2010, focused on developing model policy guidelines and model legislative texts for various issues related to the information society and telecommunications. For sector issues related to the information society, the HIPCAR Project focused on electronic transactions, electronic evidence in e-commerce, privacy and data protection, interception of communications, cybercrime and access to public information (freedom of information). For sector issues related to telecommunications, the HIPCAR Project addressed universal access and service, interconnection and access, and licensing.

Phase II is to be completed in 2011 and is focused on direct in-country assistance to help Member States implement and transpose these models into national policies, laws & regulations. Several CARICOM countries have requested assistance, including Dominican Republic, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago.

Africa

i. Regional Framework – ECOWAS

The Economic Community of West African States (ECOWAS) is among the various regional economic communities in Africa that have been proactive in creating initiatives to foster cooperation and integration of their telecommunications and information technology activities. As opposed to other African regional initiatives, such as the Southern African Development Community (SADC) the ECOWAS Treaty foresees the harmonization of legislation, including in the telecommunications field, similar to the EU model.

ECOWAS, founded in 1975, is a regional organization of West African States (Benin, Burkina Faso, Cape Verde, Côte d’Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo). Its main objective is to form a unified economic zone in West Africa through economic integration and shared development in various industries, including telecommunications.1 In the area of telecommunications, the ECOWAS treaty seeks to establish “common transport and communications policies, laws and regulations.”2 The treaty further requires member states to:

- Develop, modernize, coordinate and standardize their national telecommunications networks in order to provide reliable interconnection among member states;
- Complete, with dispatch, the section of the pan-African telecommunications network situated in West Africa;
- Coordinate their efforts with regard to the operation and maintenance of the West African portion of the pan-African telecommunications network and in the mobilization of national and international financial resources; and encourages member states to seek private sector participation so as to achieve these objectives.

In addition, the Council of Ministers of ECOWAS has determined that the following items are priorities for the region:

- Harmonization of regulatory frameworks and institutions.
- The evolution of a regional regulatory framework - the ECOWAS ICT Task Force has been established to harmonize ICT policies of member countries;
- Fostering competition.
- Building a robust Regional Backbone Infrastructure capable of supporting seamless cross-border connectivity.
- Reducing costs associated with rights of way through the installation of optical fibre cable on power lines to carry electricity supply between countries that have electricity.
- Granting operating licences on a priority basis to private investors that are interested in entering the markets in the region.

ii. Regional Regulatory/Supervisory Body

In 2002, ECOWAS was responsible for the creation of the West African Telecommunications Regulatory Association (WATRA), the main objective of which is to coordinate dialogue regarding telecommunications and regulation in the West African region. WATRA is an association of regulators and the respective government ministries of West African Territories responsible for telecommunications matters.

WATRA is intended as a vehicle to foster continued development of information communications technology (ICT) within the subregion, and decisions and directives issued by the Conference of Regulators are binding on all national regulators. In this respect, WATRA encourages the establishment of consistent standards throughout the region to facilitate the deployment of interoperable ICT systems and services. The members expect WATRA to “become a leading forum for regulators in the region to exchange ideas and formulate plans regarding regulatory and technical issues that will accelerate development of infrastructure across the region.”

Given the limited resources available for the development of regulatory frameworks that promote ICT sector development, WATRA may provide countries with a source of information (e.g., best practices and regulatory modeling) and support in the development of appropriate regulatory structures.
In September 2005, WATRA took on the leading role in approving the ECOWAS telecommunications guidelines on key regulatory issues at an Ordinary General Meeting in Accra. These guidelines will be the basis for ECOWAS Telecommunications Directives that are expected to be adopted by ECOWAS Ministers in early 2006. These efforts are a first in Africa and will set an example for other subregions in Africa and around the world.

iii. Harmonization

ECOWAS has undertaken a Telecommunications Regulation Harmonization Project aimed at designing a strategy for the harmonization of telecommunications policies in ECOWAS. To date, each ECOWAS country, with the exception of one, has commenced liberalization of the telecommunications sector and has separated postal and telecommunications operation from regulation. In addition, 11 ECOWAS countries have established telecommunications regulatory authorities.

As ECOWAS progresses in its harmonization efforts, some of the challenges it may face include harmonization of existing national ICT policies (e.g., regional spectrum and licensing); evolving common principles for interconnection and universal access; safeguarding the interests of citizens (e.g., control of content); and using ICTs to reduce distance barriers among communities. See Box 3-3 for a description of other African regional harmonization initiatives.

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**Box 1 Other African Regional Initiatives**

**Source:** Box Credit

**Economic community: South African Development Community (SADC)**

- **Member states:** Angola, Botswana, the Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, United Republic of Tanzania, Zambia, and Zimbabwe.

- **Related Telecommunications Association:** Communications Regulators Association of Southern Africa (CRASA)

- **Harmonization Efforts:** SADC is among the most advanced regional economic communities with respect to telecommunications liberalization and ICT issues. TRASA has advocated establishment of independent regulators, and is proactive in attracting foreign investment in telecommunications infrastructure development. It advocates the introduction of operators to compete with the incumbent telecommunications operator and the corporatization of the public operator. TRASA has also established model ICT policies, legislation document, and regulatory guidelines for the SADC countries.

**Economic community: West African Economic and Monetary Unit (UEMOA)**

- **Member states:** Benin, Burkina Faso, Cote d’Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo.

- **Related telecommunications association:** None

- **Harmonization Efforts:** UEMOA is currently working on directives aimed at the harmonization of telecommunications laws of the member countries. Given that all its members are also members of ECOWAS, UEMOA has actively participated in ECOWAS and WATRA workshops on the ECOWAS guidelines and aims to harmonize its directives with ECOWAS.

**Economic community: Common Market for Eastern and Southern African (COMESA)**

- **Member states:** Angola, Burundi, Comoros, Democratic Republic of Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, and Zimbabwe.

- **Related telecommunications association:** Association of Regulators of Information and Communication in Central and Eastern Africa (ARICEA)

- **Harmonization Efforts:** Through ARICEA, COMESA has been very proactive in member state capacity building. It has initiated programs to harmonize ICT policies and attract foreign investment to the region, and drafted model ICT policies, licensing rules, and frameworks. It also has established an agenda to stimulate regulatory harmonization. In 2011, ARICEA and COMESA began a study on cybersecurity in the region, which is expected to result in draft policy guidelines and draft model bill.

**Economic community: Central African Economic and Monetary Community (CEMAC) and Economic Community of Central African States (CEEAC)**

- **CEMAC Member states:** Cameroon, the Central African Republic, Chad, Democratic Republic of the Congo, Equatorial Guinea and Gabon.

- **CEEAC Member States:** Angola, Burundi, Cameroon, Chad, Central African Republic, Gabon, Republic of Congo, Democratic Republic of the Congo, Equatorial Guinea, Rwanda, São Tomé and Príncipe

- **Related telecommunications association:** Central African Telecommunication Regulators Association (ARTAC)

- **Harmonization Efforts:** ARTAC has based itself on other regional models, including CRASA, and seeks to encourage the development of regional harmonized, modern legislative and regulatory structures in the ICT sector.
Since 2001, the Association of Southeast Asian Nations (ASEAN) has worked towards creating an effective framework to promote growth in the telecommunications industry. ASEAN is an intergovernmental organization comprised of the Governments of Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. ASEAN has several committees, meetings, and working groups focused on promoting liberalization and harmonization of the ICT industry and it has developed several ambitious proposals (e.g., the development of a seamless telecommunications network and a uniform regulatory framework among ASEAN countries). However, it has been challenging to achieve concrete results, largely due to the lack of binding authority of ASEAN’s decisions on its member countries. For example, after the 14th ASEAN Telecommunications Regulators’ Council (ATRC) Meeting in 2008, Singapore noted that ASEAN needs a more comprehensive ICT regulatory framework, which could be achieved through the adoption of a rules-based system able to transform ATRC into a more effective and cohesive organization.

ASEAN countries have signed several framework agreements and declarations vowing to open their markets to competition and work together towards the enhancement of their ICT sectors.

In 2004, the ATRC agreed to develop non-binding regulatory models on best practices in “(i) competition and management and interconnection; (ii) convergence and new services; and (iii) cooperation on capacity-building.” The purpose of these models is to serve as guidelines for ASEAN regulators to develop new legislation and regulatory practices to establish their respective systems and processes. Such regulatory frameworks have not yet been developed.

A 2004 study conducted on the “Liberalization and Harmonization of the ASEAN Telecommunications” indicated that all ASEAN member countries were in different stages of market liberalization (i.e., either fully liberalized, substantially liberalized, in transition or in the first stages of policy change). The study found that a framework for reform was needed, consisting of three stages: (i) establishing the foundations for a regulatory regime; (ii) fostering network development through the introduction of competition; and (iii) full liberalization.

A second study focused on the objectives identified by the ASEAN Telecommunications Regulatory Council (i.e., interconnection and competition management; convergence and licensing of new service; and confronting the digital divide). The study recognized that work still needs to be done in these areas and that the first priority is the establishment of a “robust regulatory framework,” that will ensure effective regulation and an “independent regulator capable of dealing with sector-specific issues of market dominance.”

The Brunei Action Plan, implemented in 2006, focused on enhancing ICT competition and capacity-building among ASEAN countries, particularly through programs that facilitate e-commerce, build emergency response preparedness, promote e-society and cultural initiatives and improve access to ICTs. The 9th TELMIN Meeting in 2009 adopted the Vientiane Declaration on Promoting the Realization of Broadband across ASEAN, which seeks to promote “the expeditious development of next generation networks by establishing an ASEAN broadband infrastructure connecting to high speed national information infrastructures through facilitative policies and regulation as well as by leveraging on other regional backbone initiatives, to ensure sufficient capacity and route diversity, to have adequate infrastructure for redundancy and to avoid over reliance on any particular regional system between the ASEAN Member States and to extend broadband access to the ASEAN communities by 2015.”

These initiatives have culminated in the ASEAN ICT Masterplan (AIM2015), which was adopted at the 10th TELMIN in January 2011 and consists of six strategic thrusts:

1. Economic transformation
2. Empowerment and engagement of people
3. Innovation
4. Infrastructure development
5. Human capital development
6. Bridging the digital divide

Each of these thrusts includes various initiatives to help achieve the objectives. For example, the goal of economic transformation includes developing a framework that facilitates transparent and harmonized ICT regulations, as well as developing public-private partnerships for the ICT industry. Infrastructure development is to be achieved through various means, including establishing an ASEAN broadband corridor and Internet exchange network while bridging the digital divide will be achieved, in part, by reviewing USO policies and implementing school connectivity programs.

Bilateral Agreements

In addition to opportunities for countries to coordinate within multilateral and regional frameworks, bilateral agreements help to foster further collaboration efforts between countries to increase trade and support investment and development, as well as promote fundamental principles and best practices. For example, the European Union and United States established a bilateral agreement in April 2011, which includes ten principles related to trade in ICT services to be promoted worldwide. Other bilateral agreements focus on promoting the development of ICT infrastructure and services between two countries. For example, France and Israel signed a Bilateral Agreement for cooperation in the field of telecommunications in 2009 that includes provisions on cooperation in international organizations, as well as mutual exchange of information and advice on regulatory developments, spectrum management, satellite coordination and promotion of R&D. The agreement includes a proposal to hold annual meetings between the two parties to review ways to ensure implementation of the agreement.
International Telecommunication Union The International Telecommunication Union (ITU) is the leading United Nations agency for information and communication technology issues, and the global focal point for governments and the private sector in developing networks and services.1 For 145 years, ITU has coordinated the shared global use of the radio spectrum, promoted international cooperation in assigning satellite orbits, worked to improve telecommunication infrastructure in the developing world, established the worldwide standards that foster seamless interconnection of a vast range of communications systems and addressed the global challenges of our times, such as mitigating climate change and strengthening cybersecurity. Based in Geneva, Switzerland, ITU membership includes 192 Member States and more than 700 Sector Members and Associates.

The Plenipotentiary Conference is the top policy-making body of the ITU. Held every four years, the Plenipotentiary Conference is the key event at which ITU Member States decide on the future role of the organization. Although ITU Sector Members, Regional Telecommunication and Intergovernmental Organizations, and the United Nations and its specialized agencies also attend the Plenipotentiary Conference as observers, the ITU Member States:2

- set the ITU’s general policies,
- adopt four-year strategic and financial plans and
- elect the senior management team of the organization, the members of Council and the members of the Radio Regulations Board.

There are multiple basic texts of the ITU, which establish a binding, global framework for international telecommunications.3 The Constitution of the ITU sets forth the structure of the Union while the Convention addresses the ITU’s diverse and far-reaching activities promoting telecommunications. Other basic texts include the Optional Protocol on the settlement of disputes, the Decisions, Resolutions and Recommendations in force, as well as the General Rules of Conferences, Assemblies and Meetings of the Union.

The ITU is divided into three sectors: 1) Radiocommunication (ITU-R), which manages the international radio-frequency spectrum and satellite orbit resources; 2) Standardization (ITU-T), which is the ITU’s standards-making body; and 3) Development (ITU-D), which was established to help spread equitable, sustainable and affordable access to ICTs.

i. ITU-R

The ITU-R’s mission is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including those using satellite orbits, and to carry out studies and approve Recommendations on radiocommunication matters.4 In implementing this mission, ITU-R aims at creating the conditions for harmonized development and efficient operation of existing and new radiocommunication systems, taking due account of all parties concerned.

The primary objective of ITU-R is to ensure interference-free operations of radiocommunication systems through implementation of the Radio Regulations and Regional Agreements, as well as the efficient and timely update of these instruments through the processes of the Regional and World Radiocommunication Conferences (WRCs). WRCs are held every three to four years during which ITU Member States review and revise the Radio Regulations, as needed.5 The Radio Regulations is the international treaty governing the use of the radio-frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits around the world. Revisions to the Radio Regulations are made on the basis of an agenda determined by the ITU Council, which takes into account recommendations made by previous world radiocommunication conferences.

The general scope of the agenda of a WRC is established four to six years in advance, with the final agenda set by the ITU Council two years before the conference, with the concurrence of a majority of Member States. Under the terms of the ITU Constitution, a WRC can:

- Revise the Radio Regulations and any associated frequency assignment and allotment plans;
- Address any radiocommunication matter of worldwide character;
- Instruct the Radio Regulations Board and the Radiocommunication Bureau, and review their activities;
- Determine questions for study by the Radiocommunication Assembly and its Study Groups in preparation for future Radiocommunication Conferences.
The ITU-R Recommendations constitute a set of international technical standards developed by the ITU-R. They are the result of studies undertaken by Radiocommunication Study Groups on:

- The use of a vast range of wireless services, including popular mobile communication technologies;
- The management of the radio-frequency spectrum and satellite orbits;
- The efficient use of the radio-frequency spectrum by all radiocommunication services;
- Terrestrial and satellite radiocommunication broadcasting;
- Radiowave propagation;
- Systems and networks for the fixed-satellite service, for the fixed service and the mobile service;
- Space operation, Earth exploration-satellite, meteorological-satellite and radio astronomy services.

The ITU-R Recommendations are approved by ITU Member States. Their implementation is not mandatory; however, as they are developed by experts from administrations, operators, the industry and other organizations dealing with radiocommunication matters from all over the world, they enjoy a high reputation and are implemented worldwide.

ii. ITU-T

The main products of ITU-T are the sector’s Recommendations (“ITU-T Recs”), which provide standards for defining how telecommunications networks operate and interwork. There are currently more than 3,000 ITU-T Recs (Standards) in force on topics such as service definition; network architecture and security; from broadband DSL; Gbit/s optical transmission systems; next-generation networks (NGN); and IP-related issues, as well as other fundamental components of today’s ICTs. Although ITU-T Recs are non-binding, they are generally complied with due to their high quality and because they guarantee the interconnectivity of networks and enable telecommunication services to be provided on a worldwide scale. In 2007 alone, ITU-T produced over 160 new and revised standards, covering everything from core network functionality and to next-generation services like IPTV. The World Telecommunication Standardization Assembly (WTSA) is conducted every four years and is the event that defines the next period of study for ITU-T, as well as sets the general policy for the Sector and establishes the study groups.

A Question is the basic project unit within ITU-T. The area of study of the project is defined by the text of the Question, and this is generally approved by the study group itself. For a new Question to be established, it is necessary that a number of Members commit to support the work. Questions address technical studies in a particular area of telecommunication standardization. Each SG has a Chairman and a number of vice-chairmen appointed by the World Telecommunication Standardization Assembly (WTSA).

To assist in the organization of the work, the SG may be organized into a number of Working Parties (WPs). The WP is the next organizational unit down within the SG. It coordinates a number of study Questions on a related theme, e.g. the Media Coding Working Party in Study Group 16 deals with all study Questions relating to coding of speech, audio and video streams that we use every day for Internet calls, DVDs, etc.

The team of experts working on a specific Question is known as the rapporteur group. Their meetings are chaired by the relevant rapporteur. Considering the text of the Question and guidance from the SG, the participants determine what Recommendations are required and develop text for these Recommendations taking all relevant inputs into account and consulting other relevant parts of ITU-T. During a meeting of the parent WP or SG, the experts will normally meet to progress the work, but they may also meet independently of the parent WP or SG, in a more informal setting, when required.

A Question is the basic project unit within ITU-T. The area of study of the project is defined by the text of the Question, and this is generally approved by the study group itself. For a new Question to be established, it is necessary that a number of Members commit to support the work. Questions address technical studies in a particular area of telecommunication standardization, and are driven by contributions. A Question is normally terminated once the defined work has been completed, or the task is revised in the light of developments, which can be technical, market-oriented, network or service driven. The text for each of the Questions assigned to a study group can be found on its web page.

iii. ITU-D

The ITU Telecommunication Development Sector (ITU-D) goal is to ensure the right to communicate to all people, everywhere in the world, through access to infrastructure and ICT services. In this regard, the ITU-D’s mission, which encompasses ITU’s dual responsibility as a UN specialized agency and an executing agency for implementing projects under the UN development system, is to:

- Assist countries in the field of information and communication technologies (ICTs), in facilitating the mobilization of technical, human and financial resources needed for their implementation, as well as in promoting access to ICTs.
- Promote the extension of the benefits of ICTs to all the world’s inhabitants.
Promote and participate in actions that contribute towards narrowing the digital divide.

Develop and manage programmes that facilitate information flow geared to the needs of developing countries.

The Telecommunication Development Bureau (BDT) is the executive arm of the ITU-D and is mandated to foster international cooperation in the delivery of technical assistance and support for rolling out and upgrading ICT infrastructure and services in developing countries.11 The BDT is also responsible for implementing projects so as to facilitate and enhance telecommunications development by offering, organizing and coordinating technical cooperation and assistance activities. It provides technical advice and is responsible for the collection, processing and publication of information relevant to telecommunication development.

Held every four years, the World Telecommunication Development Conference (WTDC) is the vehicle through which the ITU-D establishes concrete priorities to help achieve its goals of spreading equitable, sustainable and affordable access to ICTs.12 The WTDC is a high-level platform where Member States and Sector Members come together to set development priorities, strategies and action plans and guide the work of the ITU-D. Preparatory Conferences are held in each of the five ITU-D regions before the WTDC.

Regional Telecommunications Organizations

There are various types of ITU Membership allowing different levels of participation and access to meetings and information. National governments may join the ITU as Member States.13 Private, academic and other non-State organizations may join the ITU as a Sector Member (i.e., member of ITU-R, ITU-T and/or ITU-D sector) or Associate (i.e., member of a particular Study Group within a sector), including telecommunications carriers, equipment manufacturers, funding bodies, research institutions and regional telecommunications organizations (REGORGs).

Regional telecommunication organizations play an important role in preparatory discussions among Member States and Sector Members to facilitate the work of ITU conferences and meetings. In particular, they are instrumental in regional harmonization of policies, standards and frameworks. Additionally, these organizations prepare positions for Plenipotentiary Conferences, WRCs, WTDCs and WTSAs. There are eight regional organizations that are Sector Members in all three ITU sectors (for more on the REGORGs, see Module 5, Section 7.2.1):14

- Asia-Pacific Telecommunity (APT)
- Africa Telecommunications Union (ATU)
- European Conference of Postal and Telecommunications Administrations (CEPT)
- Inter-American Telecommunication Commission (CITEL)
- Caribbean Telecommunications Union (CTU)
- European Telecommunications Standards Institute (ETSI)
- League of Arab States (LAS), of which a subset of countries are part of the Cooperation Council for the Arab States of the Gulf (GCC)
- Regional Commonwealth in the Field of Communications (RCC)

Internet Corporation for Assigned Names and Numbers (ICANN)

Formed in 1998, ICANN is a non-profit, public-benefit corporation headquartered in the United States, with participants from across the globe dedicated to keeping the Internet secure, stable and interoperable through its coordination role of the Internet’s naming system.15 ICANN is responsible for:

- Managing the IP address spaces (IPv4 and IPv6);
- Assignment of address blocks to regional Internet registries;
- Maintaining registries of IP identifiers; and
- Managing the top-level domain names, such as com, net or org.

Although a corporation, ICANN is structured on a multi-stakeholder model through which it develops policy via bottom-up, consensus-based processes in collaboration with governments and international treaty organizations, as well as businesses, organizations, and skilled individuals.16 To this end, ICANN is made up of several different groups, which represent various Internet-related interests and contribute to all of ICANN’s final decisions. There are three “supporting” groups that represent organizations dealing with 1) IP addresses; 2) domain names and 3) managers of country code top-level domain names. In addition, there are four “advisory committees” to provide ICANN with advice and recommendations, which include a wide range of stakeholders, including governments and international organizations, those concerned with the Internet’s security and the “at large” community (i.e., average Internet users). Finally, there is a “Technical Liaison Group,” which works with the organizations that devise the basic protocols for Internet technologies. For more on ICANN, see the Practice Note in Section 4.3.4 of this Module.

6.3.3 MATURITY OF THE MARKET - RELATIONSHIP BETWEEN TELECOMMUNICATIONS LEGISLATION AND COMPETITION POLICY

A growing trend among countries with highly competitive telecommunications markets, is a growing reliance on competition laws to regulate the sector. The relationship between telecommunications legislation and competition policy varies by country, and is influenced by the country’s level of economic development and the maturity of the market. Regardless of the regulatory model adopted, it is essential that telecommunications policies be guided by underlying principles of competition in order for markets to develop for the benefit of consumers. The relationship between telecommunications and competition policies is determined by and evolves in response to factors such as market maturity (i.e., the level of competition in the marketplace) and a country’s institutional framework. This section will explore the regulatory models adopted by different countries with respect to their telecommunications and competition regimes, existing regulatory trends in the
6.3.3.1 THE EVOLUTION FROM SECTOR-SPECIFIC REGULATION TO COMPETITION-BASED REGULATION

The degree of competition in the market plays an important role in the development of new regulatory trends. As ICT markets become more competitive, regulators are beginning to transition from ex ante to ex post regulation. In promoting access to and adoption of ICTs, policymakers must consider whether to: 1) establish sector-specific, forward-looking regulation (ex ante regulation) to prevent or promote certain activities, or 2) establish or rely on competition law to remedy specific instances of anti-competitive behavior (ex post regulation). Due to the fast pace of technological advances and the growing recognition of the value of robust competition, policymakers increasingly have implemented ex post rules to foster innovative markets while imposing targeted ex ante regulation to address specific market failures, particularly with respect to the network infrastructure.

Over the next decade, ex ante regulation will likely continue to be targeted at the physical infrastructure underlying network infrastructure and may begin to address challenges in other areas such as services and applications. Consequently, regulations will likely focus to varying degrees on access networks, backbone, backhaul and international connectivity. However, recognizing that the rationales for ex ante regulation no longer hold as markets mature and become more competitive, gradual fine-tuning or, in some cases, even full withdrawal of targeted ex ante regulation becomes necessary to better reflect competitive conditions in the market and serve consumer interests. When market conditions warrant the phasing out of ex ante regulation, regulators should consider implementing transition periods to ensure a smooth shift into an ex post regulatory environment. Transition periods allow stakeholders, consumers and service providers to gradually adapt to a new regulatory framework.

Both the United Kingdom and Portugal, for example, adopted transition periods as they moved from ex ante forms of regulation to ex post regulatory frameworks. In May 2008, when reviewing the wholesale broadband access markets, Ofcom determined that British Telecom (BT) no longer had significant market power (SMP) in local exchanges where alternative services providers had emerged. In response, Ofcom withdrew certain regulatory obligations immediately (e.g., non-discrimination and transparency requirements), but required BT to provide existing customers network access for a 12-month transition period to afford BT's wholesale customers the opportunity to make alternative arrangements. Similarly, when reviewing the wholesale broadband access market in 2009, ICP-ANACOM found that Portugal Telecom (PT) did not have SMP in certain geographic markets and accordingly decided to withdraw ex ante regulation in such markets. Unlike Ofcom, the Portuguese regulator opted to maintain a 12-month phase-out period for most ex ante obligations imposed on PT in these geographic areas, including non-discrimination, transparency, access, cost accounting and financial reporting. The price control, however, was phased-out immediately upon the adoption of the decision.

Relying on ex post regulation to address competitive concerns in the ICT market requires the implementation of competition laws and regulations that are effective, enforced and suited to the country's specific conditions. This legal safety net is crucial for competitive forces to take root, but implementing ex post regulation may represent a major challenge, particularly for developing countries that lack competition laws and regulations or are affected by weak institutional structures. This challenge may be compounded where economic systems have traditionally relied on strong state intervention, resulting in entire sectors and most dominant firms being state owned, controlled by the government or afforded special protection by government policies.

For over a decade, a series of initiatives have been implemented to create competition law frameworks in various countries around the world. Approximately 100 countries have adopted competition laws, with a quarter of those being developing countries. Similarly, a series of regional initiatives have been adopted to establish competition law rules and principles, including in the Association of Southeast Asian Nations (ASEAN), Common Market for Eastern and Southern Africa (COMESA), Economic and Monetary Union of West Africa (UEMOA), Economic and Monetary Community of Central Africa (CEMAC), Caribbean Community and Common Market (CARICOM), Andean Community (CAN), and in the Common Market of the Southern Cone (Mercosur).

Countries without general competition laws, such as the Kingdom of Bahrain, are beginning to develop ICT-specific ex post rules. Although there is no general competition law in the Kingdom of Bahrain, the Telecommunications Regulatory Authority (TRA) is tasked with acting as both the regulator and competition authority for the ICT sector. In February 2010, the TRA introduced an ICT competition framework, which builds on the authority vested in the TRA by the Telecommunications Law to protect consumers’ interest and promote competition by establishing guidelines “to help market participants understand how TRA will assess competition in the telecommunications sector,” including both ex-ante market reviews and ex-post investigations into anti-competitive conduct.

Evolution of the European Union Model

The EU has followed a coordinated reform strategy which began almost two decades ago with the adoption of a series of directives to guide the transition from monopoly to full liberalization. This first framework, referred to as the “1998 Package” in honor of the year in which full liberalization was achieved, was comprised of a sequence of directives prescribing the progressive removal of market barriers and the encouragement of competition, as well as the harmonization of telecommunications regulation throughout the EU. The liberalization process began with niche market segments (e.g., terminal equipment) and moved gradually towards core market segments (e.g., voice telephony).

In light of the maturity and liberalization achieved, in 2002 the EC issued the a new regulatory framework, the NFR, essentially prescribing that sector-specific regulation (ex-ante regulations) be confined to cases where effective competition is absent, i.e., in markets where there are one or more undertakings with significant market power, and where national competition law remedies are not sufficient to address the problem. As such, the NFR places greater reliance on generic EU competition law, and seeks a “market-based” approach to regulation, as opposed to a “service-based” approach.
The NRF replaced much of the sector-specific regulation with technologically-neutral, general competition law rules, with the aim of reducing ex-ante sector-specific rules progressively as competition in the market develops. The NRF provides new market definitions and its significant market power (SMP) concept has been re-defined to be more closely aligned with the competition policy provisions of the concept of dominance set out in the European Treaty.

Under the Framework Directive, the EC must identify the product and service “markets” that may raise competition issues and may be subject to ex-ante regulation. (See Table 3-4 for the list of markets currently identified by the EC.) In making such determinations, the member states rely on EU competition principles and practices. In turn, the NRAs must conduct an analysis of the markets that have been identified as being susceptible to regulation, using the following criteria: (i) determine whether there are entry barriers of a structural, legal or regulatory nature; (ii) examine the state of competition relative to such barriers to determine if effective competition could develop in a relevant period of time; and (iii) determine whether the exclusive application of competition law would properly address market failures. If after conducting its analysis, the NRA determines that regulation is warranted, it may propose a draft measure, which the EC may request be withdrawn if it (i) concerns definition of relevant markets; (ii) would create a barrier to the entry; or (iii) would be incompatible with the EC’s laws or policy objectives (e.g., to move from sector-specific regulations to competition laws). Even if the EC identifies a market as being “susceptible” to ex-ante regulation as it would be possible for an operator to maintain market power, it does not mean that regulation will always be required. Regulation will only be warranted if there is a finding that effective competition does not exist in the relevant market.

In essence, the NRF sets forth the following three-step process:

- **Definition of Markets**: NRAs are required to identify markets the characteristics of which warrant the application of ex-ante regulation based on three criteria: (i) high and non-transitory entry barriers; (ii) the dynamic state of competitiveness behind entry barriers; and (iii) the sufficiency of competition law in the absence of ex-ante regulation.

- **Market Analysis**: NRAs are required to assess the level of competition in the markets which it has identified under (i) above.

- **Imposition of Remedies**: If the NRA finds that a particular market lacks effective competition and identifies operators with significant market power, it may impose certain specific obligations (i.e., those in the Universal Service Directive or Access Directive mentioned in Section 3.2.2 above). The NRA may also maintain or amend obligations that may already be in place. The Framework Directive provides a review and consultation process for the approval of such remedies to ensure that they are consistent with the objectives of the NRF and that they do not further affect competition in the market.

Although the 2002 Framework Directive set out a list of 18 markets—seven at the retail level and 11 at the wholesale level—the European Commission recommended phasing out sector-specific regulation of electronic communications in a 2007 Recommendation (2007/879/EC). In the Recommendation, the Commission found that 11 of the 18 markets are no longer regarded as needing to be subject to sector-specific regulation. (See Table 3-3 for the list of markets currently identified by the EC.)

### Table 3-4: Markets Susceptible to ex-ante Regulation in the EU, as of Recommendation17

<table>
<thead>
<tr>
<th>Retail Level</th>
<th>Wholesale Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Access to the public telephone network at a fixed location for residential customers.</td>
<td>2. Call origination in the public telephone network provided at a fixed location.</td>
</tr>
<tr>
<td>3. Call termination on individual public telephone networks provided at fixed location.</td>
<td>4. Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.</td>
</tr>
<tr>
<td>5. Wholesale broadband access.</td>
<td>6. Wholesale terminating segments of leased lines, irrespective of the technology used to provide leased or dedicated capacity.</td>
</tr>
<tr>
<td>7. Voice call termination on individual mobile networks.</td>
<td>[Note that markets are often referred to by the numbers assigned to them under the EC Recommendation (e.g., the mobile termination market may be referred to as “Market 5”–]).</td>
</tr>
</tbody>
</table>

EU Directives are binding rules meant to be implemented on a national level by each member state. Depending on the maturity of the market and the legislation in place at the time of adoption of the Framework Directive, some countries have had to implement modifications in their national legislation and are at varying stages regarding their analyses of the above-mentioned markets.

Although the EU’s 2002 telecoms rules have been successful, it has remained a challenge for telecom operators to deliver pan-European or cross-border services, in large part due to the existence of 27 regulatory systems with widely varying rules. Since the NRAs have had different approaches to similar competition problems, new EU telecom rules have been adopted to help streamline and bring greater consistency to competition issues throughout the EU. As such, the EU passed the 2009 Telecoms Reform, which required Member States to transpose into national law by May 21, 2011. The 2009 Telecoms Reform addresses competition on several levels:

- **The Body of European Regulators of Electronic Communications (BEREC)** has replaced the European Regulators Group (ERG), a loose cooperation between NRAs. BEREC provides a better-structured, more efficient approach than ERG and will help ensure fair competition and more consistency of regulation on the telecoms markets.

- The 2009 telecoms reform gives the European Commission the power to oversee regulatory remedies proposed by national regulators (e.g., on the conditions of access to the network of a dominant operator; or on fixed or mobile termination rates) in order to avoid...
inconsistent regulation that could distort competition in the single telecoms market. When the Commission, in close cooperation with BEREC, considers that a draft remedy notified by an NRA would create a barrier to the single market, the Commission may issue a recommendation that requires the NRA to amend or withdraw its planned remedy.

* The 2009 telecoms reform enables the Commission to adopt further harmonization measures in the form of recommendations or binding decisions if divergences in the regulatory approaches of NRAs, including remedies, persist across the EU in the longer term (e.g. on broadband access conditions or on mobile termination rates).

* NRAs gain an additional tool of imposing functional separation obligations, where warranted. Under the 2009 telecoms reform, NRAs may require telecoms operators to separate communication networks from their service branches, as a last-resort remedy. This new remedy has been advocated since 2007 by the European Commission and by the 27 national regulators. Functional separation can rapidly improve competition in markets while maintaining incentives for investment in new networks.

**Transposition of the EU Model**

Understanding the EU’s regulatory evolution and the state of the EU markets during both phases of regulatory interventions is crucial when considering implementation of a similar model in developing countries. Many developing countries find themselves in a transitional stage similar to the one that existed in the EU during the implementation of the 1998 Package. Therefore caution may be warranted to avoid rushing into its implementation in markets that may not be ready for near-term regulatory dismantling, as they may require some continued regulation to ensure the development of competition.

Additionally, in markets where full liberalization has been achieved, effective application of the EU’s competition-based approach may be influenced by a country’s lack of experience and resources to dictate and enforce generic competition principles. The principal elements that may pose a challenge to the successful emulation of the EU model in developing countries are the differences in: (i) market composition and development; and (ii) the institutional frameworks.

With respect to market composition and development, the following differences have been identified as potential challenges in adopting the EU model in developing countries:

* **Dominance of Mobile Networks.** Large mobile penetration in developing countries, resulting in the preeminence of mobile networks with respect to fixed networks, may require that some elements of price regulation traditionally aimed at dominant fixed-line incumbent be applied to mobile networks. However, some other regulations (e.g., local loop unbundling) may be inapplicable to wireless networks.

* **Universal Service and Rural Access.** Compared with Europe and other developed countries, developing countries tend to have lower levels of teledensity. Where most developed countries (with higher teledensity levels) focus on issues of “content, quality and price of basic services,” countries with developing communications markets may be required to focus their regulatory resources on the implementation of access measures.

* **Market Liberalization.** Some developing countries have not achieved full liberalization of all market elements and certain monopoly vestiges still exist (e.g., incumbent telecommunication operator’s control over international gateway; preferential access to essential facilities by the incumbent’s mobile business). As such, developing countries may require greater regulatory intervention as the market transitions to greater liberalization.

The legal, political and institutional dynamics in developing countries also may contribute to the need for more prescriptive sector regulation. The legal and judicial systems in many developing countries may lack sufficient depth and expertise on matters of competition principles, and courts may lack the technical knowledge to effectively resolve complex matters in a constantly evolving market. Political interference by well-connected or state-owned operators is also a factor that supports maintaining sector-specific regulation in order to avoid arbitrary implementation of regulation.

Where generic competition principles may not be applied for the reasons mentioned above, countries may consider incorporating competition law principles into their sector-specific framework, as a mechanism to foster the growth of the market and prevent anticompetitive practices that may hinder its development.

While the EU model as a whole may not be transferable to the developing world, certain of its underlying principles can serve as the foundation for an effective regulatory framework:

* Establishment of an independent regulator;

* Existence of an efficient mechanism to appeal decisions of the regulator;

* Applying regulation with principles of transparency, non-discrimination and objectivity;

* ‘Two-tier’ regulation, where the activities of operators with significant market power are held to greater regulatory supervision;

* Adoption of technology neutral approach (i.e., recognizing the fast-paced development of convergence and shift regulation from technology/service-based, to technology neutral);

* Reducing market access barriers;

* Avoiding over-regulation and progressive reduction of unnecessary regulation upon the existence of effective competition;

* Engaging in open, transparent and thorough consultation prior to the issuance of any regulation that would impact the market; and

* Reducing bureaucratic processes in an effort to reduce costs and streamline processes where possible.
6.3.3.2 ANALYSIS OF JURISDICTIONAL DIVISION OF POWER BETWEEN COMPETITION AUTHORITIES AND REGULATORY INSTITUTIONS

The relationship between telecommunications laws and competition policies can be depicted through the jurisdictional division of power between competition authorities and regulatory institutions. When there are separate entities enforcing telecommunications and competition rules, balancing the interplay and jurisdiction between these two entities is a key element in allowing the industry to expand. On the other hand, where a single entity exists (either a telecommunications regulator or a general competition authority), policies applicable to the telecommunications market should encourage growth and competition in the industry. Examples of different models adopted include:

- The most common scenario where countries have both a telecommunications regulator and one or more entities with jurisdiction over economy-wide competition matters (e.g., the United States, Chile, and South Africa); or a telecommunications regulator and a competition authority with a specific mandate over competition in the telecommunications sector (e.g., Australia);
- A model adopted in certain developing countries where there is no competition authority, but a sector-specific regulator with sector-specific competition mandates (e.g., Dominican Republic);
- The least common model adopted in New Zealand, where a sector-specific commissioner is part of the general, economy-wide competition authority.

The structure of competition policy and interplay between institutions is not necessarily pre-determined by the legal system in place. In some cases this may be the result of political and practical considerations such as management of existing human and financial resources, the development and size of the telecommunications market, and the level of competition that exists in the market. (See Table 3-4 for a list of certain countries with both a telecommunications regulatory body and a competition authority.)

Scenario 1 – Existence of Competition and Telecommunications Authorities

United States

In the United States, the Federal Communications Commission (FCC) is the independent regulator in charge of overseeing interstate and international communications, but in matters involving competition issues, it must coordinate with the U.S. Department of Justice (DOJ) or the Federal Trade Commission (FTC) depending on the industries involved and the economic impact.1

The Communications Act of 1934 (as amended by the Telecommunications of 1996) establishes pro-competitive principles that govern the telecommunications industry in the United States and gives the FCC authority to review and approve (ex-ante) merger transactions involving licensed telecommunications carriers.2 The Communications Act requires the FCC to consult with DOJ prior to granting certain authorizations to local exchange carriers, and the antitrust law gives the FCC concurrent authority with DOJ to review mergers among telecommunications carriers.3 DOJ’s Antitrust Division and the FTC are primarily responsible for overseeing enforcement of U.S. antitrust laws (the Sherman Act and the Clayton Act).4 DOJ’s Antitrust Division has authority to prevent anticompetitive conduct (e.g., contracts, combinations and conspiracies in restraint of trade) that is subject to either criminal or civil action under U.S. antitrust laws and to review proposed mergers and acquisitions of telecommunications carriers (i.e., to assess their competitive effect and challenge those that threaten to harm competition).5 As a result, activities performed by telecommunications service providers in the United States are subject to the FCC’s regulatory enforcement under the Communications Act, as well as the DOJ’s enforcement under the antitrust laws. However, in a recent Supreme Court decision on whether a carrier’s breach of certain duties under the Communications Act also generated antitrust liability under the Sherman Act, the Supreme Court determined that such liability arises where a regulatory structure is already in place to prevent anticompetitive injury.

The FTC is responsible for preventing and penalizing unfair and deceptive market practices in restraint of trade.6 While the FTC does not have authority to review mergers involving the FCC-licensed telecommunications common carriers, it does have authority to review mergers of unregulated non-common carriers or mergers involving common carriers that reach a certain monetary threshold.7 Therefore, when a merger does not involve a telecommunications common carrier, in principle it may be reviewed by either the FTC or DOJ, as was the case of the merger of America Online (an Internet service provider) and Time Warner (a cable/media operator). The jurisdictional division among these three entities runs parallel and may often overlap. Rather than multiple agencies reviewing a transaction, the law requires one agency to give the other(s) investigative “clearance” to conduct the review. To avoid the overlap and duplicity of review between the FTC and DOJ, and the extensive delays in obtaining such clearance, in 2002, the two entities entered into a Memorandum of Agreement allocating areas of responsibilities in reviewing mergers and enforcing antitrust laws.8 As a result, the DOJ now is responsible for enforcing antitrust laws on telecommunications matters (See Box 3-8 for a snapshot of this tripartite review).

In reviewing mergers or other antitrust actions, the DOJ and FTC focus purely on competition issues, basing their decisions on whether a particular transaction will result in an accumulation of market power that would reduce competition and affect consumers.9 While the FCC also may engage in a competition analysis, it applies a broader sector-oriented analysis, focusing on whether the transfer would benefit or harm the public interest, convenience, and necessity.10 In some cases, the FCC may approve a merger, but may place conditions on the merger after...
consultations with the DOJ on competition issues.

**Chile**

Chile, like the United States, has a sector-specific regulator (SUBTEL) and a competition authority. However, the competition authority can intervene in telecommunications matters and apply competition law not only to private parties, but to the regulator itself.

SUBTEL, created in 1977 under the Ministry of Transportation and Telecommunication, is the entity responsible for overseeing the operations of telecommunications networks, and developing and enforcing technical industry standards. SUBTEL also is required to approve the transfer of any concession, authorization or permit. The Telecommunications Law of 1982 sets forth certain competition-related provisions applicable to the industry and operates in conjunction with Chile’s antitrust law (Decree 211), which generally prohibits activities that are a restraint to competition. Pursuant to Decree 211, the Tribunal for the Defense of Open Competition (Tribunal de Defensa de la Libre Competencia, the "Tribunal") and the National Economic Prosecutor (Fiscalía Nacional Económica, the "NEP") are the entities primarily responsible for the promotion and protection of competition in all markets.

Unlike the United States, Chile's antitrust law does not require the competition authorities to approve mergers and the Tribunal may not initiate antitrust investigations on its own. However, the Tribunal (at the request of interested parties) may prevent actions that can potentially harm competition. The NEP or any private party may file a claim with the Tribunal alleging that a party has engaged in actions that restrain competition and affect the public. Despite the lack of a requirement for authorization, in 2005 the Tribunal issued a pre-merger decision in one of the most significant acquisitions in the Latin American telecommunications market: the acquisition by Telefónica Móviles of BellSouth’s Latin American mobile business.

In this instance, Telefónica Móviles and BellSouth filed a motion with the Tribunal requesting that it expressly approve the acquisition in order to avoid potential post-merger litigation. After conducting cost and competition analyses, the Tribunal approved the merger with certain conditions (e.g., divestiture of a particular spectrum concession to avoid 100 per cent control of a particular band by the merged entity).

The Tribunal has authority to order Chilean regulators, including the telecommunications regulator, to take certain actions where it identifies competition concerns. However, the Tribunal generally works well together, there have been instances where the Tribunal has imposed its authority on the regulator.

For example, in 2000, two mobile operators operating in the 800 MHz band petitioned for, and acquired, from SUBTEL additional spectrum in the 1900 MHz band (PCS). Another mobile operator filed a complaint with the NEP. The NEP, in turn, initiated a proceeding with the Antitrust Commission (currently the Tribunal). The Commission ordered SUBTEL to conduct a public spectrum auction without giving preferential treatment to the two mobile operators that had originally applied for the spectrum. Although a more transparent process was used to grant the right to additional spectrum, some argue that the case merely represents an effort to use the competition institution to delay the allocation of new spectrum. In addition, others believe that the competition authority became too involved in technical matters.

In principle, the jurisdictional division of power between the telecommunications regulator and the competition authority in Chile appears to be clear, where intervention by SUBTEL is forward-looking and the competition authority is generally involved on a retrospective basis. However, the example of Telefónica Moviles and BellSouth above shows that companies may prefer to voluntarily submit themselves to the judgment of competition authorities for specific guidance in order to reduce uncertainty and post-acquisition problems.

**European Union**

In Europe, competition matters are divided between the respective competition authorities within the EC and the EU member states. There are two separate directorates within the EC that address competition and electronic communications matters: the Competition Directorate General (Competition DG), which has played a significant role in the development of EU telecommunications policy; and the Information Society and Media Directorate-General (DG InfoSoc), responsible for developing Information Society initiatives and harmonization efforts.

There is no European-wide telecommunications regulatory authority. The DG Competition Directorate is responsible for designing and enforcing general competition rules under the EU's Community Treaties, and ensuring that competition of the EU market is not distorted. Its four main areas of action with respect to competition policy are antitrust and cartels, merger control, liberalization (i.e., introducing competition in monopolistic sectors), and state aid control (to ensure that competition in the Common Market is not distorted). At the EU level, the general competition rules are set forth in the EC Treaties, and pursuant to these, sector-specific competition rules are issued to govern certain sectors of economic relevance. For instance, member states are subject to the Directive on Competition Electronic Communications Markets, which prohibits them from establishing exclusive or special rights for the provision of electronic communications networks. This Directive also establishes the general competition principles applicable to the industry and requires the removal of competitive barriers for: (i) vertically integrated public undertakings; (ii) use of frequencies; (iii) satellites; and (iv) cable television networks. Member states are required to adopt the necessary measures to ensure compliance with this sector-specific competition directive.

**Competition Matters – Relationship between the EC and NCAs**

The EC has the authority to deal with competition matters on a community level, and national competition authorities (NCAs) are responsible for enforcing national competition laws. In some instances, EC authority may be shared with that of NCAs and in others, the EC may have exclusive authority (e.g., when certain practices may have impact on trade between member states or are deemed to be "Community dimension").

The EC Treaty also established general competition rules that apply to all industries throughout the EU, and are enforced in coordination with the NRAs. Article 81 of the EC Treaty prohibits anticompetitive agreements (e.g., agreement between competitors and vertical agreements) that may have an effect on trade between member states and which prevent, restrict or distort competition in the common market. Exemptions may be granted if there are overriding countervailing benefits (e.g., improvement in efficiency or the promotion of research and development).
Article 82 of the EC Treaty prohibits (without the possibility of exception) the abuse of a dominant position to the extent it may affect trade between member states. NCAs must apply articles 81 and 82 of the EU Treaty in individual cases, in cooperation with the EC and the other member states. In practice, there have been few cases in the telecommunications sector in which the EC has had to act under the provisions of articles 81 and 82. 26 However, the EU’s merger control procedures are a useful example to illustrate the allocation of powers between the EC and NCAs.

In 2004, the EU adopted New Merger Control Regulations (NMCR) 28 setting forth a referral system for the allocation of merger decisions between the EC and the NCAs, which complies with the subsidiarity principle set forth in Article 5 of the EU Treaty. According to the subsidiarity principle, unless the EC has exclusive authority to act, EC action is only permissible when the purpose of the proposed action will not be sufficiently achieved by the member states’ action (i.e., where the independent action by the member states’ institutions will not achieve such purpose effectively). 29 Under the NMCR, the EC has exclusive jurisdiction over mergers of “Community dimension”, as a result of the transaction exceeding certain turnover thresholds. Mergers that do not meet that turnover should be reviewed by the NCAs, unless referred to the EC through the NMCR’s referral process.

EC dimension mergers are those where:

(i) the combined worldwide turnover of the undertakings concerned (i.e., the merging parties) is greater than €5 billion; and each of at least two of the undertakings concerned had a turnover within the EU of more than €250 million; or

(ii) the combined worldwide turnover of the undertakings concerned is greater than €2.5 billion; their combined turnover in each of at least three member states is greater than €100 million; in each of those three member states, the turnover of each of at least two of the undertakings concerned is €25 million; and the EU wide turnover of each of at least two of the undertakings concerned is greater than €100 million;

However, if more than two-thirds of each of the merging parties’ EU turnover in either case is in one and the same EU member state, the merger must be examined by the NCA of that member state. Cases also may be allocated to and from the EC and NCAs through a referral procedure that seeks to allocate the case to the best placed authority in a manner consistent with the subsidiarity principle. Where clearance is required in more than three jurisdictions it may be approved by the EC (provided such competition authorities do not object to such referral), in which case such approval would be valid EU-wide. Pursuant to Article 9 of the NMCR, at the request of a member state, the EC may refer a EC dimension transaction to such member state where the transaction (i) threatens to significantly hamper competition in a distinct market within that member state; or (ii) affects competition on a market within that member state, which presents all the characteristics of a distinct market and which does not constitute a substantial part of the common market. 30 Article 22 of the NMCR allows the EC to accept a member state’s referral of a non-EC dimension referral where trade among member states may be affected.

The EC also has issued merger guidelines 31 to provide companies instructions on when mergers are likely to be challenged or not, and a document on best practices on the conduct of EC merger control proceedings, 32 which seeks to enhance the efficiency of investigations and to ensure transparency in the merger review process.

**Role of the NRAs**

Unlike the United States, in the EU, NRAs generally do not participate in merger reviews, as these are under the competence of the NCAs. However, in the EU, NRAs play an important role in enhancing competition in national telecommunications markets through sector-specific policies, as they are required to “promote competition in the provision of electronic communications networks, electronic communications and associated facilities and services.” 33 NRAs may participate jointly with NCAs in assessing and ensuring competition in the communications market. As explained in Section 3.3.1 above, NRAs are required to consult with the EC prior to the adoption of measures following a determination of market power and the EC has the authority to require an NRA to withdraw a draft measure.

Given the increasingly competition-oriented regulatory approach of the EU model (see Section 3.3.1, above), there are some areas of overlap between regulatory policy (applied by the NRAs) and competition law (enforced by the NCAs). This has led some to debate over the future role and institutional structure of NRAs within a deregulatory framework in markets where full liberalization and competition exists. Although some have even suggested that NRAs potentially could be absorbed by competition authorities, this view is rejected as unsound regulatory practice. 34 The importance of sector-specific regulation and enforcement remains relevant as NRAs are charged with achieving efficiency from a technical and allocation perspective (i.e., use of scarce resources), as well as ensuring competition and meeting universal service goals. Although NRAs apply certain aspects of competition law (as underlying principles of sector regulation), the interaction between the two enforcement authorities are considered an effective regulatory model. 35

**South Africa**

The South African Competition Act expressly recognizes the concurrent jurisdiction that may be exercised by the competition authorities and sector-specific regulators. The Independent Communications Authority of South Africa (ICASA), an independent body responsible for regulating the telecommunications and broadcasting industries, is also responsible for ensuring fair competition among industry players in these industries. 36 The Competition Act, which was greatly influenced by developed country experience, establishes three entities responsible for economy-wide competition matters:

a. Competition Commission
   
   - an independent body responsible for the implementation of the Competition Act, (i.e.,
   
   it investigates restrictive business practices and abuse of dominant positions and mergers); 37

b. Competition Tribunal
– an independent tribunal responsible for adjudication in the first-instance of contested competition matters (i.e., it determines whether anti-competitive practices have occurred, and if applicable, imposes sanctions under the Competition Act; it also reviews larger mergers when they have been referred to the consideration of the Tribunal and adjudicates appeals on decisions from the Competition Commission on intermediate mergers and Competition Act exemptions);38 and

\[c. \text{Competition Appeal Court}\]

– has status equivalent to a high court and considers appeals from decisions rendered by the Competition Tribunal; also confirms orders by the Competition Tribunal on the divestiture of assets by parties who have merged in contravention of the Competition Act (The Competition Commission, the Competition Tribunal and the Competition Appeals Court are, for purposes of this section collectively referred to as the “Competition Authorities”).

The Competition Act expressly recognizes the possibility of the Competition Authorities and sector regulators (i.e., ICASA) to exercise concurrent jurisdiction over industry-specific competition matters, which to the “extent possible” should be managed pursuant to an agreement between the Competition Commission and the regulator for purposes of harmonizing their exercise of jurisdiction and ensuring a consistent application of the Competition Act.39 To this end, the Competition Commission and ICASA entered into a Memorandum of Agreement setting forth the manner in which they would operate when both have jurisdiction over the “investigation, evaluation and analysis of mergers and acquisition transactions and complaints involving telecommunications and broadcasting matters.”40 Although neither entity waived its respective authorities, they agreed on the establishment of a joint working committee to facilitate cooperation and consultation of matters that require their involvement.41

In the case of mergers that require the approval of the Competition Commission and ICASA, the Memorandum of Agreement recognizes that the entities may consult each other, but requires them to make independent determinations based on their respective legislations. In the event that each reaches different determinations, the Memorandum of Agreements sets forth a procedure by which both entities should try to reach the same decision on the merger. If either the Competition Commission or ICASA fails to approve the transaction, the merger may not go through.42 Decisions may be appealed to the relevant courts (i.e., the Competition Tribunal if appealing a decision of the Competition Commission; or the ordinary courts if appealing ICASA’s decision). In some cases however, even after bringing the matter before the court, companies have opted to settle given the court’s and the Competition Tribunal’s limited understanding of industry-specific matters and the length of time it takes a court to decide on these issues.43

\[India\]

India has a telecommunications regulator and an economy-wide competition authority. Enacted in 2003, India’s Competition Act is in its initial stages of development, with enforcement entrusted to the Competition Commission of India. The Competition Act generally prohibits anticompetitive agreements (i.e., one that is likely to cause an appreciable adverse effect on competition within India) and abuse of dominant position (i.e., where an enterprise directly or indirectly, imposes unfair or discriminatory conditions in the purchase and pricing conditions), and regulates corporate “combinations” through the acquisition of shares, control and mergers. The Competition Commission has an express mandate over competition issues with respect to a variety of services, including “communication” services.44

The Telecommunications Regulatory Authority of India (TRAI) is an autonomous body responsible for the regulation of telecommunications services in India. TRAI is responsible for “facilitate[ing] competition and enforce[ing] efficiency in the operation of telecommunications services” in order to facilitate growth.45 TRAI is also responsible for adjudicating disputes among service providers and between groups of licensees on matters concerning technical compatibility and interconnection between service providers, revenue sharing arrangements, quality of telecommunications services and interests of consumers. However, the TRAI Act specifically excludes from TRAI’s jurisdiction matters concerning “the monopolistic trade practice, restrictive trade practice and unfair trade practice.” If a matter is brought before TRAI that raises such competition issues, or any other issue under the jurisdiction of the Competition Act, TRAI is required to refer such issues to the Competition Authority.46

\[Scenario 2 - Lack of Competition Authority, but Enforcement of Sector Specific Competition Rules by Telecommunications Regulator\]

\[Bahrain\]

The Kingdom of Bahrain does not have a general competition law or economy-wide competition authority. Instead, the Telecommunications Law of 2002 tasks the Telecommunications Regulatory Authority (TRA) with promoting effective and fair competition among new and existing licensed ICT operators through the issuance of necessary regulations, orders and determinations.47 TRA’s authority under the Telecommunications Law includes review and the imposition of sanctions for any conduct that restricts or distorts competition in the ICT sector, including abuse of dominant position or anti-competitive agreements. Additionally, the Law grants TRA the authority to conduct reviews of proposed mergers or other changes to the market structure that may restrict or distort competition.

In 2010, TRA issued Competition Guidelines that assist market participants to understand how it will assess competition in the telecommunications sector, including both ex ante market reviews and ex post investigations into anti-competitive behavior.48 Although the Competition Guidelines focus mainly on abuse of dominant position, they also address collusion and mergers. Under the Competition Guidelines, the following types of behavior may raise abuse of dominant position concerns that TRA could then investigate:

- Excessive pricing – when prices are set significantly and persistently above the competitive level;
- Predatory pricing – when prices are set anti-competitively below cost;

\[Table 3-5 below shows certain countries that have both a communications regulator and a competition authority, and the entity with jurisdiction over competition issues in the telecommunications sector.\]
draws several important lessons in this respect:

- Price or non-price discrimination – when equivalent products are provided to different customers on different terms in an anti-competitive manner;
- On-net/off-net price discrimination – when the prices of on-net and off-net calls diverge in an anti-competitive manner;
- Refusal to supply – when a dominant vertically integrated operator’s behavior unreasonably restricts competitors access to its network; and
- Unduly long-term contracts – when retail service contracts are unjustifiably long.

**Scenario 3 – The Case of New Zealand: Competition Authority Enforcing General Competition Policies and Sector-Specific Regulations**

New Zealand introduced industry specific provisions, such as the regulation of interconnection and number portability, with the adoption of the Telecommunications Act in 2001, but the general competition statutes play an important complementary role, notably the Commerce Act of 1986, as amended, which prohibits anticompetitive practices (e.g., misuse of a dominant position) and business acquisitions that create or strengthen dominance.49

The Ministry of Economic Development (MED) advises the Minister of Communications on the operation and regulation of specific markets and industries, including telecommunications. The general, economy-wide competition authority is the Commerce Commission (Commission), which is an independent agency not subject to government direction.51 The Commission is responsible for enforcing competition legislation including the Telecommunications Act 2001.52 Within the Commission, primary responsibility for making decisions about, and providing advice to the Minister on telecommunications, rests with the Telecommunications Commissioner.

The jurisdictional division of power between these two agencies with respect to telecommunications matters is clearly defined in New Zealand’s legislation, and is evidenced in rulemaking proceedings. An interplay between MED and the Commission recently took place in connection with the Commission’s proposal regarding the regulation of mobile termination rates. Under the Telecommunications Act, the Commission is responsible for conducting “investigations into the desirability of regulating additional services or amending the regulation of services where considered necessary, and make recommendations to the Minister of Communications.”53 In 2004, as a result of complaints of high mobile termination rates and lack of competition in New Zealand’s mobile termination market, the Commission initiated an investigation to determine whether to regulate the mobile termination market. In June 2005, the Commission issued a report to the Minister of Communications recommending the regulation of fixed-to-mobile termination rates (excluding 3G networks).54

Under the Telecommunications Act 2001, the Minister of Communications has the ultimate authority to accept or reject the Commission’s recommendations, or to require the Commission to reconsider its recommendation “for any reason specified by the Minister.”55 However, the Minister of Communications cannot reject the Commission’s recommendation and substitute his own preferred outcome – if he rejects the Commission’s recommendation, then the regulatory status quo prevails. As a result of this authority and despite supporting a reduction of mobile termination rates, the Minister of Communications required the Commission to reconsider its recommendation, particularly on aspects of implementation and achieving benefits to end-users.56

As of the date of this publication, New Zealand’s mobile termination proceeding has not concluded, but it serves to highlight the interplay between the relevant agencies. Worth noting is the broad authority of the Minister of Communications with respect to the recommendations of the Commission, which may be subject to reconsideration for reasons not specifically set forth in the Telecommunications Act or the Commerce Act.

New Zealand’s approach has not been emulated in other countries, and there are no indications that this approach would lead to higher levels of competition than that achieved by countries with sector-specific regulation.57 Furthermore, this approach is unlikely to be successful in developing countries that lack expertise in the enforcement of generic competition laws.

**Practice Notes**

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- **Box 3-5: United States Tripartite Review [3.3.2]**
- **Table 3-5: Entity with Jurisdiction over Competition Issues in the Telecommunications Sector in Certain Countries with both a Telecommunications Regulator and Competition Authority [3.3.2]**

**6.3.3.3 PRACTICAL LESSONS FOR DEVELOPING COUNTRIES**

Regardless of the stage of development of their telecommunications market and regulation, the most significant lesson that developing countries may draw from some developed countries is that the objective of competition policy is to foster the expansion of the market, the availability of new technologies, and the accessibility of low-cost quality services to the public.

The small number of players in a market, and the lack of technical, human and financial resources may not make it feasible for developing countries to engage in dramatic legislative change (i.e., from sector-specific to general competition rules). A report issued by the International Competition Network (ICN)51 evaluated the effectiveness of competition advocacy in regulated sectors (including telecommunications) and draws several important lessons in this respect:2

1. Regulatory agencies should be aware of the importance of competition. To the extent there is both a competition authority and a regulatory agency, the latter should endeavour to consult with the former in developing and proposing new regulations in order to achieve pro-competitive policies.
1. An “open and active dialogue” should be maintained between competition authorities and sector regulators. This may include (i) requiring competition authorities to opin on proposed telecommunications regulations or telecommunications regulators to be consulted prior to the issuance of general competition guidelines that may affect the sector; (ii) participation of competition authorities in meetings with the regulator and the incumbent telecommunications operator in order to “promote competition values;” or (iii) the ability of competition authorities to “advise regulators on market definitions.”

1. Having the competition authority adopt “formal procedures,” which may include (i) the development of formal memoranda on cooperation between the competition authority and the telecommunications regulator; and (ii) implementation of telecommunications regulation that provides the competition authority with decision-making power on competition matters.

1. Using the media as a means to enable the competition authority to explain “its views and arguments within the framework of advocacy activities to the wider public.”

1. Ensuring an adequate level of technical expertise that may include (i) exchanging “high quality of information” between the competition authority and the telecommunications regulation; and (ii) developing “technical know-how” with the competition authority so that competition principles can be effectively transferred to the telecommunications sector.

1. Having a “forward looking” approach, which involves developing sound strategies to “anticipate and address” potential competition problems and deal with them before they negatively impact the market (This is the goal sought by the market analysis under the EU NRF discussed above).

1. Adopting a “legalistic approach,” which may include (i) incorporating formal rules governing the relationship between the competition authority and the telecommunications regulator to ensure that the “recommendations and opinions made by the competition agency are provided at the early states of the regulated sector reform” (see Box 3-6 for example of Brazil’s legalistic approach); (ii) developing a code of conduct that seeks to improve the relationship among industry participants; and (iii) establishing conditions regarding the protection and exchange of confidential information.

The Brazilian System of Defense of Competition (SBDC), comprised of the Administrative Council of Economic Defense (CADE), the Secretariat of Economic Law (SDE), and the Secretariat for Economic Monitoring (SEAE), is responsible for ensuring the protection of competition in Brazil. CADE has entered into several competition promotion agreements with sector-specific regulatory agencies in order to institutionalize cooperation among them in competition and antitrust matters (this would be an example of the “formal procedures” approach).3 However, General Telecommunications Law contains specific provisions governing the interplay between the telecommunications regulator, Anatel, and CADE and establishing the hierarchy of competition law with respect to the telecommunications sector, as follows:

- General competition rules (i.e., “rules for the protection to the economic framework”) are applicable to the telecommunications sector, to the extent that they do not conflict with the telecommunications law (Article 7 of the General Telecommunications Law);
- Any act among telecommunications service providers that seeks any form of economic concentration is subject to the controls, procedures and conditions set forth in the general competition law and will be submitted for consideration by CADE;
- Anatel has the ability to supervise, control and prevent activities that harm the economy, unless such activities fall within the purview of CADE.

Under this structure, Anatel’s duties are similar to those of the SDE, which initiates administrative proceedings and issues determinations on mergers to be approved by CADE.3

### 6.3.4 IMPACT OF OTHER LEGISLATION

The effective implementation of telecommunications regulation and the achievement of its objectives may be influenced by other laws that affect the sector. In meeting other government objectives, laws may be passed that directly or indirectly affect the development of the telecommunications sector. These laws may enhance or diminish the effectiveness of the telecommunications legal and regulatory framework in creating an enabling environment for the development of the sector, affecting the degree of investment and competitiveness in the sector, and the ease of accessibility by new entrants to the market.

The breadth of legislation potentially affecting the telecommunications sector is quite expansive. This section focuses on the legislation generally considered to most directly impact the sector – tax laws, foreign ownership laws, consumer protection laws, spams legislation, and property laws. The interaction between competition law and telecommunications law is addressed more fully in Section 3.3.

#### 6.3.4.1 TAX LAW

The regulation of telecommunications services will be affected by the taxation of such services, whether at the federal, state or local level. The taxation of telecommunications services, the amount of taxes, and the determination of any exemptions, will depend on the particular tax laws in each country. Taxes collected from telecommunications operators and service providers are important sources of revenue to many governments, and are used for a variety of purposes, including financing the cost of regulating the sector, and helping fund universal service programs, emergency services, and services for disabled persons. However, excessive taxation of the telecommunications industry can retard competition, and discourage technological development and investment in the sector. Given the importance of the telecommunications sector, the development of adequate telecommunications infrastructure and the costs associated with such development, investment in the sector is critical. One of the main considerations for attracting investment in telecommunications infrastructure and services are the additional costs...
associated with the taxes levied by individual governments. Many countries, for example, offer incentives to attract foreign direct investment in the form of tax concessions, holidays and credits, export subsidies, import entitlements and accelerated depreciation. Some governments have created “tax-free” zones to attract investors in the telecommunications sector. Panama, for example, created a tax-free environment in the Howard Special Economic Area and the “City of Knowledge Tecnopark” as an incentive for companies to establish businesses.

The effect of taxation on the “digital divide”, particularly in developing countries, is evident in a 2010 study released by the GSM Association on the impact of taxation on the development of the mobile broadband sector. This study examined the impacts of various taxation approaches on mobile telephony, including direct taxes (both general and sector-specific), value-added taxes, handset taxes and import duties, finding that for every dollar reduced in taxes, emerging countries may be able to generate between US $1.4 and US $12.6 in additional GDP. Further, the foregone tax revenues were expected to be partially or even completely compensated by taxes collected on the larger GDP. The study concluded that although it is important for governments to use tax revenues to fund universal service objectives where private investment is lacking, tax models may not be efficient, particularly where special taxes are applied to the telecommunications sector that “crowd out” private spending. The study also highlighted inconsistent policy goals wherein some regulations seek to develop the ICT sector while other regulations treat ICT services as “cash cows” for tax purposes. Particularly for developing countries, it is necessary that policy makers align taxation approaches for mobile services, particularly mobile broadband, with national ICT objectives to ensure that taxes do not represent an obstacle for diffusion.

The advance of new technologies in the telecommunications sector is also likely to impact the way countries impose telecommunications taxes. For example, as regulators define VoIP services, they must also consider the tax implications of the regulatory classification of VoIP, which could affect whether VoIP services are subject to federal, state or local taxes, whether interconnection fees apply, and whether VoIP providers are subject to universal service contributions.

6.3.4.2 FOREIGN OWNERSHIP

Given its status as a critical public utility, telecommunications has been regarded as an integral part of a country’s sovereignty and thereby subject to foreign ownership restrictions under either telecommunications legislation or a country’s foreign investment law. However, largely as a result of liberalization, many countries have eased foreign ownership restrictions in order to attract investment, particularly as public sector financing has shrunk since the 1980’s and the private sector, both domestic and foreign, has had to assume responsibility for financing development in the ICT sector. Foreign investment has facilitated the growth and development of the telecommunications sector in many countries, increasing access to capital for network development and modernization, and allowing for the transfer of technology and know-how. However, despite the benefits of foreign investment, not all countries are initially open to establishing a legal environment that is conducive to overseas ownership in the sector (see Box 3-10 below). Where foreign ownership restrictions continue to exist, governments should balance the reasons for such restrictions with the need for creating a favourable environment that is conducive to competition and development as well as an adequate access to capital.

Under Vietnam’s investment law of 1992, as amended in 2000, foreign companies are allowed to provide services to Vietnam’s telecommunications market only under a Business Corporation Contract (BCC). A BCC is, in essence, a partnership agreement between a foreign and a Vietnamese party in which private investors provide capital and receive a negotiated return on their investment for a prescribed number of years. Foreign investors are not allowed to own equity stakes in Vietnamese telecommunications companies and the Vietnamese party is the only party permitted to hire and manage a workforce. A foreign company must be present in Vietnam for at least two years before entering into BCC negotiations.

Recognizing that this scheme discouraged foreign investors because they had no operational control over their investments, the Vietnamese Government issued a new Law on Telecommunications and Decree implementing the Law loosening these restrictions. As of June 1, 2011, foreign ownership restrictions on telecommunications services provided under Vietnam’s market access commitments in its WTO services schedule apply for other WTO members. For example, for facilities-based basic telecommunications services, foreign capital contribution may be up to 49% of the charter capital of a joint venture.

The level and nature of foreign investment in a country depends on various factors, such as openness of the market, government policies, infrastructure quality, political and regulatory stability, taxes and tariffs, labor costs, international commitments, and the existing legal framework. In South Africa, for example, foreign ownership restrictions in the telecommunications sector originate from the political history of the region. To address the effects of apartheid, the government’s policy of economic reform has been based on economic empowerment, which encourages ownership and significant participation by historically disadvantaged groups. In the ICT sector, Sections 35(3) and 35(4) of the Telecommunications Act requires the regulator, ICASA, to promote the empowerment and advancement of disadvantaged groups and women by giving them preference in the award of any licences for up to 30 per cent equity ownership (and sometimes higher).

Although foreign ownership restrictions have been eased in numerous countries they continue to exist in some countries, even in liberalized economies, chiefly due to concerns regarding national identity and security, economic espionage, damage to law enforcement interception capabilities, and potential for damage to critical infrastructure. For example, although India recently raised the foreign direct investment limit in the telecommunications sector from 49 per cent to 74 per cent in order to attract more investment in the sector, it has imposed various conditions on foreign investment to address national concerns which limit the impact of the changes. These conditions state that: (i) the majority of the Board of Directors, including the Chairman, Managing Director and Chief Executive Officer, must be resident Indian citizens; (ii) at least one resident Indian promoter must hold 10 per cent equity in any telecommunications company; (iii) the Chief Technical Officer and Chief Financial Officer must be resident Indian citizens; (iv) no sensitive information relating to subscribers and accounts can be transferred outside India; and (v) the identity of subscribers must be traceable at all times.
Although a country’s telecommunications laws may contain foreign ownership restrictions, it is often the case that other national laws regarding foreign investment in general may impose limitations. Canada and the United States, for example, not only have foreign ownership restrictions in their telecommunications laws, but have national laws regarding foreign investment such as the Committee on Foreign Investment in the United States (CFIUS) review in the United States and the Investment Canada Act in Canada. In the United States, the Committee on Foreign Investment in the United States (CFIUS) review is applied to all foreign acquisitions of U.S. companies to evaluate the impact on national security. If countries have foreign investment laws which require a review of telecommunications transactions and investment, they should ensure they do not become a hurdle that is non-transparent, timely, resource-intensive, and creates uncertainty. On the other hand, the Investment Canada Act provides for the review by the Minister of Industry of any foreign acquisitions in order to ensure a “net benefit” to Canada.

Practice Notes

- Foreign Ownership in Canada [3.4.2]
- Foreign Ownership in the United States [3.4.2]
- Table 3-6: Foreign Telecommunications Ownership Restrictions in Selected Countries [3.4.2]

6.3.4.3 CONSUMER PROTECTION LAW

It is important that the telecommunications legal and regulatory framework create an environment that promotes public interest, confidence and participation in the sector. Most countries have done so by enacting consumer provisions in telecommunications legislation, such as number portability, quality of service and universal service. Many countries also have general consumer laws to protect consumer interests in the purchase of goods and services, which also affects telecommunications. The popularity of mobile phones has also resulted in the enactment of special legislation in some countries against mobile phone theft. The interaction of different consumer protection laws that affect the telecommunications sector is seen, for example, in Australia.1 where consumer protection legislation is embodied in the Telecommunications Act 1997, the Telecommunications (Consumer Protection and Service Standards) Act 1999, the Privacy Act 1988 and the Spam Act 2003.2 In addition, there are general consumer safeguards under the Trade Practices Amendment (Telecommunications) Act 1997, general unfair trading legislation and customer rights under contract law in Australia.3

Due to the interaction of different consumer protection laws, such as in the case of Australia, a need exists for consistency among the laws in order to lessen confusion, and to ensure that the highest standard of consumer protection prevails. In particular, consumer issues and the degree of regulatory oversight may be influenced by the maturity of the national market and the degree of competition in the sector. For example, in highly competitive markets, such as Australia, Hong Kong SAR, Malaysia and Singapore, more reliance is placed on industry self-regulation through voluntary codes of practice. In Malaysia, the Consumer Forum, comprised of service providers, telecommunications companies, broadcasting stations, non-governmental organizations and public interest groups, is designated by the Malaysian Communications and Multimedia Commission (MCMC) to prepare industry codes on consumer protection issues.4 Generally, however, consumer protection regulations establish the telecommunications operators’ obligations regarding their customers. Operators’ obligations typically include, but are not limited to, items such as: timely and accurate billing; customer contract policies and procedures, protection of consumer privacy; and terms of reference for suspension of service. These regulations also need to take into account procedures necessary to respond to and resolve users’ claims and to ensure that the relationship between telecommunications users and operators are fair and equitable.

Furthermore, given the constantly evolving nature of the telecommunications sector due to new technological developments and convergence, in particular the development of the Internet and the ICT sector, and the large quantity and range of personal information involved, these developments provide certain challenges that may not necessarily be addressed by telecommunications laws or general traditional consumer protection laws. Therefore, many countries are adopting additional laws and regulations that are focused on consumer protection matters in the ICT sector, such as intellectual property rights spam, privacy, fraud, identity theft, cyber crime, and e-commerce transactions. Such legislation protecting consumer activities in the ICT sector, and providing for the security of electronic networks and communications, are necessary to create trust and confidence in the use of digital networks.5 Further discussion of the impact of ICT related legislation in the telecommunications sector is found in Chapter 4, Section 4.4. A more detailed discussion regarding the regulatory responsibility for consumer protection is available in Chapter 6, Section 6.4.1.

Data Privacy Protections

(a) Personal Data

Due to the sensitivity of information involved in communications activities, most telecommunications legislation contains provisions regarding the privacy and confidentiality of user information. However, the ICT environment has greatly facilitated the global transmission of personal information, and it has become much easier to collect and share private information through the Internet. As a result, many countries have enacted data protection legislation to protect individuals’ privacy rights by restricting the manner in which personal information is used in the private and public sectors.6 Some countries, such as Australia, have also undertaken efforts to harmonize privacy provisions in telecommunications legislation and in other related legislation to ensure a consistent standard of privacy protection applied to both the public and private sectors, which have been subjected to different privacy policy requirements. In 2005, the Australian Office of the Australian Information Commissioner (OAIC) (formerly the Office of the Privacy Commissioner) conducted a review of the Privacy Act in light of the developments in private sector industries, and issued recommendations to the Parliament on improving the private sector provisions in the Privacy Act.7 With regard to personal sector telecommunications, the OAIC recommended that the Telecommunications Act and the Privacy Act be amended to provide consistency and to clarify what constitutes authorized uses and disclosures under each Act, and to ensure that the Privacy Act cannot be used to lower the standard of privacy protection provided by the Telecommunications Act. These recommendations to privacy obligations in the private sector, along with updates to the government’s obligations in protection of citizens’ privacy, are being considered as part of broad legislative amendments to the Privacy Act in 2011.8

In the EU’s 2002 Data Protection Directive9 and Privacy Directive,10 privacy in the processing of personal data and the confidentiality of
communications are recognized as fundamental rights that should be protected. The Privacy Directive requires member states to harmonize and ensure an equivalent level of protection of the right to privacy with respect to personal data in the electronic communication sector.11 Pursuant to this, the Data Protection Directive prohibits the transfer of personal information to any country that does not have adequate privacy laws.12 As a result, EU member states have implemented legislation that prohibits the transfer of personal information from the EU to third countries unless such countries have adequate privacy protection in their laws. As part of the 2009 Telecom Reforms package, the EU implemented additional privacy rules protecting against personal data breaches.13 Under the new rules, which Member States were required to transpose by May 25, 2011, telecom operators and ISPs must take stronger security measures to protect the names, email addresses and bank account information of their customers, along with data about every phone call and Internet session they engage in, in order to ensure that data does not accidentally or deliberately end up in the wrong hands.14 Additionally, the new rules require ISPs to provide better information to consumers regarding the data stored or accessed in their devices through “cookies” (i.e., small text files stored by a user’s web browser). In the case of data not related to the service currently accessed by the user, the new rules require Member States to ensure users have given their consent before such data is stored or accessed.

To date, a majority of countries around the world have enacted laws relating to data protection. Often, the protection of personal data is not encompassed in a single law but is covered by a variety of laws depending on the type of information that is being protected. In the United States, for example, legislation has passed regarding medical records (The Standards for Privacy of Individually Identifiable Health Information, or “HIPAA Privacy Rule”),15 credit reports (Fair Credit Reporting Act),16 and immigration and citizenship information (USA Patriot Act).17 Similarly, in Argentina, the protection of personal data is regulated by different legal instruments, namely the Argentine Constitution, the Personal Data Protection Act, Decree No. 1558, and the Data Retention Law, Law No. 25.873, which was incorporated into the Telecommunications Law. In New Zealand, data protection legislation is contained in a number of laws, including the Telecommunications Information Privacy Code 200318 and the Privacy Act 1993.19

(b) Data Retention

Another factor that has shaped the policy on the use of communications data with regards to privacy of information is the concern with national security after the events of September 11th, 2001, in the United States, and the recent terrorist attacks in Spain and in England. One example of the current debate surrounding the use of communications data for national security purposes is the initiative on data retention rules. Some laws, such as the EU Data Retention Directive,20 require communications service providers to retain all data created by their users for a prescribed period of time, while other countries, such as the United States, require communications service providers to store specific sub-sets of data for a more limited amount of time for specific purposes. The issue of data retention is hotly opposed by operators and service providers because of the resources required to comply. In Argentina, the Data Retention Law was promulgated in February 2004 and mandated a 10 year data retention period.21 However, due to opposition by ISPs, who would bear the burden and costs of retaining the data, and civil liberties groups regarding the long retention period, the government suspended the application of the law in 2005 and has not since been re-enacted or amended.22

Spam Legislation

Often considered in relation to consumer protection legislation is legislation against spam, or the sending of unsolicited, usually commercial, electronic messages. With the growth of Internet usage, spam became more prevalent although it can also be carried out through other electronic means, such as facsimile, telephone, short message service (SMS) and instant messaging services. (See Box 3-11 for the definitions of spam.) With the growth of ICTs, a continually increasing number of countries have implemented legislation against spamming to supplement existing consumer protection laws (see Figure 3-D).23 The problems associated with spam are magnified in developing countries, where high volumes of incoming and outgoing spam can cause a severe drain on the limited and costly bandwidth that is available for ICTs.24 Notably, efforts aimed at combating spam have waned in the last few years as policy makers focus more on data privacy and cyber security issues.

Some countries, however, such as Dominica, Iran, Jordan, Moldova, Nicaragua, Sri Lanka and Zambia have reported since 2009 that they do not have any legislation countering spam, while others such as Bulgaria, Chile, Costa Rica, Malaysia, Mexico, Morocco, Peru, South Korea and Switzerland have developed legislation to counter spam legislation through consumer protection laws, telecommunications law, or data protection law.25 Nonetheless, several countries such as Canada is in the process of enacting specific anti-spam laws, while others such as Argentina, Austria, Australia, Belgium, Brazil, China, Czech Republic, Hungary, Japan, Lithuania, the Netherlands, Singapore and the United States have enacted specific spam legislation.26 In the EU, legislation against spam is codified in the Directive on Privacy and Electronic Communications which requires member states to prohibit unsolicited communications sent via e-mail, SMS, facsimile, or telephone.27 The Directive’s basic principles are that: (a) member states should take an opt-in approach, whereby they ensure under applicable legislation that businesses obtain prior consent before sending unsolicited e-mails for direct marketing; (b) senders must clearly indicate the use of cookies or other tracking devices, including spyware; and (c) the definition of spam is technology neutral.

As part of the 2009 Telecom Reforms, the EU also introduced stronger spam rules.28 In particular, all commercial emails advertising web sites without full information about the company are now illegal. As many spammers operate across borders, cooperation between enforcement authorities will be improved as they have now become part of an EU-wide Consumer Protection Cooperation network. Furthermore, the new rules give internet service providers the right to protect their business and their customers by taking legal action against spammers.

Although national efforts are the main forces in combating spam, due to the “borderless” nature of spam, it is just as important to have international enforcement cooperation. For example, countries such as Australia, Korea, the United Kingdom and the United States have signed bilateral and multilateral memoranda of understanding to coordinate and improve spam enforcement activities. The OECD, to support the development of an inclusive response to spam, has launched an Anti-Spam Toolkit containing resources and information on anti-spam activities at the international level, to help policy-makers, regulators, and industry players formulate policies and find solutions to spam.29
Despite the enactment of anti-spam laws that are necessary tools for combating spam, such laws, on their own, have been unsuccessful in abating spam. Therefore, in addition to enactment of anti-spam laws, which usually involve the sanctioning of spammers through an “opt-in” or “opt-out” approach (Box 3-12), it is also important to consider alternative legal mechanisms such as the establishment of industry-led enforceable codes of conduct for Internet Service Providers (ISPs). This proposed approach would require ISPs to establish and enforce codes of conduct that prohibit their users from using the ISP as a source of spamming and other prohibited acts such as spoofing and phishing and prohibiting users from entering into peering arrangements with ISPs that do not uphold similar codes of conduct. The ultimate goal of such codes of conduct is to ensure that ISPs assist with the anti-spam efforts by taking adequate action to keep spammers off the Internet.

Most anti-spam laws involve the “opt-in” versus the “opt-out” approach.

**Opt-in**: This approach, adopted by the EU Directive, prohibits marketers and senders of commercial electronic messages from sending messages to a recipient unless the recipient has affirmatively asked to receive them. Affirmative requests for messages can be delivered directly by a recipient or they can be constructively construed from an existing business relationship between the recipient and the sender. For example, under opt-in laws, if a person purchases a product from a merchant, that merchant may send that person offers in the future until the merchant receives a request to stop sending such offers.

**Opt-out**: This approach, adopted by the United States, Japan and South Korea, allows senders to send messages to a recipient even if there is no existing business relationship and the recipient has not specifically opted to receive the messages. However, senders must honor the requests of recipients to remove them from a sender’s mailing list.

Reference Documents

- Nigeria: Memorandum of Understanding between the Consumer Protection Council and the Nigerian Communications Commission

6.3.4.4 PROPERTY LAW

National laws regarding property transactions can affect the effectiveness of the telecommunications legislation in several ways. Property taxes, for instance, can affect investment in the sector. In addition to taxes, property laws with regard to ownership rights and government
confiscation are other factors that investors usually consider when deciding whether to invest in a particular country, and affect the level of public confidence in the stability of the sector. Some countries, such as Jordan, have "investor friendly" property laws. Foreign entities are allowed to own or lease property in Jordan for investment or personal use, provided that their home countries permit reciprocal rights to Jordanians. Investment properties have to be developed within five years from the date of approval, and foreign companies which hold a majority share in a Jordanian company or wholly owned subsidiaries of foreign companies, are automatically given national treatment with respect to ownership of land where the company's business allows for ownership of land or real estate.\textsuperscript{1}

Property laws also affect the actual application of the rights granted to licensees under the telecommunications legislation with regard to their access to critical networks and infrastructure. The ability of operators to offer telecommunications services often requires the building of infrastructure, such as installation of cable or optical fiber lines, poles, ducts, and construction of towers, which in turn involves the need to access public or private property. Telecommunications operators' access to rights of way is often reflected in telecommunications legislation, which gives the government the right to appropriate property for such use. Where such appropriation involves private ownership, the landowner is usually compensated for the use of property. However, access to property as provided under the telecommunications law can become complicated in practice, depending on the property laws existing in the particular country. While the federal government has control over federal property, states and municipalities often have jurisdiction over property under their administration.

For example, some countries, such as Brazil, have property laws that are applied at the federal, the state and the municipal level. Rights of way and access of telecommunications operators to property in Brazil are governed in part by the federal Civil Code,\textsuperscript{2} the Telecommunications Law,\textsuperscript{3} and the municipal laws of each state. Articles 21 and 22 of the Constitution establish the exclusive authority of the federal government to legislate and exploit telecommunications services in Brazil, which is defined as a public service. The power of the government to regulate telecommunications has been delegated to the regulatory agency, Anatel, which regulates the sector under the provisions of the Telecommunications Law. Article 74 of the Telecommunications Law specifically states that the telecommunications licensee is not exempt from complying with engineering regulations and municipal, state and federal laws regarding construction and cable and equipment installation in public areas. Articles 20 and 30 of the Constitution provide that states and municipalities may be authorized to legislate upon specific matters related to the provision of telecommunications services, such as the rights of municipalities to legislate on urban planning and environmental matters and to charge telecommunications operators for the use and occupation of the land under their jurisdiction. Under Title II, Article 1286 of the Civil Code, the owner of a real property must allow public service providers to install cables, ducts and conduits for the provision of public services, pursuant to the payment of a proper indemnity. Article 1369 of the Civil Code states that property owners may confer on any third party the right to build on its land by means of a public deed, and under Article 1371, the tenant is responsible for payment of fees and taxes applicable to the property.

Practice Notes

- Spam Legislation in Australia, China, Malaysia, and the United States [3.4.4]

6.4 IMPACT OF CONVERGENCE

This Chapter addresses the international response of policy-makers and regulators to convergence and its effects on their legal and regulatory frameworks. First, it analyses the different regulatory approaches most commonly used to address convergence (i.e., legislative, regulatory and self-regulation approaches) and describes the advantages and disadvantages of each approach. Second, it outlines the impact that convergence is having on different regulatory processes, namely licensing, spectrum, interconnection, universal service, and numbering. Finally, it analyses and describes the type of legislation and regulatory processes that should be implemented by countries to facilitate a converged environment.

Practice Notes

- Copyright in the US and Europe
- Different Approaches to Facilitate In-Band Migration [4.3.2]
- EU Copyright Directive [4.4.3]
- Examples of Data Retention Rules in Different Countries [4.4.4]
- FCC Rules Regarding Emergency Calls for VoIP Service Providers (E911) [4.3.1]
- In-Band Migration [4.3.2]
- Licensing broadband wireless access in Switzerland and France
- Licensing of Wireless Technology in Different Countries [4.3.2]
- Regulating WiFi and WLAN
- Regulatory Treatment of WiFi and WLAN [4.3.2]
- Table 4-2: Pros and Cons of Legislative Approach in Telecommunications/ICT Regulation [4.2.1]
- Table 4-8: Licensing in Malaysia [4.5.3]
- UK Office of Communications [4.4.1]
- US Copyright Directive [4.4.3]

Reference Documents

- Argentina - Decreto No. 764/2000 - Desregulacion de las Telecomunicaciones
WHAT IS CONVERGENCE?

There is no universal definition of convergence, although generally it is understood to mean the ability of different networks to carry similar kinds of services (e.g., voice over Internet Protocol (IP) or over circuit switched networks, video over cable television or Asynchronous Digital Subscriber Line (ADSL) or, alternatively, the ability to provide a range of services over a single network, such as the so-called “triple play.” Box 4-1 summarizes some of the issues that regulators should consider with regard to convergence.

Convergence is accelerating as existing networks are modified to offer new services (e.g., upgrade of telephone networks to offer ADSL, alteration of electric power networks to offer broadband services, and the modification of cable networks to offer interactive services). Convergence is also possible with wireless broadband technologies. As a result, different network infrastructures can today provide a plethora of services (Table 4-1). Cable television providers can offer consumers voice, Internet access, and broadcast services over the same network as one bundled package of services, and for one monthly price. Likewise, a mobile service provider may be able to offer a subscriber data and video services, as well as voice services, and digital television (DTV) providers are offering interactive services.
The combination of services over the same platform is challenging common perceptions about the best means to license and regulate providers in the information and communications technology (ICT) sector. Traditionally, regulatory frameworks were designed for an era when clear functional differences existed between services and infrastructure, but these regulations are increasingly inadequate for dealing with today's world.

Policy-makers and regulators are responding to the challenges presented by the ICT sector in a variety of ways. First, there has been a shift towards an equal or technology-neutral regulatory treatment of different information and communications infrastructure. For example, the European Union (EU), India, and Kenya have introduced, or are in the process of introducing, legal frameworks and regulations to regulate aspects of convergence through a flexible and a technology neutrality approach. Second, governments such as Malaysia, Singapore, and the United Kingdom, are modifying the structure of regulatory authorities by providing them with the authority to regulate the telecommunications, broadcasting, and information technology sectors. Finally, governments are drafting and implementing new laws and regulations to create the necessary legal enabling framework to support an ICT sector. These laws and regulations deal with such issues as intellectual property, content, data protection, security, and computer crime.

Another approach to convergence is to accommodate it within the existing legal and regulatory framework. This is possible in countries where there are no barriers to market entry or restrictions on the type of service offering. Although operators can, and do, offer multiple services over multiple platforms in fully competitive markets, it is often a cumbersome process requiring multiple licences and regulatory oversight by different institutions.

### 6.4.2 DIFFERENT APPROACHES IN IMPLEMENTING ICT REGULATION

There are three approaches taken by countries to address convergence: (i) a legislative approach; (ii) a regulatory approach; and (iii) a self-regulation approach. Although the first two are most commonly used among policy-makers, the self-regulation approach is gaining increasing popularity. Each of the approaches presents advantages and disadvantages as discussed below, but no one approach results in an optimal solution. In general, countries see more effective results when several approaches, especially the legislative and the regulatory ones, are used together. Moreover, the first two approaches are generally more effective when they also incorporate a consultative process (see Box 4-2), such as a public hearing. Additionally, incorporating a self-regulation approach with industry participation allows policy-makers to better understand the consequences of convergence and its trends, as well as to balance the different interests involved in convergence regulation.
The liberalization of telecommunications in the European Union (EU), completed in 1998, is generally considered a marked success. Opening up formerly monopolistic markets led to dramatically lower prices and improved services for consumers and businesses, boosting Europe’s communications industry and creating economic growth.

Ongoing technological innovation, however, overtook the telecommunications regulatory regime. Digitalization now allows many kinds of content to be delivered over different networks. The Internet has become a global infrastructure for a range of electronic communications services. Information and communications technologies are converging, opening up myriad possibilities for new industries and services.

To tackle the emerging policy and regulatory issues associated with this new technological environment, the European Commission (EC) published a Green Paper on the convergence of telecommunications (Convergence Green Paper) in December 1997. This was followed by a five-month public consultation period, including a public hearing, to allow the EC to receive feedback from industry, member state regulators, and other interested parties. The EC subsequently published the results of the public consultations in March 1999.

Later that year, the EC launched a review of its telecommunications framework in a consultation document known as “the 1999 Communications Review”, which was published in November 1999. The aims of the review were fivefold: (i) to promote more effective competition; (ii) to react to technological and market developments; (iii) to remove unnecessary regulation and simplify associated administrative procedures; (iv) to strengthen the internal market; and (v) to protect consumers.


A public hearing was held in January 2000 in which interested parties were invited to submit their comments on the 1999 Communications Review. The public consultation period ended in February 2000 and the results of these consultations were published in April 2000. After reviewing the responses of all interested parties, including member states’ regulators and industry representatives, the EC issued several “orientations” (i.e., policy documents) in April 2000 and subsequently proposed in July 2000 a package of measures for a new regulatory framework for electronic communications networks and services.

The result of these lengthy consultations is the EU new regulatory framework (NRF), comprised of six specific directives and one decision which tackles convergence by generally extending and adapting liberalization to electronic communications.

The 2009 Telecom Reforms, which updated the 2002 NRF. In the 2009 Reforms process, the European Commission acknowledged that there have been major developments in the area of convergence since the 2002 framework—in particular, the growth of VoIP and the uptake of television services through broadband lines (i.e., IPTV). Rather than impose any new rules to promote converged services, the 2009 Reforms address convergence in terms of potential net neutrality principles in which users should be free to use any type of application or service over their broadband Internet connections.

### 6.4.2.1 LEGISLATIVE APPROACH

The legislative approach consists of developing legislation that responds to convergence, either in the immediate term or in anticipation of convergence trends. Legislative solutions define new laws or create new regulatory frameworks to respond to convergence and guide future policy direction. This can be done by developing and implementing a reform of the entire legal framework for telecommunications or by amendments to existing laws.

An advantage of the legislative approach is that it allows the introduction of a new framework to deal with convergence, without constraints imposed by other regulations or by the existing telecommunications law that may contain categories in which converged services do not fit. A new law or an amendment of an existing law aimed at addressing convergence through a technology-neutral approach with a simplified service category can eliminate contradictions and inconsistencies in regulatory classifications. This ultimately makes the regulator more efficient and effective.

Korea (Rep.) overhauled its telecommunications legislation in 2008 in order to accommodate convergence between telecommunications and television. Under the previous legislative framework, the Korean Broadcasting Commission held jurisdiction over television broadcasting while the Ministry of Information and Communication (MIC) held jurisdiction over the ICT sector. Since these regulatory authorities could not come to agreement on the provision of real-time IPTV by telecommunications operators, the converged technology was effectively banned in the country. To remedy this issue, the Korean Government passed a new law creating a converged regulator, called the Korea Communications Commission (KCC), which has jurisdiction over both television and telecommunications-related matters. In addition, the Korean Government enacted a new law, entitled “Internet Multimedia Broadcasting Business Act” that specifically addressed the licensing requirements and service obligations of IPTV. With extensive build-out of broadband infrastructure, the new law facilitated fast growth of IPTV services in Korea. By the end of 2010, Korea’s IPTV market was the fourth largest in the world with about 3.65 million IPTV subscribers and was also the fastest
When designing new legislative frameworks to address convergence, flexibility and foresight are critical elements. Given that the market of new services and technologies is extremely dynamic, legislators must be mindful not to develop legislation that may rapidly become outdated. Legislation should allow the regulator sufficient flexibility for interpretation so that solutions can be implemented as needed despite the evolving nature of convergence, and can do so without constraining future applications and technologies that could benefit the economy and consumer welfare.

In addition, the evolution of convergence, combined with the uncertainty about which technologies and services will succeed in the marketplace, requires a continuous review of the applicable legislation. Some jurisdictions, such as the EU and Malaysia, have established a permanent legislative review process to address convergence.

**Legislative approach through amendment of existing laws**

Although a legislative approach commonly involves a modification of the entire legal framework, it may also be carried out through a process of amendments. Through an amendment process, policy-makers can obtain the feedback of industry, consumers and other affected parties for each amendment and address external input before carrying out the legal reform. The amendment process can be quite effective to address urgent convergence challenges without the time-consuming process required for an entire legal framework reform, and is useful to prepare industry and consumers for further regulatory changes. For example, in Hong Kong (SAR), the Government introduced numerous reforms by amending existing legislation, such as the Telecommunications Ordinance, as well as introducing new legislation including the Electronic Transactions Ordinance.

**Practice Notes**

Table 4-2: Pros and Cons of Legislative Approach in Telecommunications/ICT Regulation [4.2.1]

6.4.2.2 REGULATORY APPROACH

Under the regulatory approach, countries do not develop new legislation to address convergence. Instead, they modify existing regulations or institute new regulations to address new technologies. For example, in the United States, the Federal Communications Commission (FCC) introduced regulatory modifications to allow new technologies, such as power line communications (PLC), also referred to as broadband over power lines (BPL).1 (See Box 4-3.)

In October 2004, the U.S. Federal Communications Commission (FCC) modified regulations to support the development of Access Broadband over Power Lines ("Access BPL"), and provide the necessary safeguards against harmful interference to existing services (e.g., licensed radio services). Access BPL technology provides high speed services using the communications capabilities of the electrical power grid.

The FCC’s new rules:

- Impose technical requirements on BPL devices (e.g., the capability to avoid the use of any specific frequency and the ability to adjust or shut down a unit remotely);
- Establish frequency bands within which BPL may not operate ("excluded frequency bands") in order to safeguard aeronautical communications;
- Create an Access BPL notice database to identify and resolve harmful interference in an organized manner;
- Require equipment certification for Access BPL systems (replacing the former verification requirement); and
- Establish an improved measurement procedure for all equipment that uses radiation and electromagnetic field safety (RF) energy to communicate over power lines in order to ensure that other licensed uses are protected from harmful interference.

The regulatory approach can be a practical way of addressing convergence provided that existing regulations can be modified or new ones introduced relatively quickly. However, the regulatory approach must be carefully managed to minimize inconsistencies between new and existing rules.
In jurisdictions where the regulator’s actions are constrained by the legal framework, a regulatory approach may be extremely limited to the point of being ineffective or unavailable as an option. In addition, since convergence may result in different services and technologies being provided by a single operator, more than one branch of the government, or more than one regulatory agency, may need to be involved. To eliminate inconsistencies, a common policy articulated by the highest level of the government may be required. The involvement of different branches of the government and regulatory agencies slows the process and eliminates one of the main advantages of the regulatory approach, its fast pace.

Most often, the regulatory approach is used by policy-makers in conjunction with the legislative approach. This complementary mix allows governments to establish new legal frameworks to address convergence while dealing with its specific effects through regulation. For this combined approach to work most effectively, the legislation must be sufficiently flexible to allow periodic regulatory adjustments.

For example, this mixed approach was used in Spain. The Government of Spain had already implemented the EU’s 2002 NRF and modified its interconnection regulation to allow broader interconnection than traditional switching (e.g., operators were able to interconnect to parts of the infrastructure or have access to wholesale services for subsequent resale (i.e., broadband wholesale service). However, because operators’ needs were changing due to increased provision of IP-based systems and services, the regulator implemented a subsequent resolution introducing a capacity-based interconnection system that would serve as an alternative to the traditional time-based system and the access to parts of infrastructure and wholesale services. Table 4-3 summarizes the advantages and disadvantages of the regulatory approach.

### Table 4-3: Pros and Cons of the Regulatory Approach in Telecommunications/ICT Regulation

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<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
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<tbody>
<tr>
<td>It allows a faster approach (than legislation) to address convergence and its effects, introducing regulatory measures according to the pace of the technology.</td>
<td>It may cause inconsistencies among existing and new rules.</td>
</tr>
<tr>
<td>It allows regulators to make precise rules addressing the effects of convergence.</td>
<td>It may raise asymmetries among existing operators and those that operate technologies that arise from convergence.</td>
</tr>
<tr>
<td>When used in conjunction with the legislative approach, it allows for the quick updating or elimination of outdated rules. It also allows flexibility in interpreting existing government to harmonize a common approach.</td>
<td>In jurisdictions where different branches of the government deal with convergence, it may entail the intervention of a higher level of government to harmonize a common approach.</td>
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### 6.4.2.3 SELF-REGULATION PROCESS

The self-regulation process consists of developing and designing convergence policy through an ad hoc or existing consultative body. This body is normally composed of several government agencies, industry representatives, and other interested parties.

The role and functions of these consultative bodies varies, but they generally issue recommendations to the government addressing the need for changes in convergence legislation and/or regulation. To the extent that industry representatives are involved, self-regulation and industry guidelines may be an outcome of this approach. These consultative bodies may address specific issues of convergence (i.e., VoIP or Next Generation Networks (NGN)) or may undertake a more comprehensive analysis assessing the consequences of the legislative and regulatory environments. A consultative body is a valuable tool that provides a way to constantly review and monitor the effects of convergence and provide first-hand contact with industry and other parties that deal with convergence directly.

Australia has several consultative forums for the communications sector, with the most important being the Communications Alliance (formed in 2006 from the merger of the Australian Communications Industry Forum (ACIF) and the Service Providers Association Inc (SPAN)). The Communications Alliance implements and manages industry self-regulation in the interests of both industry and consumers. For example, as part of its activities, the Communications Alliance has developed a number of VoIP-related industry guidelines including: 1) IP network quality of service for Carriage Service Providers, such as ISPs and 2) VoIP quality of service measurements.

However, the self-regulation process has certain potential problems. For example, the intervention of industry representatives may pose a risk in those jurisdictions where competition has not developed or where significant asymmetries exist among operators, since the consultative body may be dominated by these operators and its conclusions could reflect narrow interests. In these cases, self-regulation guidelines developed by these consultative bodies may result in rules that benefit existing operators to the detriment of new competitors that operate new technologies providing converged services. Policy-makers must carefully manage these risks in order not to regulate convergence according to the special interests of a few companies and against consumers and the public welfare.
Traditional telecommunications operators may not be allowed to compete with cable operators if broadcasting service licences are restricted. Were initially licensed to provide broadcasting services, can provide voice and data services without any specific restriction. On the other hand, regulatory framework to introduce competition and non-discrimination. For example, in many jurisdictions, cable television operators, which have been involved in the provision of a service; or (iv) not requiring any registration or notification on the basis that the services provided fall outside of the regulator’s authority or because the regulator has decided to forbear from regulating a particular service. Reforms due to convergence are following common trends affecting various aspects of telecommunications regulation, particularly in the areas of licensing, spectrum, interconnection, universal service, and numbering. With regard to licensing, modifications to regulations have focused mainly on reducing market-entry requirements for new technologies by introducing a simpler and technology-neutral licensing regime. In the area of spectrum management, the concept of technology and service neutrality is being proposed, as well as spectrum trading and in-band migration, to allow the more flexible introduction of new services and obtain a more efficient use of the spectrum. Interconnection ideas are also shifting and new concepts are being implemented such as “access” and “capacity based interconnection.” For purposes of universal service and numbering, technology-neutrality and inter-modality portability is being introduced.

### 6.4.3 Modifications to Telecommunications Legislation to Address Convergence

Policy-makers are implementing reforms to their legal frameworks in order to address the issues raised by convergence. Most of these reforms are focused on telecommunications legislation and regulation. However, due to convergence, legal reforms of telecommunications legislation are increasingly coordinated with and, in some cases even integrated into legislation affecting broadcasting and information technology. These reforms are resulting in the opening to competition of increasingly more advanced and converged services (see Figure 4-A). Countries where such an approach is not carried out have less effective regulatory tools to handle convergence and therefore may miss the full benefits of its development and the introduction of advanced and converged services for the market and consumers. For instance, reforms may be developed in the telecommunications regulatory framework, but if regulation in other ICT sectors is not also modified to address the challenges of new technologies (i.e., privacy and security issues, e-signature, e-commerce, etc.), the market will not fully develop because consumers will be reluctant or unable to use all ICT capabilities until these challenges are fully addressed.

Reforms due to convergence are following common trends affecting various aspects of telecommunications regulation, particularly in the areas of licensing, spectrum, interconnection, universal service, and numbering. With regard to licensing, modifications to regulations have focused mainly on reducing market-entry requirements for new technologies by introducing a simpler and technology-neutral licensing regime. In the area of spectrum management, the concept of technology and service neutrality is being proposed, as well as spectrum trading and in-band migration, to allow the more flexible introduction of new services and obtain a more efficient use of the spectrum. Interconnection ideas are also shifting and new concepts are being implemented such as “access” and “capacity based interconnection.” For purposes of universal service and numbering, technology-neutrality and inter-modality portability is being introduced.

### 6.4.3.1 Licensing

Licensing frameworks traditionally consisted of a large number of different service categories, and applicants applied for separate licences in order to provide each service. In addition, licences were often granted based on the type of technology that was being offered by the applicant (e.g., VSAT licence).

Convergence has had an impact on this categorization and made it complicated for regulators to continue to grant licences in this manner. For example, a cable television operator intending to provide “triple play” services generally would require three different licences, one for each of the bundled services (i.e., broadcasting, voice and data), instead of one single licence. Countries have been modifying their licensing frameworks to address this new situation by simplifying their licensing regimes. This has been primarily implemented by: (i) introducing technology-neutral licences with broader service categories; (ii) establishing a unified and technology-neutral licence that allows operators to provide multiple services under one licence using any kind of technology; (iii) “de-licensing” whereby the operator merely needs to submit a notification or registration with the regulator, although specific rights of use may be required when scarce resources such as spectrum or numbering are involved in the provision of a service; or (iv) not requiring any registration or notification on the basis that the services provided fall outside of the regulator’s authority or because the regulator has decided to forbear from regulating a particular service.

However, these modifications may not be sufficient to fully address convergence if they are not accompanied by related measures in the regulatory framework to introduce competition and non-discrimination. For example, in many jurisdictions, cable television operators, which were initially licensed to provide broadcasting services, can provide voice and data services without any specific restriction. On the other hand, traditional telecommunications operators may not be allowed to compete with cable operators if broadcasting service licences are restricted.

<table>
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<tr>
<th>PROS</th>
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<tbody>
<tr>
<td>It provides first-hand knowledge of the effects of convergence and can provide insight on the effects of proposed regulation.</td>
<td>The establishment of a consultative body, and the development of procedures to ensure its neutrality, may be difficult.</td>
</tr>
<tr>
<td>It can be a useful tool to introduce the measures to address convergence with the pace and flexibility requested by the industry.</td>
<td>In those jurisdictions where competition has not developed or where significant asymmetries exist among operators, recommendations may not be neutral and may tend to foreclose effective entry by new convergence technology-based operators.</td>
</tr>
<tr>
<td></td>
<td>It may not result in quick solutions if recommendations to modify existing regulations must be implemented through a subsequent legislative approach.</td>
</tr>
</tbody>
</table>

Table 4-4 summarizes the advantages and disadvantages of the self-regulation approach. Table 4-4: Pros and Cons of the Self-Regulation Approach in Telecommunications/ICT Regulation
In this case, the lack of reform in broadcasting legislation becomes a bottleneck that restricts competition and discriminates against telecommunication operators.

The modification of the licensing regime may not be an easy task for policy-makers and regulators because of the existing legal framework and market structures already in place. However, necessary reforms may be introduced through a transition process in which market and legal structures are smoothly adapted. A regulator willing to follow this transition into a technology-neutral licensing regulation likely will address the following decisions (Box 4-4):

□ Deciding which model of licensing will be adopted.
□ Deciding whether the existing licensing framework will be overhauled in one step or through a gradual, phased in fashion.
□ Deciding which entity or entities will be responsible for licensing, authorizations, and notifications.
□ Mapping various services licensed under a service or technology-specific regime to a less burdensome licensing regime. This includes deciding which services may still be subject to licensing, which may require only an authorization or notification process and which may become unlicensed as well as eliminating any geographical licensing restrictions and redesigning the application process.
□ Ensuring a level playing field under the new licensing regime so that neither existing service providers nor new market players will be at a competitive disadvantage, i.e., whether existing licensees will require any compensation for moving to the new licensing regime or whether the transition can be accomplished in the absence of compensation; how to address issues such as large licence fees paid during a period of limited competition while reduced licence fees apply in the new regime, changes to bank guarantee policies, etc.
□ Revising existing universal access/service regulations, including modifications to network rollout, coverage or investment requirements as well any contributions to universal access funds and reviewing which services consumers should be provided under the nation's universal access/service definition.
□ Reviewing and updating other regulations such as quality of service, interconnection, spectrum and numbering, both to transfer any such regulations currently included in licence terms and conditions to stand-alone regulation as well as updating such regulations to accommodate convergence.
□ Developing a regulatory framework that incorporates recent technological developments, such as WIFI, VoIP and WiMax and anticipating a continuous technical and market evolution.
□ Developing regulatory capacity to regulate disputes, enforcement and sanctions.

(a) General Licence Categories and Technology Neutrality

The first trend in licensing reform is to introduce technology-neutral licences that combine converged services or broaden the types of services that fall within one licence.

For example, in Malaysia, the prior licensing framework consisted of 31 service-based licences, whereas its new framework consists of four general and technology-neutral licences: Network Facilities Provider (NFP); Network Services Provider (NSP); Application Services Provider (ASP); and Content Application Services (CSP)(a special subset of application services that includes television and radio broadcast services and Internet content services).

The Eastern Caribbean Telecommunications Authority (ECTEL), has developed a technology-neutral licensing approach with four categories of licences: Individual Licences (generally for services that are infrastructure-oriented); Class Licences (ISPs or resale, among others); Frequency Authorization Licences (that is an ancillary licence that would be required in addition to an Individual or Class Licence); and Special Licences (that are foreseen for special cases in emergency circumstances). 3 ECTEL classifies licences based on the service that will be provided without regard to the type of technology being used. For instance, whereas previously an operator might obtain a VSAT licence, it now obtains a licence for the service (i.e., a private or a public network service) it will be offering using that VSAT.

(b) Unified Licensing

A second trend is the introduction of a unified licensing regime, in which licences evolve into a single licence covering a wide range of services. This approach has been or is being adopted by various countries, including Kenya and India.

Kenya’s licensing regime, announced in September 2004, adopted a unified and technology-neutral licensing framework that permits any form of communications infrastructure to be used to provide any type of communications service.4 This licensing regime differs significantly from the previous service-specific licensing regime consisting of 46 types of licences grouped into nine categories. Kenya’s current Unified Licensing Framework (ULF) consists of three main technology-neutral licences: (i) Network Facilities Provider (ii) Application Service Provider (iii) Content Service Provider.5 In addition, investors seeking to land a submarine cable in Kenya require a Submarine Cable Land licence while those interested in building system for the provision of international voice/data services are required to get a licence for international Systems and Services. An operator may be issued multiple commercial licenses, provided that it maintains separate accounts for each licence.

In India, the Department of Telecommunications adopted a more unified licensing framework in which Unified Access Service (UAS) licensees may provide, within their licensed geographic area, any voice and/or non-voice (i.e., data) services over either fixed line or wireless networks via circuit-switched or IP-switched equipment.6 These licensees may also provide specific value-added services of voicemail, video conferencing, audiotex, videotex, email and closed user group services to subscribers. However, all other types of services require a separate licence. As of March 2008, there were 240 UAS licensees in India.

(c) De-licensing
A third trend is the movement in certain countries towards lighter licensing regimes or de-licensing. Traditionally, many countries used three general approaches to authorize telecommunications networks and services -- individual licences, class licences, and open entry. In the initial phase of liberalization in particular, countries leaned towards a higher degree of regulatory control over market entry, thus requiring individual licences in most cases, where: (i) there was a need for access to public property and/or locations of public use and/or third party’s properties to roll out the networks (i.e., deploy a base station or a fiber network); (ii) there was a need for scarce resources (e.g., frequencies and/or numbers), and (iii) the government of a particular country determined that the service needed to be provided in a certain way.

Convergence has called this premise into question, with countries realizing that burdensome administrative procedures relating to market entry limit the offer of a greater variety of applications or services. As a result, many countries (including all 27 EU member states) are moving towards a general authorization regime.

De-licensing involves a general authorization or class licence system in which operators are free to provide services subject to regulatory obligations. Typically, the operator must submit to the regulator a notification containing minimal information before, or within a short time after, initiating service. However, operators do not have to wait for approval before commencing service.

A registration regime typically requires minimal information, but involves stricter formalities in that prior acceptance of the registration by the regulator is required for the operator to commence its activities. In addition, unlike a notification, a registration may be rejected by the regulator.

In April 2004, Japan implemented a review of its telecommunications business law and established a registration and notification regime. Operators in Japan that install networks of a certain size and scale must obtain a registration from the Ministry for Internal Affairs and Communications. However, all other operators are only required to submit a notification to the Ministry.7

The EU has moved towards a simple authorization regime using minimal regulatory intervention and requiring individual licences only where strictly necessary (e.g., for the use of resources such as radio frequencies and numbering). The regime covers authorization of all electronic communications networks and services regardless of whether they are provided to the public. The objective of the new framework is to ensure the freedom to provide electronic communications networks and services, subject only to the conditions relating in particular to welfare, public security, and public health. However, one interesting aspect of the new regime is that the definition of “electronic communications networks and services” is so broad that in certain EU jurisdictions various services that were previously unregulated now require a notification and operators are now subject to a variety of related obligations (e.g., fees and taxes) to which they were not previously subject.

**Eliminating Licence Requirements on New Converged Services**

A fourth trend to address convergence is to eliminate filing requirements with the regulator on the basis that the services fall outside of the regulator’s authority or because the regulator has decided to forbear from regulating a particular service.

This approach has been followed in the United States for ISPs and the services they provide (e.g., email, Internet access, and VoIP). To date, services provided by ISPs have been treated as unregulated “information services” in order to promote the continued development of the Internet.8

**Adherence to Regulatory Requirements and Obligations**

As many regulatory functions were based on a license regime at inception, the move to forbear from licensing is viewed by some, as eroding the regulator’s authority in relation to the new entrant, leading to a license being issued even when regulatory oversight is no longer required. Although a regulator may decide that certain categories of service or network providers will not be subject to licensing requirements, this does not exclude the possibility of the regulator imposing certain regulatory obligations on such providers, such as contributions towards universal service funds or compliance with emergency service requirements. For example, although the FCC has not implemented licensing, notification or registration requirements for ISPs, it has determined that certain VoIP providers must comply with emergency number (E911) requirements. This determination is part of a rule-making proceeding that was initiated by the FCC to determine whether VoIP services should be regulated and whether providers of such services should be subject to certain regulatory requirements.9

**Practice Notes**

- [FCC Rules Regarding Emergency Calls for VoIP Service Providers (E911) [4.3.1]]

### 6.4.3.2 SPECTRUM

Most countries allocate spectrum on a national basis in accordance with the ITU frequency allocation table, and then assign specific frequencies for use by particular radio services. Traditionally, spectrum licences have been subject to stricter government controls than other types of licences because they involve the use of a scarce resource and can be hampered by interference.

However, to promote competition, convergence and efficient use of spectrum resources, policy makers and regulators have begun introducing changes to spectrum regulations. First, regulators are starting to grant the right to use spectrum without regard to the type of technology being used (i.e., technology-neutral approach). For example, in India, the government has reformed the licensing and spectrum authorization regime from a service-specific to a technology-neutral unified access service licence (UASL) framework.1 Under the previous spectrum authorization framework, the government issued Cellular Mobile Telephone Service (CMTS), which only permitted licensees to provide mobile voice and data services. However, under the UASL, licensees are permitted to offer both mobile and fixed telecommunications services. Additionally, CMTS licensees are able to migrate to the new licensing framework. In May 2010, the Telecom Regulatory Authority of India (TRAI) released to the government its Recommendations on the Spectrum Management and Licensing Framework, which includes a recommendation to create a specific fund for spectrum reframing.2

The United States has similar rules to Australia and generally takes a technology-neutral approach. Congress authorized the FCC to allocate spectrum for flexible use when it: (i) will be in the public interest; (ii) will not deter investment in communication services, systems and
technology developments; (iii) will not result in harmful interference; and (iv) is consistent with international agreements.3

Second, regulators are allowing spectrum trading or in-band migration. In Australia, spectrum licences are tradable and technology neutral.4 Spectrum licences authorize the use of spectrum and licensees are free to use any device and technology within their spectrum, provided that such devices comply with the conditions of the licences and the advisory guidelines established for the corresponding bands. To avoid interference, the Australian Communications Authority (ACA) creates a document called “interference management framework” for each auction in which it sets forth the rules for spectrum use.5 In addition, in Guatemala, the 1996 Telecommunications Law5 introduced private spectrum rights that are granted in frequency usage portions (Títulos de Uso de Frecuencias – TUC), which have technical limitations to protect against interference (e.g., maximum power transmission and emission). These private rights are limited for a period of time (15 years plus an additional 15 year extension if requested), but they can be traded without limitation other than the technical condition related to each TUC to protect against interference.

(a) Introduction of Technology Neutrality in Spectrum Regulation

The introduction of technology neutrality in spectrum regulation brings with it certain limitations. The premise of a technology-neutral approach is that any service should be provided through any kind of technology in any frequency band, and the use of spectrum can be altered at any time. However, in practical terms, this is not feasible for various reasons:7

1. Interference. Traditionally, regulators have addressed interference problems by mapping the services and allocating them in a national table of frequencies. Only those services allowed in a frequency band could be licensed therein. However, now that countries have introduced a technology-neutral approach in spectrum regulation, interference issues may be dealt with in a different manner. One option followed by certain regulators is to issue specific technical rules associated with the specific spectrum granted. These technical rules introduce some limitations to the spectrum use, and thus in the strictest sense full technology neutrality is not possible, but it does resolve the problem of interference. Another option, and one that has been used in the past, is to establish “guard bands” or small blocks of 1 or 2 MHz between different types of allocations.

2. Economies of scale. The implementation of new technologies is more effective and economically viable when efficient economies of scale (e.g., decreases in the cost of equipment and technology development) are achieved by industry coordinating in the development of a standard and the identification of specific spectrum bands. In certain instances, countries and regions with industrial interests tend to develop their own standards (e.g., GSM in Europe). A technology-neutral approach in spectrum regulation challenges this coordination as different technologies and standards could be deployed in the same spectrum bands. However, although the costs related to deploying different technologies and standards are potentially higher in the short term because the economies of scale of each standard are lower than if a unified standard is adopted, a standard competition policy could have its benefits in the medium term because standards are enhanced and improved in a competition environment, providing consumers with better options and reducing technology costs.

3. International coordination. The ITU Radio Regulations, which are binding on the signatories of the ITU Constitution and Convention, are the international regulations used by the member nations to allocate and manage spectrum within their jurisdictions. The Radio Regulations affect the extent to which technology neutrality can be implemented; however, the ITU Radio Regulations are broad enough to allow development of different radiocommunications services within the designated spectrum bands, so countries still have a wide degree of discretion to introduce technology neutrality.

(b) Spectrum Trading

A second response to convergence has been the introduction of spectrum trading and in-band migration. Spectrum trading refers to the ability of licensees to sell or trade their spectrum rights. Countries may decide to limit spectrum trading for specific uses or technologies or to allow unlimited trading except for requiring adherence to rules regarding interference. As of 2010, only 25 of 156 countries responding to the ITU’s survey question on secondary spectrum trading indicated that secondary trading is permissible while only six of these countries stated that there may be a change in spectrum use permitted on transfer. However, as Table 4-5 shows, the number of countries allowing spectrum licensees to trade spectrum on the secondary market has been steadily rising since 2005, showing that this is an area with great potential for further flexibility and liberalization.

![Table 4-5: Number of Countries Permitting Secondary Spectrum Trading, 2005-2010](source: ITU World Telecommunication Regulatory Database (2010)).

Within the EU, the NRF allows spectrum trading.8 In 2004, certain member states and the European Commission commissioned an independent study regarding the conditions and options of introducing spectrum trading. The report recommended the implementation of spectrum trading and further liberalization of spectrum use.9 The United Kingdom has already allowed spectrum trading for certain types of licensed transmissions, and is expected to expand to more types of licences.10 Furthermore, the United Kingdom has introduced measures to liberalize spectrum by, among other things, reducing obligations of current licences and allowing them to modify their spectrum use provided they do not cause interference.11 The 2009 Telecom Reforms continue to permit spectrum authorization holders to trade spectrum in the secondary market.
Various countries are introducing in-band migration which refers to the policy of allowing operators to use existing licensed spectrum to provide new services. Jurisdictions in the Americas and Asia have used this policy with the introduction of IMT-2000 systems, allowing existing mobile operators to provide third generation (3G) networks in their assigned frequencies. This policy has permitted operators to decide when to deploy 3G networks and has been effective in reducing implementation costs because it has allowed operators to use their existing spectrum without incurring the cost of new licences. As a result, 3G mobile networks have proliferated throughout these two regions. In 2009, the EU amended the GSM Directive of 1987, which reserved part of the 900 MHz band for GSM access technologies only. The updated Directive allows licensees in the 900 MHz to also offer 3G (UMTS) technologies. Although the 2009 reforms are not entirely technology-neutral, the EU has stated that it will review other mobile technologies, particularly upcoming 4G systems, to ensure compatibility with GSM and UMTS systems.

(d) Unlicensed or Licence-Exempt Use

Regulators are also facing the introduction of Wireless Local Area Networks (WLAN and WiFi), technologies that operate in the Industrial, Scientific and Medical (ISM) bands. The ISM bands are generally unlicensed because they operate on a non-interference basis. Regulators have generally allowed WiFi networks to operate unlicensed, provided that their transmitting characteristics fall into those designed for that band. In practice, this has resulted in the implementation of a technology-neutrality approach for the ISM band. For example, of the 67 countries that responded to the ITU’s annual regulatory survey, only two prohibit WLANs in the 2.4 GHz band and four in the 5 GHz band. Thirty-nine countries allow WLANs without any prior notification or registration in the 2.4 GHz band, and 25 in the 5 GHz band. Finally, 27 countries allow WLANs with a simple registration or notification in the 2.4 GHz band and 28 in the 5 GHz band. In line with the “hands-off” policy approach, the European Commission has issued a recommendation calling on EU member states to facilitate WLANs without imposing any specific regulatory conditions. In Singapore, the band in which WLAN operates was already being used. To facilitate the introduction of WLANs, the regulator migrated existing systems out of the band to allow WLANs to operate.

(e) Digital Terrestrial Television and the Digital Dividend

In order to better to provide higher quality terrestrial broadcast television programming, as well as allow for refarming of spectrum in the television broadcast bands, digital terrestrial television (DTT) has increasingly garnered the attention of regulators and policy makers around the world over the last several years. DTT is more spectrally efficient than analogue terrestrial television, and therefore requires less spectrum per channel. As a result, it potentially makes available a considerable amount of spectrum in bands that new and existing technologies are demanding. However, in order to receive DTT, consumers must acquire a new television set or a set-top box (STB), introducing a disruptive effect for consumers that must be carefully managed.

Regulators and policy makers are facing the challenges arising from these two factors by establishing policies to: (i) recapturing spectrum from analogue broadcasters that is no longer required in order to operate in an all-digital format; (ii) assign the newly available spectrum to new uses; and (iii) pursue a smooth transition for consumers that minimizes the disruptive effect of requiring a new television or STB.

Countries are increasingly implementing policies establishing long parallel emissions periods allowing broadcasters and consumers to smoothly transition, which includes designating a specific date whereby broadcasters must switchover from analogue television to DTT, often referred to as the analogue switch-off or switchover (ASO). Many countries have already completed the ASO, including Austria, Denmark, Finland, Germany, the Netherlands, Norway, Spain, Sweden, Switzerland and the United States. Other countries are planning to complete the ASO by 2012, including Canada, Australia, Japan, Korea (Rep.) and New Zealand, as well as most of the remaining EU Member States in order to meet the proposed deadline set out by the European Commission. Additionally, the signatories of the ITU’s Geneva 2006 (GE06) Agreement, all Region 1 countries, as shown in Figure 4-A below, have agreed to complete the DTT transition by June 17, 2015. Although not all African countries have set out an ASO date, Kenya, Nigeria and South Africa have each established hard deadlines for the ASO of July 1, 2012; June 17, 2012; and December 2013, respectively.
In addition to higher quality television broadcasting services, the DTT transition allows governments to reclaim broadcast spectrum and assign the spectrum for new uses. This reclaimed spectrum, often referred to as the digital dividend, is ideal for commercial wireless services, such as mobile broadband, due to its excellent propagation characteristics. Digital dividend spectrum allows for wide coverage in rural areas, as well as good in-building and non-line-of-sight coverage, while requiring installation of fewer base stations than in higher frequency bands. As such, the digital dividend enables a more cost-effective network roll-out.

The digital dividend spectrum, located in the 698-862 MHz band, was identified by WRC-07 for use by IMT systems. (Note that WRC-07 identified the 862-960 MHz band for IMT as well, but this is not generally considered “digital dividend” since it has not been part of television broadcast spectrum.) As shown in Figure 4-B, the digital dividend for Region 1 (R1) countries (i.e., in Europe, Africa, Russia and parts of the Middle East) is generally the 790-862 MHz band and is referred to as the “800 MHz band”. However, the digital dividend covers the 698-806 MHz band (called the “700 MHz band”) for Region 2 (R2) countries in North and South America and Region 3 (R3) countries in Asia-Pacific and parts of the Middle East. Within these harmonized bands, countries may then select their own specific band plans for mobile services.

Since harmonization and the resulting economies of scale are considered beneficial, most countries are expected to try to adopt the same or similar band plans as other countries in their respective regions. So far, APT and the EU have been at the forefront of regional harmonization, but ATU, CITEL and other intergovernmental organizations are expected to play a key role in regional harmonization as well.

- **European Union:** The European Commission (EC) has issued multiple consultations, recommendations and decisions on the harmonization and release of digital dividend spectrum, which resulted in a May 2010 decision on the harmonized technical conditions in the 790-862 MHz band. This decision provides that “Member States may decide individually whether and at what point in time they designate or make available the 800 MHz band for networks other than high-power broadcasting networks, and this Decision is without prejudice to the use of the 800 MHz band for public order and public security purposes and defence in some Member States.” In addition, the EC will not set a deadline for allowing mobile services in the 800 MHz, but this may be decided by the Parliament and Council at some future date, upon a proposal from the Commission. The general conditions of the 800 MHz Decision are as follows:

  - Where the 800 MHz band is made available for networks other than high-power broadcasting, it must be on a non-exclusive basis for terrestrial systems capable of providing electronic communications services.
  - There must be appropriate protections provided to systems in adjacent bands.
  - Member States must facilitate cross-border coordination, particularly where neighboring countries are releasing digital dividend spectrum at different times or are third countries (i.e., non-EU Member States) using these bands for different services. As such, Member States are not bound by the 800 MHz Decision in geographic areas where spectrum coordination with third countries requires a deviation.
  - As shown in Figure 4-C, within the 790-862 MHz band, the frequency arrangement will include 5 MHz blocks and FDD duplex spacing of 41 MHz with base station transmission (downlink) located in the lower part of the band (791-821 MHz) and terminal station transmission (uplink) located in the upper part of the band (832-862 MHz).

- **Asia-Pacific Telecommunity (APT):** One of the APT’s key work programs is the APT Wireless Group (AWG), formerly known as the APT Wireless Forum (AWF). The AWG addresses various aspects of emerging wireless systems, including IMT/IMT-Advanced. At the ninth meeting of the APT Wireless Forum in September 2010, an agreement was reached on two harmonized frequency arrangements for IMT in the 698-806 MHz frequency band in the Asia-Pacific region. The AWF-9 agreed that a harmonized frequency arrangement for the band 698-806 MHz is appropriate to assist Region 3 countries wishing to use the entire band for IMT as well as those administrations considering use of a portion of this band. Recognizing the need to provide sufficient protection for the services in adjacent bands and based on studies of the various interference mechanisms that may impact services in adjacent bands, it was decided that digital television spectrum would be allocated below 694 MHz. Spectrum for mobile services is to be allocated in one of the following ways:

  - **For FDD frequency arrangements:** 703-748 MHz uplink paired with 758-803 MHz downlink, including a lower guardband of 5 MHz at 698-703 MHz and an upper guardband of 3 MHz at 803-806 MHz for a total of 90 MHz of FDD spectrum (2x45 MHz). (See Figure 4-D)
  - **For TDD frequency arrangements:** A single 108 MHz band from 698-806 MHz.
Despite efforts at regional harmonization, final decisions on the allocation and assignment of digital dividend spectrum will be made on a country-by-country basis. Given the various stages of the DTT transition around the world, the release of this spectrum is likely to be on-going for the next decade with some general trends emerging, including:

- **DTT transition timelines vary, but ASO will likely be completed worldwide by 2020.** Many developed and developing countries have adopted ASO dates, or have at least set a goal for completing the transition by a certain year. While the United States and many European countries have already completed the ASO or will complete it in the next two years, other countries appear to be focusing on 2015-2020 to complete their transitions.

- **International and regional harmonization is well underway.** At the international and regional level, there have been efforts to harmonize the digital dividend spectrum and develop common band plans. The 2007 World Radiocommunication Conference (WRC-07) identified spectrum in the 698-960 MHz band for International Mobile Telecommunications (IMT).

- **Consideration of the award of digital dividend on a national basis is still developing.** There has generally been less progress made towards developing rules and timeframes for the award of digital dividend spectrum. While there are several digital dividend proceedings to be completed and issued over the next two years, including Chile, Ireland and the United Kingdom, most countries around the world have yet to establish technical and service rules or award processes for the digital dividend spectrum, particularly in developing countries.

- **Countries are waiting to assign digital dividend spectrum until after the ASO.** It appears that generally countries are waiting to award the digital dividend spectrum until after the ASO is completed and the spectrum is unencumbered by broadcasting services. For example, Finland’s ASO in the 800 MHz band was completed in 2007, but digital dividend licenses still have not been awarded.

### Practice Notes

- **Different Approaches to Facilitate In-Band Migration [4.3.2]**
- **In-Band Migration [4.3.2]**
- **Licensing of Wireless Technology in Different Countries [4.3.2]**
- **Regulatory Treatment of WiFi and WLAN [4.3.2]**

#### 6.4.3.3 INTERCONNECTION

The technological innovations that have resulted in the convergence of telecommunications, information and broadcasting have raised numerous regulatory issues regarding interconnection. Until recently, interconnection policies were mainly used to facilitate competition by requiring incumbent telecommunications operators (or dominant suppliers) to provide interconnection to competing operators. Today, effective interconnection arrangements are considered an essential element to foster the development of integrated ICT markets.

Convergence has forced a reassessment of this policy in order to take into account the interconnection of different types of networks and service providers (e.g., cable television/content providers and IP networks/ISPs).

Traditional interconnection regulation was established for telecommunications operators with interconnection rates generally based on time (i.e., per minute). Services based on IP protocol, however, do not fit within the traditional schemes of switched voice interconnection and requires different kinds of access (e.g., interconnection at an IP level or the higher frequencies of the local loop necessary to provide ADSL data services over the existing copper wiring) and different kinds of charges. This is necessary to permit, in a converged environment, the fundamental principle that any network operator is able to interconnect with any other operator regardless of the network (i.e., “any-to-any” interconnection). Countries are addressing these needs by introducing: (i) a symmetrical interconnection regime, (ii) new kinds of “access” through interconnection regulation and (iii) a technology-neutral interconnection charging system based on capacity, instead of time and distance.

(a) **Introduction of a Symmetrical Interconnection Regime**

Traditionally, only public switched network operators (fixed or mobile) were subject to interconnection obligations. However, there has been some ambiguity regarding other operators, such as cable networks or ISPs. As convergence blurs the traditional difference between networks, regulators are introducing a symmetrical interconnection regime in which any operator, regardless of the type of network it has, is obliged to interconnect with any other operator. For instance, in Denmark, communications network providers offering service to the general public (including traditional telephone network operators as well as broadcasters and Internet service providers) have the obligation of, and the right to, interconnection. In Argentina, new legislation implemented a symmetrical interconnection regime where all operators are obliged to interconnect upon request.

However, some jurisdictions have maintained asymmetrical interconnection. For instance, the EU NRF requires regulators throughout the EU to carry out a market analysis to determine which operators have significant market power. Interconnection has been separated into three different markets (i.e., call origination, call termination and transit). Regulators will decide after this analysis which markets are deemed to have significant market power. In each such market, an operator is obliged to provide interconnection. By way of example, the EC has determined that all mobile operators are dominant in the provision of termination on their networks as there is no realistic possibility of substitution.

2
To address the different needs of IP network and service operators for interconnection, the EU NRF introduced the concept of “access,” principally for origination, which allows ad hoc interconnection to network infrastructure via direct access or resale (such as local shared access or bitstream access). Within the EU, member states have implemented “access” interconnection and granted this right to operators other than traditional voice providers. Member states, such as Denmark, Finland, and Greece, have determined that all operators have a right to bitstream access, and Austria has allowed ISPs to request unbundled infrastructure. The United Kingdom has proposed implementing an “equivalence of inputs” (EoI) for NGN that obliges the incumbent telecommunications operator to make available the same products and services to other operators as it makes available to itself, at a wholesale price (which is the same ‘transfer’ price that a network division may provide to a retail division), and using the same system and processes. EoI implements a further step within the “access” concept, as it allows operators to request directly, on a wholesale basis, services which have a retail counterpart instead of regulating a physical connection. In September 2005, the operator agreed to support the proposals in the consultation, including commitments to provide unbundled network access on an EoI basis, and not to make design decisions that would foreclose specific product options without adequate consultation. See Table 4-6 for a comparative summary of the EU concept of access and the U.K. concept of EoI.

<table>
<thead>
<tr>
<th>Access</th>
<th>OFCOM Proposal of Equivalence of Input</th>
</tr>
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<tbody>
<tr>
<td>Making facilities and services available to another operator for the purpose of providing electronic communications services under defined conditions. It includes, among other things</td>
<td>Making available to competitors the same products and services that an operator with significant market power makes available to itself, which includes:</td>
</tr>
<tr>
<td>• physical interconnection,</td>
<td>• a wholesale price, and</td>
</tr>
<tr>
<td>• access to network elements and associated facilities (i.e., local loop),</td>
<td>• the same systems and processes.</td>
</tr>
<tr>
<td>• access to physical infrastructure, including buildings, ducts, and masts,</td>
<td>No retail service may be launched by an operator with significant market power without a corresponding wholesale product offered to other operators as EoI.</td>
</tr>
<tr>
<td>• access to software systems, including operational support systems,</td>
<td></td>
</tr>
<tr>
<td>• access to numbering translation,</td>
<td></td>
</tr>
<tr>
<td>• access to fixed and mobile networks,</td>
<td></td>
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<tr>
<td>• access to conditional access systems, and,</td>
<td></td>
</tr>
<tr>
<td>• access to virtual network systems.</td>
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</tbody>
</table>

(c) Capacity-based Interconnection

A relatively new measure being implemented to address convergence needs for interconnection is a flat charge representing the cost of the capacity, rather than a per-minute rate. Some jurisdictions, such as Spain and Colombia, have implemented a capacity-based interconnection (CBI) modality that allows operators to request a specific capacity for interconnection and pay a flat rate charge that reflects the fixed cost nature of the interconnection capacity. As interconnection capacity is dimensioned to peak-hour traffic, CBI rates reflect true economic costs and do not require artificially spreading such fixed costs over projected traffic minutes to arrive at a per-minute charge.

In Spain, CBI was introduced in the incumbent’s Reference Interconnection Offer (RIO) and allows operators to request interconnection through three different models: (i) on a capacity basis; (ii) a time-based model; or (iii) a mix of both. Capacity-based interconnection may be requested in two capacity units (64kbps and 320kbps) and the RIO allows for the reselling of excess capacity. Similarly, in Colombia, the
regulator issued a resolution allowing operators the option of choosing time-based interconnection or capacity interconnection on a per-city basis. However, there is only a single 2 Mbps capacity unit and reselling is not allowed. The table below compares the capacity interconnection models of Spain and Colombia.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Spain</th>
<th>Colombia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is use of both models (time and capacity) by an operator permitted?</td>
<td>Yes, but the operator must select at each interconnection point (POI) the model it is going to be used.</td>
<td>Yes, but only for national operators that interconnect in more than one city. Capacity-based interconnection cannot be used simultaneously with time-based interconnection in the same city.</td>
</tr>
<tr>
<td>What is the minimum Capacity Unit (MCU)</td>
<td>There are two MCUs:</td>
<td>Capacity interconnection charges are established according to a 2 Mbps (E1) link, but the regulation expressly states that a different unit may be agreed upon by the parties. Currently, there has not been any interconnection agreement signed by any operator with an MCU lower than 2 Mbps.</td>
</tr>
<tr>
<td></td>
<td>1. For those POIs that have interconnection links equal or less than four 2 Mbps (120 channels of 64 kbps) the MCU is 64 kbps.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. For those POIs having interconnection links more than four 2 Mbps (120 channels of 64 kbps); the MCU is 5x64kbps.</td>
<td></td>
</tr>
<tr>
<td>What types of traffic are allowed?</td>
<td>There are two types:</td>
<td>Not expressly defined. Any type of traffic is allowed.</td>
</tr>
<tr>
<td></td>
<td>1. Internet traffic only</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Voice + Internet traffic</td>
<td></td>
</tr>
<tr>
<td>Is resale possible?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is overflow possible?</td>
<td>Yes. Operators may opt for capacity links without or with an overflow possibility</td>
<td>Yes. Overflow routes must be established by both parties in order to guarantee the minimum quality parameters established in the regulation.</td>
</tr>
</tbody>
</table>

(d) Wholesale Open Access Models

Some countries, including Singapore and Australia, are rolling out fiber network infrastructure based entirely on a wholesale open access model. In Singapore, the government has established a three-layer industry structure for the country’s Next Generation National Broadband Network (“Next Gen NBN”) with different responsibilities and roles to ensure that there is no conflict of interests among the various layers. It comprises of:

1. The Network Company (NetCo), which operates at the first layer, is responsible for the design, build-out and operation of the passive infrastructure, which includes the dark-fiber network and ducts. OpenNet was appointed as the Next Gen NBN’s NetCo.

2. The Operating Company (OpCo), which operates at the second layer, provides wholesale network services over the active infrastructure, comprising switches and transmission equipment. Nucleus Connect was selected as the OpCo for the Next Gen NBN.

3. The Retail Service Providers (RSPs), which form the third layer, offer services over the Next Gen NBN to end-users, including businesses and consumers. RSPs are able to purchase bandwidth connectivity at non-discriminatory and non-exclusive prices, and compete on a level playing field to provide competitive and innovative services to end-users.
Similarly, Australia is establishing the National Broadband Network (NBN) with the objective of providing 93 percent of Australian homes, schools and businesses with a fiber-to-the-premises connection capable of providing broadband speeds of up to 100 Mbit/s, with capability to provide speeds of up to one gigabit per second. For the remaining premises, the NBN will be a combination of next-generation wireless and satellite technologies to provide peak speeds of at least 12 Mbit/s.

In order to build out the largest single infrastructure project in Australian history, the government established the National Broadband Network Company ("NBN Co.") to both construct the NBN infrastructure, as well as resell capacity on a wholesale basis. The NBN Co is required to provide access to the network infrastructure on a wholesale, transparent and non-discriminatory basis to retail service providers.

(e) Networks that Require Interconnection

The types of networks and services to be considered in interconnection policies vary with the development of new technologies. Examples of services that have required a reshaping of such policies are mobile data, cable television, and Internet.

When first introduced, Short Messaging Service ("SMS") provided mobile users the ability to transmit text between mobile terminal devices. Today, SMS may be transmitted from call centers and websites, and may even be received by fixed line users. This has pushed the boundaries of voice-focused interconnection policies and has forced regulators to consider whether traditional interconnection policies should be applicable to SMS traffic between mobile operators, content providers and fixed line operators. In Bahrain, Venezuela, and Mexico, regulators ordered interconnection for SMS providers.

Another challenge regarding interconnection with mobile networks is the emergence of multimedia applications, prompting questions as to whether mobile network operators can operate as ISPs and whether there should be any limitations on the ability of users to access mobile portals. Whether a mobile network operator can operate as an ISP is generally based on the scope of the mobile provider’s licence or whether a special licence is required to provide Internet access. Where the provision of Internet access does not require a licence, mobile operators generally do not encounter problems in deploying mobile Internet services. Consumers should be allowed to use alternative access and content providers, but this is not possible when mobile operators lock users in their portals. Mobile operators should be required to open their networks to other Internet service providers, content providers and other portals.

Regulators have also taken different decisions regarding Internet access via cable television modem networks. Some countries such as the United States, have ruled that Internet access is unregulated and, therefore, cable operators have no obligation to open their networks to alternative ISPs. Other countries, such as Canada, have ruled that cable television companies are obliged to make their Internet access network available for resale to other operators.

6.4.3.4 NUMBERING AND INTERNET PROTOCOL ADDRESSING

ITU-T Recommendation E.164 defines the international public telecommunications numbering plan while countries implement their own national numbering policies and regulations based on the E.164 recommendation. Countries have typically implemented numbering plans that establish different numbering ranges for fixed line and mobile voice telephony, often divided into geographic areas. This differentiation had a twofold function of informing end users of the charges of the calls and maintaining the interconnection cost structure based on services (i.e., mobile voice service vis-à-vis fixed voice service) and distance. Since this allowed subscribers to be reached by a unique combination of digits, numbering became an essential resource for telecommunications networks operators. However, with the advent of convergence, regulators are finding that modifications to such policies and regulations are necessary. Just as telephone numbers are required to identify the calling and called parties, an addressing system—known as the Domain Name System (DNS)—is necessary in order to identify and allow communications among Internet-enabled devices, websites and other Internet applications and services. The worldwide growth of the Internet has required substantial reforms to the management of IP addresses, as outlined below.

(a) Assignment of Numbering Resources to New Technologies Service Operators

One of the significant impacts on numbering regulation relates to the proliferation of VoIP services. This has raised questions among regulators as to whether numbering resources should be assigned for VoIP and whether traditional telephone service operator obligations should be imposed on VoIP providers. Regulators have adopted a variety of solutions. For example, in some jurisdictions, providers are allowed to use geographic numbers provided they offer service under the traditional voice service regime, which imposes various obligations (e.g., quality of
service, access to emergency services, and lawful interception). In addition, countries such as Singapore, Japan, South Korea and some EU Member states (e.g., Ireland, France, Germany, and Austria), have created a specific numbering range for VoIP services, due to the special characteristics of the service, most notably its nomadic use.

Some countries, such as Japan, Spain, and the United Kingdom, have combined both measures, and grant geographic numbers to VoIP providers if they operate under the voice service regime (i.e., voice quality of service, lawful interception obligations, access to emergency services), and specific number ranges if VoIP providers operate under the “information service” regime. The implementation of this differentiation has the additional intention of satisfying that consumers these services are not equal and that VoIP specific range service providers do not necessarily provide the same set of features commonly associated with public voice service.

(b) Inter-modal Portability

A second modification on numbering regulation has been the introduction of inter-modality number portability. Number portability is the ability of a consumer to maintain the same telephone number when changing service providers. Number portability may be inter-modal (e.g., porting a number from a fixed line to a mobile network or vice versa) or restricted to one type of network (e.g., mobile number portability). The United States has included a geographically restricted inter-modal portability, meaning that a consumer may port among different types of networks within a limited geographical area. In Argentina, although the regulator issued a decree in 2000 (Article 30 of Decree 764/2000) recognizing a consumer right to inter-modal number portability, implementation has been slow due to challenges from incumbents. Final adoption of rules is expected by the end of 2011. 1 Hong Kong (SAR) has also introduced inter-modality number portability to address fixed to mobile convergence in conformance with the Unified Carrier Licensing Regime. However, there are signs that number portability could potentially be expanded to other services, such as VoIP. In Denmark, the regulator has implemented a non-geographic numbering plan (i.e., a consumer may be reached at a telephone number that does not correspond to its geographical location) where numbers are not attached to a specific service, and consequently, there are no portability restrictions among services.

However, the implementation of inter-modal portability is currently limited to few jurisdictions. Geographical restrictions on inter-modal portability often respond to the potential effects on traditional numbering plans that are based on distance, services, and interconnection cost structures and for this reason, inter-modality portability may require a numbering policy restructure to be implemented.

(c) ENUM

E.164 NUmber Mapping (ENUM) is a protocol that is the result of work of ITU-T’s Internet Engineering Task Force’s (IETF’s) Telephone Number Mapping Working Group. The charter of this working group was to define a DNS-based architecture and protocols for mapping a telephone number to a Uniform Resource Identifier (URI) that can be used to contact a resource associated with that number. The ENUM protocol enables resolution of E.164 telephone numbers into other resources or services on the internet.

The ENUM protocol has allowed the introduction of a fully neutral approach to numbering, simplifying numbering regulations and addressing complexities resulting from convergence. Essentially, by translating a PSTN number to an IP address, ENUM makes it easier to contact people through electronic means (e.g., linking users’ email, telephone number, fax and instant messenger address allowing them to be reached by any of these means through a single number). ENUM developments are helping to define the future direction of numbering policies. In addition, ENUM can help to address some of the transparency concerns with VoIP, due to the mapping of PSTN numbers to “uniform resource locators” (URLs). The Internet Architecture Board (IAB) and ITU-T Study Group 2 are discussing collaboration on the operational, administration and delegation issues related to deployment of ENUM protocol-based services. This requires extensive consultation with administrators of resources derived from the international E.164 numbering plan, including national and integrated numbering plan administrators. ENUM trials are being conducted in several countries including Austria, China, Finland, France, Japan, the Netherlands, Republic of Korea, Sweden, the United Kingdom and the United States.

(d) Domain Names

The DNS translates domain names, which are meaningful to humans (e.g., www.itu.int) into unique IP addresses (i.e., the numerical identifiers associated with networking equipment for the purpose of locating and addressing these devices worldwide). The DNS can be thought of as the “telephone directory” for the Internet by translating user-friendly device and application identifiers into IP addresses. The Internet Corporation for Assigned Names and Numbers (ICANN) is the administrator of IP addresses and helps to coordinate how IP addresses are supplied to avoid repetition or clashes. In addition, ICANN is the central repository for IP addresses, from which ranges are supplied to regional registries who in turn distribute them to network providers. ICANN and the Internet Assigned Numbers Authority (IANA) work together to manage top level domain (TLD) names, such as “.com”, “.org”, “.net”, as well as country code TLDs (ccTLDs), such as “.uk” for the United Kingdom and “.bh” for the Kingdom of Bahrain.

As numbering policies continue to be influenced by the development of IP networks, the management of ccTLDs on a national level has become another regulatory issue. Several countries have given their telecommunications regulators the responsibility to manage ccTLDs, yet some regulators may not have the necessary resources to take on this task. Although regulators maintain the control and legal responsibilities, they may rely on others for the domain names management including other government agencies, private companies, academic institutions and non-profit organizations. Furthermore, some governments have even commercialized the ccTLDs that correspond to their jurisdictions in order to obtain an additional source of revenues. On an international level, one of the biggest issues facing the Internet relates to guaranteeing that ample IP addresses continue to be available. The current IPv4 address system, IPv4, provides for approximately 4.3 billion addresses. Due to the growing number of Internet-enabled devices, IPv4 is to be completely exhausted by the end of 2011. 10 In order to ensure that the billions of existing and new devices expected to go online in the near future can be accommodated, ICANN has introduced IPv6, which allows for many trillions of IP addresses—enough to last for the foreseeable future. Despite the need for more addresses, many governments, as well as the private sector, have been slow to migrate to IPv6 due to the costs of upgrading equipment that are not IPv6-capable. Some countries are implementing regulations to ensure that network operators and device manufacturers are IPv6 compliant. For example, India has required all telecom operators and ISPs to be IPv6 compliant by the end of 2011 and to offer IPv6 services beginning March 2012, which is also the date when all public sector agencies and companies must
also switch to IPv6.11 Other countries are taking an industry-led approach. In New Zealand, for example, following a 2008 workshop held by the Ministry of Economic Development, New Zealand’s major ICT industry and stakeholder organizations formed the IPv6 Task Force to develop a transition plan from IPv4 to IPv6.12 In March 2011, the IPv6 Task Force launched an online service directory containing a list of New Zealand-based vendors, trainers, consultants, service providers and IT integrators who have expertise in IPv6 in order to promote a smoother migration.13

Practice Notes

- ENUM
- ICANN
- VoIP Numbering schemes

Reference Documents

- India -- Telecommunications Mobile Number Portability Regulations, 2009
- Looking Forward: Mobile Number Portability in South Africa (Tracy Cohen)
- Nigeria: Numbering Regulations 2007
- OECD: ENUM: CONVERGING TELEPHONE NUMBERS AND ADDRESSES IN NEXT GENERATION NETWORKS
- Pakistan: MNP Code of Practices v. 9
- South Africa: Making MNP Work

6.4.3.5 UNIVERSAL SERVICE

Convergence is challenging traditional universal service policies and the means by which universal service objectives are currently met. Universal service was initially an obligation imposed on the monopoly operator that concentrated on the provision of voice telephony, requiring operators to expand coverage to provide services in remote and underserved areas. Incumbent operators typically cross-subsidized the cost of their universal service obligations with revenues derived from other services. With the introduction of competition and new technologies, regulators substituted this implicit cross-subsidization with a requirement that all or some operators contribute a percentage of their revenues to a universal service fund.

The primary question confronting regulators in jurisdictions where a universal service contribution system exists, is whether operators offering VoIP services should have universal service obligations, and whether they should contribute on the same basis as traditionally established operators. Many countries have not imposed universal service obligations on service operators using new technologies due to concerns that such obligations would inhibit their development and the development of new technologies and new market players. However, this trend seems to be shifting as more traffic shifts from public switched telephone networks to IP-protocol networks. In Canada, for example, universal service requirements have been imposed on all service providers, including VoIP providers that enable one-way or two-way interconnection with the PSTN (therefore, excluding PC-to-PC VoIP). Canada’s approach is consistent with its technology-neutral policy to VoIP, equating such providers to traditional voice operators, provided the service is offered through access to the public switched telephone network.1

In addition, as IP technologies are gaining importance, regulators are modifying the Universal Service Obligations (USOs) to include narrowband and broadband Internet access. For example, of the 125 countries that responded to the ITU’s annual regulatory survey in 2011, 73 included narrowband Internet service in the universal service definition and 52 included broadband access. In 2000, no countries had established a mandate to make broadband a part of a universal service policy; by 2010, at least 25 countries had expanded their universal service policies to include broadband access.2 In September 2006 (effective January 2008), Switzerland was among the first countries to expand USOs beyond voice telephony to include broadband.3 Under the new regime, universal service includes the obligation to provide a broadband connection with a transmission speed of at least 600 kbit/s download and 100 kbit/s upload speeds, with a price ceiling of CHF 69 excluding VAT.4 In October 2009, the Finnish government announced that, as of July 1, 2010, a 1 Mbit/s Internet connection is defined as a universal service, which means that all telecom operators defined as universal service providers are required to provide every permanent residence and business office with access to a reasonably priced and high-quality connection with a downstream rate of at least 1 Mbit/s.5 With this decision, the Finnish Ministry found that access to affordable broadband services is a basic right for every consumer and business in Finland.6

Other countries are also considering the expansion of USOs to broadband, particularly as traditional fixed line voice telephony wanes and new IP-based technologies are playing a more important role in the economy. For example, Brazil’s Bill 1481/07 proposes to use resources from the countries Fund for Universal Telecommunications (FUST) for the expansion of broadband and would require all primary schools and higher education institutions to have Internet access, particularly in rural areas.7

Regulators are also looking beyond USOs in seeking to ensure that those living in rural and underserved areas have universal service and access to broadband services. Instead of mandates on universal access, regulators can implement more flexible licensing regimes to take advantage of technological development and convergence. For example, reasonable rural coverage obligations can be included in licenses or regulators may set specific rural UAS targets for operators in exchange for relief from universal service fund contributions. The Hungarian government has implemented a variation of this policy by reducing the taxes on telecommunications operators by 50%, provided they have invested at least HUF 100 million (USD 500,000) in broadband infrastructure in unserved areas and expect to have profits exceeding HUF 50 million (USD 275,000).
6.4.4 MODIFICATION TO BROADCASTING AND ICT LEGISLATION TO ADDRESS CONVERGENCE

In order to facilitate the development of new technologies, which brings telecommunications, broadcasting, and the Internet closer together, the regulatory frameworks governing these industries are being coordinated, and correspondingly modified, so that they are all focused on the same objectives. Today, the ICT sector requires governments to undertake a broader perspective of law and regulation and assess the impact and interaction of telecommunications legislation with ICT related legislation, such as media/broadcasting legislation, content laws, intellectual property laws, and privacy laws. As shown in Table 4-8, several countries (e.g., Hong Kong SAR and India) have adopted or are in the process of adopting ICT-related legislation.

6.4.4.1 MEDIA AND BROADCASTING LEGISLATION

While the driving force behind telecommunications regulation has been primarily the liberalization of the sector and promotion of competition, the regulation of broadcasting and media has been mostly influenced by the social and cultural impact of the industry. Broadcasting is defined by the ITU as a radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound, television, or other types of transmission. Broadcasting often has substantial content regulation because it is perceived as playing a special role in the cultural life of a country and in developing a national identity. For example, in order to promote social objectives, the majority of OECD countries have regulations regarding broadcasting content and media ownership.

Telecommunications and broadcasting services traditionally have been regulated separately, whether by the same regulatory entity or a
different regulatory entity. In a majority of countries, broadcasting is regulated by a separate entity or responsibility over broadcasting is shared by the telecommunications regulator with other government entities responsible for broadcasting. In other countries, such as Australia, Bulgaria, Canada, Croatia, Ghana, India, Italy, Japan, Malaysia, Norway, South Africa, Switzerland, Tanzania, the United Kingdom and the United States, the telecommunications regulator also fully responsible for broadcasting.

Convergence has resulted in new technologies and services that often are not encompassed in existing service definitions and regulation. This has challenged the adequacy of the current industry-based regulatory framework. For instance, should audiovisual content offered through the Internet or a mobile telephone be defined as telecommunications or broadcasting? As broadcast content and telecommunications network carriage become more integrated, a need exists to review telecommunications and broadcast media regulation to accommodate the regulation of new services and ensure consistency in policy and regulation. Convergence from a broadcasting perspective is primarily manifested in the joint offerings of video and high-speed Internet service (and often voice service), mostly via cable television networks.

In order to address the challenges of convergence, some jurisdictions such as Australia, Malaysia, Hong Kong (SAR), and the United Kingdom have established a common regulator with responsibilities over the telecommunications and broadcasting sector. Regulators such as the Office of Communications (OFCOM) in the United Kingdom and the Malaysian Communications and Multimedia Commission (MCMC) have undertaken regulatory reforms to enact new converged regulatory frameworks that apply to all electronic communications networks and services. In Hong Kong SAR, the Office of the Telecommunications Authority (OFTA) is currently reviewing its broadcasting regulatory regime, and considering the benefits of establishing a unified regulator, merging the Broadcasting Authority (BA) and OFTA into one regulator to oversee the electronic communications sector. In Korea (Rep.), a new converged regulator with authority over telecommunications and television broadcasting—the Korea Communications Commission (KCC)—was largely created in 2008 from the merger of the Korean Broadcasting and the Ministry of Information and Communication (MIC) in order to facilitate a regulatory framework for IPTV services.

Practice Notes

6.4.4.2 CONTENT

Historically, content has been delivered by different service providers using distinct networks (e.g., television from terrestrial and satellite broadcasting, and telephone through telephone networks). With digitalization, content formerly dedicated to specific networks now can be conveyed on different infrastructures and delivery platforms. This poses a potential conflict in regulation as different standards of content regulation are applied to telephony, sound and television broadcasting, print media and the Internet. With convergence, policies may need to be changed to achieve the common social objectives of promoting and protecting cultural traditions, public service, and protecting citizens from harmful material across all types of networks and delivery platforms.

While convergence poses challenges to the regulatory framework, it is recognized that differences in the expectations, context and intrusiveness of different services exist, and could justify the differentiation in regulatory approaches. Therefore, while Internet content remains mostly unregulated, regulation requiring a minimum level of domestic content on television is still a feature of broadcasting regulation and licensing in many countries. For instance, the 2002 National Trade Estimate Report on Foreign Trade Barriers by the U.S. Trade Representative states that approximately 30 trade partners have local content restrictions in the audio-visual sector.

Additionally, an ITU survey regarding broadcasting and Internet content demonstrates that broadcasting content is more highly regulated than Internet content in the majority of countries. Of the approximately 125 countries surveyed by the ITU, almost all of the countries had some form of regulatory entity responsible for broadcasting content, except for Bahrain, Nicaragua, Paraguay, Peru, St. Vincent and the Grenadines, and Spain. On the other hand, the majority of the countries surveyed had no regulatory entity responsible for Internet content. Of the regions surveyed, Internet content seems to be more heavily regulated in the Asia Pacific region and Europe and least regulated in the Americas and Africa.

Some of the issues regulators face regarding content regulation are:

- Applicability of public service provisions;
- Cross media ownership, cross sector ownership and restriction on the size of individual broadcasters;
- Cultural diversity, local content quotas and local production of content;
- Programming standards associated with accuracy and impartiality in the reporting of new and current affairs;
- Intellectual property rights;
- Role and means of supporting public broadcasting; and
- Programming standards associated with decency, censorship and freedom of speech.

(a) Broadcasting Content

Due to the role of broadcast media in defining the cultural identity of a country, one of the main issues in regulating broadcasting is the quota on national content. Two EU directives, the Framework Directive and the Television Without Frontiers Directive have redefined broadcasting in the region. In particular, the Directives separate regulation of content from the regulation of transmission, place specific limits on the regulation of transmission and permit EU member countries to regulate content in order to achieve social objectives. The Television Without Frontiers Directive stipulates that where practicable and by appropriate means, broadcasters should reserve a majority of their transmission time for European content (excluding time appointed to news, sports, games, advertising and teletext services). In addition,
broadcasters should reserve at least 10% of their transmission time or program budget for European works created by producers who are independent broadcasters. 10

In Australia, the Australian Content Standard requires all commercial free-to-air television licensees to broadcast an annual minimum transmission quota of 55 per cent Australian programming between 6 a.m. and midnight. There are also specific minimum annual sub-quotas for Australian adult drama, documentaries and children’s programs. 11

(b) Internet Content

In many countries, ISPs and Internet data centers are not required to review, monitor or classify the content that they host, and are therefore not held liable for the transmission of prohibited content unless they have specific knowledge of the illegal content or fail to report and take corrective action. This policy results from the rationale that, like traditional telecommunications carriers, ISPs are merely a conduit that passively transmit data and therefore are not responsible for the nature, or character of that data. Thus, it would be unjust, unreasonable and impractical to expect an ISP to monitor content in order to safeguard against illegal use or criminal activity.

The EU Directive on Electronic Commerce follows this approach. ISPs have no liability when the service provided is a mere transmission or access to a communication network, to the extent that the ISP cannot select or modify the content of the transmission, or select the receiver of the transmission. There is no liability on the ISP when the service is an automatic, intermediate or temporary storage of data (caching) so long as the provider does not modify the information, complies with conditions on access, and acts promptly to remove or disable access to the information when required. Furthermore, the ISP is not liable when the service offered consists merely of the storage of information, provided that the ISP does not have knowledge of illegal activities or information, or upon being aware, acts promptly to remove or disable access to the information. 12

Japan’s ISP Liability Law 13 follows an approach similar to the EU, but imposes a stricter standard on ISPs. In Japan, ISPs are not generally liable for damages caused by infringement of laws as a result of the transmission of information via the Internet. They may be held liable, however, if they were either aware of the infringement or were aware of the information and should have known of the infringement, and could technically prevent the transmission of the information. Any person whose right is allegedly infringed by transmission of the information via the Internet can request that the ISP disclose the person who transmitted the information, and the ISP may disclose such information if the right of the requesting person has been obviously infringed and the requesting person has legitimate reason to be entitled to such disclosure.

Because an ISP provides access to the Internet, some argue that it is in the best position to take action against illegal activity conducted over the Internet. As a result, in some countries ISPs have been given a degree of responsibility over content regulation under certain circumstances. Although a country may not have specific legislation regarding Internet content, this does not mean that ISPs are immune from liability for content handled under their networks under other laws. For example, in Mexico, ISPs may be held responsible under the Federal Criminal Code which provides that any person who publishes, by any means, exposes or distributes obscene books, writings, images or objects commits a crime against public morality and good custom, and can be sanctioned with imprisonment and/or fines. ISPs are not deemed responsible for the distribution of the prohibited material under the Federal Criminal Code based on the provision of Internet access or for providing shared, dedicated, or co-located hosting because they are not obliged to know the content of the web sites that they host. However, ISPs may be responsible for distribution of prohibited content when providing hosting services, where they collaborate in the production and development of the content with the author of the website and consciously host the website with specific knowledge of its contents. 14

6.4.4.3 INTELLECTUAL PROPERTY LAWS

Part of content legislation is the issue of protection of intellectual property rights associated with the growth of ICT use. In an era of electronic commerce, the sale and exchange of copyrighted material in digital format must be protected in order to ensure the continued investment and development of the ICT sector. Digitalization of information results in new risks for holders of copyright and related rights in their works, but also makes it potentially easier to administer and control acts of exploitation by means of access control, identification and anti-copying devices. 1 The EU has adopted a Copyright Directive and jurisdictions such as the United States and Hong Kong (SAR) have also passed legislation enforcing intellectual property laws in the ICT sector. In May 2011, the European Commission expanded on the Copyright Directive in the release a new Intellectual Property Rights (IPR) Strategy aimed at reforming the legal framework of IPRs in order to strike the right balance between promoting creation and innovation and promoting the widest possible access to goods and services protected by IPR. 2 The EC’s IPR Strategy sets out a series of key policy actions in copyright licensing and violations (e.g., piracy), as well as other IPR areas such as patents and trademarks.

The need for copyright reforms are due to technological developments that enable works of literature, film, music and art, as well as computer programs, to be created or transferred into digital format that allows for easy and inexpensive copying. With high-speed broadband access that allows users to download a feature length movie in a matter of minutes, the unauthorized transmission of copyrighted materials has become a major concern of those seeking to protect copyrights. One of the most basic rights granted under copyright is the right to control reproduction under the Berne Convention, which covers reproduction in “any manner or form.” 3 This right is critical to determining reproduction rights in e-commerce, as the transmission of a work presupposes the uploading of that work into the memory of a computer or digital device, and when the work is transmitted over networks, multiple copies are made in the memories of the network computers.

Some of the most significant issues arising from the extension of copyright protection in the digital environment are: (i) scope of copyright protection in the digital environment; (ii) responsibility of online providers; (iii) rights of performers in the digital environment; (iv) rights of digital broadcasters, such as webcasting and digital film and television online; (v) linking of copyright information online, including deep-linking and framing; (vi) protection of databases; and (vii) peer-to-peer (P2P) file sharing systems and video or audio streaming of copyrighted materials. 4 Measures to address illegal P2P file sharing and online streaming of copyrighted video (e.g., movies) and audio (e.g., music) have been at the forefront of countries’ amendments to IPR regulatory frameworks.

In many cases, countries have opted to involve ISPs in protecting copyrights online. For example, France passed a “three-strike” law in 2009, which requires ISPs to help the government identify copyright violators (i.e., online users who illegally download copyrighted material). Under the law, users receive two warnings of violations and ISPs are required to terminate the service of users who are found to engage in copyright
Infringement a third time within 12 months of the first violation. Like France, countries around the world are requiring Internet intermediaries, such as ISPs, to play a more active role in preventing and enforcing copyright laws. For example, the New Zealand government passed the Copyright (New Technologies) Amendment Act in 2008, which includes an obligation for ISPs to have, and reasonably implement, a policy for termination of accounts of repeat copyright infringers through a “notice-and-takedown” regime. In Korea, the government amended the country’s Copyright Act in 2009 to involve ISPs in the “notice-and-takedown” regime. Under Article 133bis of the amended Copyright Act, once the government has sent notice to an ISP that a user has engaged in copyright infringement, it is the ISP’s responsibility to warn the user of infringement. After the third such notice, the ISP may be required by the Ministry of Culture, Sports and Tourism to suspend the infringing user’s account for up to six months as part of the country’s “three-strike” regime. Although such “three-strike” laws are supported by the music and film industries and several national governments, others criticize such measures as leading to violations of users’ rights to access and share information. In particular, the United Nations expressed in May 2011 its concern that “three-strike” and other “graduated response” measures that terminate or suspend users’ Internet connection for copyright infringement can violate users’ basic human rights, including access to Internet infrastructure.

In the trademark field, commercial branding, advertising and marketing, including the use of domain names to identify one’s presence on the Internet are heightened by the online environment and can result in unfair competition. The general international consensus is that trademark protection under international and national laws should extend to the Internet, and the protection should be neither more nor less extensive than that granted in the physical world. Some of the issues regarding the protection of trademarks in the digital environment are:

- Use of trademarks as meta tags - which are HTML codes inserted into the header of a webpage that allows search engines to identify the contents of the page and index it;
- Sale of trademarks as keywords;
- Pop-up advertisements;
- Mousetrapping – an aggressive marketing technique that forces users to remain on a specific website, by disabling a user’s browser functions; and
- Linking and framing.

In general, patents protect inventions. In the patent field, with the growth of e-commerce, the scope of patentable subject matter has increased, resulting in issues with respect to:

- Scope of patentable subject matter, including online business method patents and software protection;
- Prior art effect – as applied to prior art in electronic form “cyber art,” and
- Enforcement of patent rights.

**Practice Notes**

- EU Copyright Directive [4.4.3]
- US Copyright Directive [4.4.3]

### 6.4.4.4 DATA PROTECTION/PRIVACY LAWS

As a result of the growing international concern for cybercrimes, such as computer-related fraud, child pornography and hacking, 47 EU and non-EU Member States have signed the Convention on Cybercrime, the first international treaty seeking to address computer and Internet crimes through harmonization of national laws that improve investigative techniques and increase cooperation among nations. The convention is designed to: (1) harmonize domestic criminal law in the area of cyber-crime; (2) provide for domestic criminal procedural law powers necessary for the investigation and prosecution of such offenses as well as other offenses committed by means of a computer system or evidence in relation to which is in electronic form; and (3) establish a fast and effective regime of international cooperation. In addition to streamlining definitions and civil and criminal penalties for cybercrimes, the Convention also gives signatory countries common powers to search and intercept the Internet communications of suspected terrorists.

**Box 1: Need for Regulation of Cyber-crimes**

Source: Council of Europe, Convention on Cyber-crime, Explanatory Report

The fast developments in the field of information technology have a direct bearing on all sections of modern society. The integration of telecommunication and information systems, enabling storage and transmission, regardless of distance, of all kinds of communication opens a whole range of new possibilities. These developments were boosted by the emergence of information super-highways and networks, including the Internet, through which virtually anybody will be able to have access to any electronic information service irrespective of where in the world he is located. By connecting to communication and information services users create a kind of common space, called “cyber-space,” which is used for legitimate purposes but may also be the subject of misuse. These “cyber-space offenses” are either committed against the integrity, availability, and confidentiality of computer systems and telecommunication networks or they consist of the use of such networks or their services to commit traditional offense. The transborder character of such offenses, e.g., when committed through the Internet, is in conflict with the territoriality of national law enforcement authorities.
An analysis of country practices in various countries suggests that the ICT regulator’s mandate can potentially be usefully extended or strengthened in the following areas:

- Implementing cybercrime rules as part of the regulator’s consumer protection responsibilities, such as related to fighting spam, malware or spyware. In the Netherlands, the Independent Post and Telecommunication Authority (OPTA) enforces prohibitions on spam, malware and spyware by imposing fines on wrongdoers.
- Expanding the ICT regulator’s responsibility for information security or network security, which may include establishing a department within the regulator focused on consumer outreach and education efforts on network security practices and enables cooperation with law enforcement agencies. For example, the Malaysian Communications and Multimedia Commission (MCMC) has an Information and Network Security (INS) department to ensure information security and network reliability within the communications and multimedia industry.
- Establishing a new regulator with the operational mandate for Internet safety. In Korea, for example, among the responsibilities of the new, converged regulator—the Korea Communications Commission—is the protection of Internet users from harmful or illegal content.

Practice Notes

- Examples of Data Retention Rules in Different Countries [4.4.4]
- Privacy and data retention policies in selected countries

6.4.5 CASE STUDIES OF CONVERGED LEGISLATION

This section contains case studies on converged legislation in the EU, Hong Kong, and Malaysia.

6.4.5.1 EUROPEAN UNION NEW REGULATORY FRAMEWORK (NRF)

The EU’s 2002 NRF represented the paradigm legislation aimed at addressing convergence and its challenges. Although the 2009 EU Telecom Reforms included new provisions to promote competition, innovation and adoption of ICT services, the 2002 NRF remains the backbone of the EU’s electronic communications regulatory framework. It is composed of six Directives that address the convergence of telecommunications, media, and information technology. The 2002 NRF did not address content.

The 2002 NRF established a unified, technology-neutral system of authorization that covers all comparable services, with the objective of addressing convergence between different electronic communications and services, and stimulating their further development. The authorization system has only a procedural notification requirement.

The general authorizations issued by national regulatory authorities (NRAs) must, at a minimum, provide the following rights:

1. The right to provide electronic communications networks or services or both.
2. The right to request interconnection or access to facilities of other providers. However, only providers of public services and networks have the right to be supported by the regulator in case negotiations with a significant market power operator fails.
3. The right to apply for rights of way.
4. The right to be considered for designation as a universal service provider (only for providers of public services and networks).

NRAs may not attach conditions to an authorization other than the ones set forth in the 2002. Member states may impose different requirements on services and networks to grant numbering, but NRAs may not discriminate among providers of comparable services. Member states may establish the requirement to obtain a separate licence for spectrum rights, although the 2002 NRF introduces the possibility of spectrum trading.

The 2002 NRF requires NRAs to conduct a market analysis on certain markets susceptible to ex ante regulation. The NRAs may propose draft measures if they find that effective competition does not exist in the relevant market. The 2002 NRF notes that newly emerging markets, such as VoIP, should not be subjected to inappropriate obligations, and while it cautions against the imposition of premature obligations, it also notes the need to prevent full control of the market by the dominant player.

The 2002 NRF also created several Committees to assist the Commission in the implementation of the NRF. One of these is the European Regulatory Group (ERG), an advisory body to encourage cooperation and coordination among the NRAs of member states. Although the ERG was replaced with BEREC with the passage of the 2009 Telecoms Reform, the ERG was actively involved in the implementation and harmonization of the 2002 NRF, including playing an influential role in the EU VoIP debate where the ERG helped to issue a common position that has been followed by various member states.

How has the 2002 NRF dealt with VoIP?

As a result of the growing significance of VoIP, the European Commission opened a public consultation proceeding to develop a VoIP harmonized regulation (the “EC Consultation Document”). This process occurred at the same time the 2002 NRF was being implemented.

The EC Consultation Document opened a comment process on the challenges brought by VoIP, proposing preliminary guidelines for VoIP regulations. Under such recommended preliminary guidelines, service providers have the commercial freedom to offer services that qualify the provider as an electronic communications service (ECS) provider or as a publicly available telephone service (PATS) provider.

Each category of service provider has different rights and obligations:
§ Only PATS providers have PATS number portability; ECS providers do not.
§ Only PATS subscribers have a right to request carrier selection and pre-selection.
§ Only PATS subscribers have the right to be listed in the public telephone directory.
§ Only PATS providers have the obligation to provide access to emergency services.
§ Quality of service standards only applies to PATS providers.

From a customer perspective, a VoIP service provided as ECS and PATS have a similar look and feel. Therefore, the EC Consultation Document suggested that to avoid consumer disinformation, member states could require ECS providers to give precise information to customers on how they differ from PATS and the impact that their services have on power line terminals, access to emergency services, and caller location.

So as not to hinder the development of VoIP services, the EC Consultation Document encouraged VoIP providers to rapidly devise and implement technical requirements and solutions such as how to handle emergency services, lawful call interception, and caller ID.

With respect to numbering, the EC Consultation Document provided the following possibilities for Member states under the 2002 NRF:
1. Allocation of geographic numbers to ECS providers, allowing mobility in limited area (e.g., a city or a telephone district)
2. Allocation of geographic numbers to ECS providers, allowing countrywide mobility
3. Allocation of geographic numbers to ECS providers, without mobility
4. Establishment of a new range of numbers specific for ECS VoIP services

Within the 2002 NRF and taking into account this Consultation Document and the ERG common statement, EU Member States have been adopting and implementing decisions on VoIP services.

Some jurisdictions, such as Spain and the United Kingdom, allow the service provider to freely decide which rights and obligation regime (the ECS or PATS) will be applicable when offering the service. Others, such as Austria and Finland, established specific parameters for the service, limiting the freedom of the providers to choose the applicable regime.

There have also been different approaches on numbering. Some jurisdictions such as Spain and the United Kingdom, have established a specific range for ECS VoIP providers, while allowing non-geographic numbering for VoIP PATS providers. Spain permits nomadic use within a particular telephone district while the United Kingdom does not have any nomadic restriction. Other jurisdictions, such as Germany, France or Austria, have recently established a specific range of numbers for ECS VoIP service.

Portability within a particular numbering range (i.e., geographic to geographic or special ECS VoIP range to special ECS VoIP) has been allowed in some jurisdictions, such as Spain and Ireland, while others, such as United Kingdom, only allow portability for PATS service providers.

How has the NRF dealt with WLANs?

The EC adopted a Recommendation in March 2003 urging EU Member states to facilitate the use of public WLANs (e.g., WI-Fi “hotspots”). The EC recognized the importance of WLANs as an alternative platform for broadband access to information society services and suggested that the desirability of promoting a harmonized approach for the provision of public WLAN access throughout the EC. To that end, the EC Recommendation advised that the provision of WLAN access on a commercial basis should be allowed under the least onerous system, i.e., to the extent possible without any specific conditions. The 2002 NRF principle of technologically-neutral regulation helped to ensure that there is no discrimination between the various WLANs and other technologies. As an example of how the Recommendation has been applied, France does not require any licence for the implementation of WLANs. The use or provision of a private WLAN by an already licensed public operator is allowed without any regulatory notification. Furthermore, a simple declaration will suffice for those providing public WLAN access who do not have a public network licence.

The EU legislation approach to address convergence

The purpose of the 2002 NRF is to address convergence by a comprehensive transformation of the applicable legal framework by means of a technology-neutral and flexible approach.

The 2002 NRF was the result of several consultative processes involving interested parties (e.g., member states, consumers and industry representatives), which gave the EC a broader perspective of convergence regulation, its effects, and its challenges. In addition, from a convergence standpoint, the practical implementation of the 2002 NRF was supported by consultation proceedings, harmonization processes, and ultimately, member states regulations. An example of this approach is the VoIP EC Consultation Document cited above. NRAs have a choice of: (i) establishing their own consultative processes at a national level; (ii) waiting for the results of the EC consultative proceeding; or (iii) adopting regulations on the subject directly.

The EU’s legislative approach to convergence involves an additional element of regional harmonization, which is achieved through EC guidelines (as in the case of VoIP) and the common position of the ERG. ICT-related regulation in the EU is addressed separately from the NRF, but takes into account the existing links between them.

6.4.5.2 HONG KONG (SAR)

Hong Kong (SAR) has adopted various regulatory measures to address convergence, focusing on fixed/mobile convergence. In 2008, the unified carrier license (UCL) regime was introduced as a single licensing vehicle for both fixed and mobile telecommunications services. The UCL replaced two previous types of carrier licenses, namely the fixed carrier license (FCL) and mobile carrier license (MCL), which are no longer issued by the Office of the Telecommunications Authority (OFTA). However, any existing FCLs and MCLs are effective until their expiry.
VoIP

Prior to the issuance of a statement by OFTA in June 2005, VoIP was not expressly regulated in Hong Kong (SAR). Instead, VoIP was treated as a technology that could be operated under any service or network license, and the license under which VoIP was provided determined the operators’ rights and obligations.

In June 2005, the Government issued a statement that set forth two specific class licenses to operate VoIP services that differentiate between VoIP services that are marketed with characteristics equal to voice services (Class 1) and those that are not (Class 2).

Class 1 licenses provide numbering rights equal to voice services and their users will have portability; however, Class 1 licensees must provide emergency access service and comply with a minimum set of quality of service standards.

Class 2 licenses do not have numbering rights, and to the extent that numbers are not assigned, operators are not required to provide access to emergency services.

To protect consumers, operators will be required to clearly declare in their marketing materials the type of licence under which they operate (Class 1 or Class 2).

WLANs

Since January 2003, OFTA has required a class license for commercial use of WLANs (i.e., offering WLAN to the public through Wi-Fi “hotspots” or Internet cafes). The license, which does not require approval, is automatically granted upon registration of the name, contact details, location of the service, and identification of the frequency band being used.

ICT-Related Regulation

Currently, broadcasting and telecommunications are regulated by separate entities and are subject to different regulations. OFTA is the regulatory authority responsible for regulating the telecommunications industry and ensuring compliance with the Telecommunications Ordinance. Broadcasting in Hong Kong (SAR) is regulated by the Broadcasting Authority (BA) pursuant to the Broadcasting Ordinance, which divides broadcasting into four categories of television program services: (a) domestic free television program service; (b) domestic pay television program service; (c) non-domestic television program service; and (d) other licensable television program services. In addition, Hong Kong (SAR) has separate regulatory frameworks for the provision of media content or television program services and for the transmission of services. Transmission networks are licensed and regulated by OFTA pursuant to the Telecommunications Ordinance, whereas television programming and content (regardless of the transmission mode) is regulated by the BA under the Broadcasting Ordinance.

In response to convergence, the Hong Kong (SAR) Government reviewed the broadcasting regulatory regime, covering convergence strategy, media ownership and the merits of establishing a unified regulator (merging the BA and OFTA into one regulator) to oversee the electronic communications sector. A public consultation document on the Government’s proposal for a unified regulator named Communications Authority was published in March 2006. As stated by the Secretary for Commerce, Industry & Technology John Tsang, “convergence at the infrastructure level means that cable and satellite broadcasters are facing increasing competition not only from their peers, but also from telecommunications providers and new media firms that are branching out into the broadcasting business. The increase in broadband penetration also means the increase of converged services on broadband networks (such as PCCW’s launch of broadband television service via ADSL in addition to video services on the Internet portal and Hong Kong SAR Broadband Network’s telephony, broadband Internet access and video triple-play service via its communications network). These developments have required the Government to review its definition of broadcasting and the relevance of considerations such as spectrum scarcity, as well as current regulatory measures that many no longer be justified on public interest grounds in view of the convergence trend.” The Communications Authority was established under the Communications Authority Ordinance (Cap. 616) in April 2012 as a converged regulator combining OFTA and the BA was still planned and under consideration by the Hong Kong legislature.

6 Hong Kong Legislative Council, Bills Committee on Communications Authority Bill at . Also see Legislative Council Brief, Communications Authority Bill at .

Reference Documents

- Broadcasting in Hong Kong

6.4.5.3 MALAYSIA

The Communications and Multimedia Act 1998 (CMA) came into effect on 1 April 1999, providing a regulatory framework to accommodate the convergence of the telecommunications, broadcasting, and computing industries.

The basic principles underlying the CMA are transparency, technology neutrality, flexibility, and transparency. Regulation is reduced by the establishment of generic provisions, and self-regulation is promoted.

In addition, the Malaysian Communications and Multimedia Commission (MCMC) was established on 1 November 1998, as the sole regulatory authority of the new framework, thereby restructuring the different branches of the government that previously had jurisdiction over the telecommunications, broadcasting, and computing industries.

The CMA encourages industry self-regulation and establishes an industry forum as a dynamic tool for the industry to formulate and implement voluntary codes of rules. These industry codes of self-regulation may be prepared at the industry’s own initiative or by request of the MCMC.

Finally, the CMA establishes a permanent review process, which must be conducted every three years by the MCMC, to examine rules and
regulations under the CMA and adapt them to the dynamics and evolution of convergence. Pursuant to this review process, the MCMC must provide written recommendations to the Minister to modify or to repeal any rules or regulation under the CMA.

Licensing

The Malaysian licensing framework separates the network from the service, and places emphasis on the activity rather than on the technology. The following are licensable activities:

§ Network Facilities Providers (“NFP”) are considered “the fundamental building block of the convergence model upon which network, applications and content services are provided.” 2 NFPs own facilities and equipment (i.e., satellite earth stations, broadband fiber optic cables, telecommunications lines and exchanges, radio communications transmission equipment, mobile communications base stations, and broadcasting transmission towers);

§ Network Services Providers provide basic connectivity and bandwidth that supports a variety of applications, and enables transport between different networks;

§ Applications Service Providers provide specific services to end-users (e.g., voice services, data services, content-based services, electronic commerce, and other transmission services); and

§ Content Applications Service Providers provide traditional broadcast services, online publishing and information services.3

The above services fall under one of the two categories of licenses created by the MCMC: individual and class. Individual licenses are for situations where a high degree of regulatory control is deemed necessary. This is the case of infrastructure (i.e., NFP) when there may be reasons to limit the number of licenses because of technical constraints (e.g., scarce radio spectrum), to avoid duplication, to protect major investments or for national security considerations. See Table 4-8 for a summary and comparison of the licensing framework in Malaysia under the old and new regimes.

VoIP

The MCMC set forth VoIP policy principle, which recognizes two ways to provide VoIP service:4

1. PC-to-PC based VoIP, which the MCMC also refers to as Internet telephony; and

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

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

WLANs

Given the technology-neutral approach of the CMA, the provision of WLAN activities do not require registration or application to the MCMC provided that the business (or the service provided) does not involve any of the following categories as defined by the Law:5

(a) Network Facilities Provider (NFP) activities
(b) Network Services Provider (NSP) activities
(c) Applications Services Provider (ASP) activities

Prospective providers of wireless hotspot Internet services which contract with a licensed Internet Access Service Provider (IASP) for access to the Internet do not require licensing under the CMA 1998. However, as this is not an Internet ASP (IASP) service, consumers would not be protected by any quality of service determinations as these providers would have to compete to provide the best service possible.

Practice Notes

- Table 4-8: Licensing in Malaysia [4.5.3]

6.5 ELEMENTS FOR AN EFFECTIVE REGULATOR

Fundamental elements must be addressed to create a successful regulatory authority. In particular, countries must establish a framework that creates an effective regulator, as well as determine the appropriate legal status of the regulator and the impact, if any, that the organization’s legal standing has on its operations and functions. The legal status of the regulatory authority will depend on the country’s political and legal systems.

Once the regulator’s mandate and competencies have been established, it is important to determine the regulator’s institutional design, as well as its relationship with the government, industry, and the public. The institutional design of the regulator will affect the structure of the regulator, including its leadership and management organization and its organizational and administrative structures. Additionally, the successful management of a regulator and the effective exercise of its functions will be affected by the administrative structure of the regulator, such as its staffing process and the ethical conduct of its staff. Overall, it is important that the organizational and institutional framework provides for some measure of regulator independence, transparency and accountability.

Practice Notes

- Table 5-1: Aspects of Effectiveness [5.1]

Reference Documents

- Bahrain Telecommunications Law
6.5.1 ESTABLISHING AN EFFECTIVE REGULATOR

Independence is a critical attribute for a regulator to be effective. However, effectiveness has additional dimensions (see Figure 5-A). In a broad sense, an effective regulator is structurally and financially independent, but the real effectiveness of the regulator will lie in how it achieves successful functionality, ideally in an independent and autonomous manner.

On the one hand, in a structural sense, independence means guaranteeing that the regulator maintains an arms-length relationship with private industry and the other branches of the government. On the other hand, successful functionality is achieved when the regulator establishes clear rules that will govern such matters as its mandate and functions, its funding, and the implementation of its authorities, and then is able to execute those rules fairly and in a timely fashion.

**Summary of aspects of an effective Regulator as discussed in this Chapter:**

- Providing the regulator with a distinct legal mandate, free of ministerial control.
- Prescribing professional criteria for appointment.
- Involving both the executive and the legislative branches in the appointment process.
- Appointing regulators for fixed terms and protecting them from arbitrary removal.
- For a board or commission, staggering the terms of the members to ensure continuity within the top ranks of the agency.
- Exempting the agency from civil service salary and employment rules that make it difficult to attract and retain well-qualified staff, as well as to terminate poorly performing staff, as necessary where the civil service system and salaries do not seem to work.
- Providing the agency with a reliable and adequate source of funding.

**Practice Notes**

- **Table 5-1: Aspects of Effectiveness [5.1]**

6.5.1.1 STRUCTURAL INDEPENDENCE

A regulator can function in an effective manner in a given market within a range of organizational structures. As discussed more fully in Section 5.2, there are various institutional options for structuring a regulator. In some cases, although increasingly rare, the ministry may be responsible for regulating the sector. Alternatively, there may be a unit inside the ministry that acts in the capacity of a regulator. There may be a formal office outside a government ministry that serves as the regulator. Lastly, a regulator can be legally independent; that is, separate from the central governmental structure.

Pursuant to the World Trade Organization (WTO) Reference Paper that requires countries to establish a regulator separate from the operator, in recent years many countries have established a structurally independent regulator, which separates the function of regulating the telecommunication market from that of supplying services. Governments have identified the need to clarify and separate the various functions of the state, as it often acts as: (i) owner/shareholder of enterprises (i.e., incumbent providers of basic services); (ii) regulator (e.g., enacting and enforcing the general rules); (iii) overseer of competition in the market; and (iv) protector of consumer interests.

Providing a regulator with structural independence will reduce the possibility of political or industry capture. When a regulatory body bow to external pressure from operators or other government entities, it often lacks independence and its decisions are neither objective nor transparent. For example, regulators with ties to state-owned incumbents may bar or delay the introduction of new technologies and services or fail to resolve interconnection disputes in order to protect the interests of incumbent operators. However, governments must also ensure that they do not create a situation whereby the regulator itself is effectively “captured” (meaning undue influence by politicians and/or dominant players) because a statute or regulation provides that the regulator is responsible for ensuring the health of the industry (including...
the regulator is of the view that it must take actions protective of the incumbent operators. In addition, regulators are often forced to take certain “protective” actions because of exclusivity provisions imposed on them by government policy (e.g., that the incumbent operator is granted exclusivity over part of the market for a certain number of years in order to prohibit the introduction of new entrants and/or new technologies that may threaten the incumbent’s market share – e.g., VoIP).

These decisions can be detrimental in that they often limit competition that would benefit consumers and erode confidence in the regulator since the regulator is perceived as “captured” by the incumbent or other government entities. Ultimately, the mandate of the regulator should not be to ensure the viability of certain industry participants, but to protect consumer interests.

Although structural independence is an important element of an effective regulatory environment, it alone is not sufficient to ensure successful development of the sector. In order to be fully effective, a regulator also requires financial independence and functionality, as further discussed below.

6.5.1.2 FINANCIAL INDEPENDENCE

The funding sources and budgeting processes of regulatory authorities can have an important impact on their independence, efficiency and cost of regulation. The source of a regulatory authority’s funds and the process by which these funds become part of the authority’s actual budget can directly impact the degree of a regulator’s autonomy and competence when carrying out its responsibilities.

The funding mechanism is critical to ensuring effectiveness of the regulatory function. While a regulator’s budget may come from the government or from the telecommunications sector itself through licensing fees, spectrum fees, fines and other administrative charges, the key is that funding should be free from political and private interest influence. 1

There are two primary vehicles used by countries to fund a regulator’s budget. Although a country may use one or the other, funding for the regulator generally comes from some combination of the two sources. One source of funding is a formal allocation from the government’s budget. The benefits of this approach can include promoting a greater role of the elected government in directing regulation, as well as establishing policies to support the overall economic goals of a country.2

A second approach is to allow the regulator to collect monies from the industry through fees and contributions.3 Regulators may receive payments from operators for spectrum or licensing fees4, penalties resulting from enforcement, or charges associated with administrative tasks such as providing numbering resources. Some countries assess special taxes on telecommunication operator revenues (in addition to income taxes imposed by the treasury), of which a portion is often earmarked for universal service purposes.5

The ITU’s World Telecommunication Regulatory Database 2010 reveals that, for the most part, telecommunications regulatory authorities are funded through general government budget appropriations, licensing (usually one-time fees) fees, spectrum fees, regulatory fees (usually annual fees that can be based on a percentage of operator’s turnover or revenues), or a combination of these sources. (See Figure 5-B). Of the 192 countries that provided information on the breakdown of their regulatory authority’s financing sources, only 28 indicated that the regulator relies on a single source of funding—over 85 per cent rely on some combination of funding sources.6

(ii) Reliance on government appropriations

In certain countries, the regulator’s budget is part of the government appropriations allocated to the ministry under whose authority it resides. In Mexico, the Comisión Federal de Telecomunicaciones (COFETEL) is considered a “decentralized” division of Mexico’s Secretaría de Comunicaciones y Transportes (Communications and Transportation Secretariat - SCT) and even though it can make regulatory decisions independently of the SCT, it must do so within the budget assigned to it by the Secretariat.7 Similarly, the Comisión Nacional de Telecomunicaciones (CONATEL) in Honduras – a “decentralized” division of the country’s Ministry of Finance – proposes its annual budget to the Ministry of Finance, and the Ministry incorporates the proposal budget into its government appropriation proposal, which must be approved by the national congress.8 In South Africa, the Independent Communications Authority of South Africa (ICASA) Act of 2000 specifies that the regulatory authority will be funded by a parliamentary appropriation. The same act also indicates that any revenues received by the regulatory authority – other than through the government appropriation – must be paid into the National Revenue Fund within 30 days of receipt.9

In these cases, the government’s authority to determine the budget gives it a degree of direct influence and intervention, or at least the appearance of such, over the policies and regulations the agency may wish to implement, possibly reducing the agency’s effectiveness in regulating its telecommunications sector. The regulator may also face uncertainty as it must rely on the commitment of the government toward the telecommunications sector in order to have the resources necessary to implement its policies and regulations. Lastly, governmental budget limitations may make relying on the government as the only source of funding problematic as the funding level may be inadequate or not released timely in order to meet increasing regulatory needs.
Relying on multiple sources of funding rather than solely on government appropriations allows regulators to have more financial independence and can make them less subject to outside influences. However, having to surrender revenues to the government and having its budget approved by the government can act as a system of checks and balances that prevents a regulatory authority from over-spending and perhaps even over-charging the regulated entities, although this control may be seen as diminishing the regulator’s ability to determine the funds it will require to implement the policies and programs needed by the telecommunications sectors.

The National Communications Board (SIDEAMET) of Estonia, which is supervised by the Ministry of Economic Affairs and Communications, relies on a number of sources of funding (e.g., licensing, numbering), but all revenues collected are deposited in a bank account under the name of the Ministry of Finance of the Republic of Estonia. The revenues are deposited into the state budget and it is the government that determines the appropriation to be received by SIDEAMET each year.

The majority of telecommunications regulatory authorities have diverse sources of funding which provide some level of financial independence from the government. Although government budget appropriations are a staple in most regulatory budgets, increasingly regulators have developed other funding sources such as: administrative and service fees; numbering fees; authorization fees; fine and penalty fees; and revenues earned from auctions. A few regulators also look to generate funds by investing in property, leasing facilities, earning interest on local bank certificates and fixed deposit accounts, and obtaining loans and grants from multilateral organizations. Financial independence, coupled with the authority to manage and administer their own funds gives regulatory agencies more regulatory certainty so that they can assert more independence in regulating the telecommunications sector. Nonetheless, there should be rules that ensure such charges are not arbitrary, excessive or discriminatory.

In Brazil, the Agência Nacional de Telecomunicações (Anatel) has the Fundo de Fiscalização das Telecomunicações as its only financial resource. All revenues collected by Anatel must be deposited in this fund and it is from this fund that Anatel obtains its expenditures each year. Anatel receives revenues from several income sources, including: government appropriations; credit operations; concessions, permits, authorizations, and spectrum fees; fines and penalties; operating and inspection fees; donations, legacies, subventions and other resources assigned to the Agency; and fees, prices or fines from the sale or leasing of assets as well as publications, technical data and information. The situation is similar in Nigeria as the Communications Act of 2003 requires that the Nigerian Communications Commission (NCC) “establish and maintain a fund from which all expenditures incurred by the Commission shall be defrayed.” The NCC receives its funds from government appropriations, licensing fees, spectrum fees, grants, loans, gifts, and aid. The Uganda Communications Act of 1997 establishes that the Uganda Communications Commission (UCC) “shall operate its own bank account.” However, the Commission must declare any surplus from its operations to the Minister of Finance.

The Telecommunications Regulatory Authority (TRA) in Bahrain, which has an independent budget, also has to declare and relinquish any surplus to the country’s public treasury within one month after the accounts have been audited. It is only allowed to keep the surplus (or part of it) for future development projects after coordinating with the Ministry of Finance and National Economy and upon approval by the Council of Ministers. The Tanzania Communications Regulatory Authority (TCRA) submits an estimated budget to the Minister responsible for Communications for approval. At the end of the fiscal year, the TCRA deposits “to a special account all surplus funds of the Authority” and can use the funds from this special account only for “one or more of the following purposes: (a) consumer education or information projects; (b) special non-recurring projects; (c) budgeted capital expenditure; (d) major rate regulating inquiries; and (e) training, research and development.”

Another example of a regulatory authority with financial independence is Botswana. The Botswana Telecommunications Authority (BTA) revenues derive mainly from the following sources: government appropriations; licensing fees; service fees; and contributions or endowments from any source. As the BTA has the authority to manage its own budget and can determine what to do with any surplus, the regulator has invested its monies in Bank of Botswana certificates, fixed deposit accounts, as well as in purchasing and leasing properties, thus diversifying its sources of funding to an even greater extent. Presently, BTA has a surplus that allows it to cover operating expenditures for the year, as well as the flexibility to evaluate its capital expenditure options in order to prioritize projects for the next two years.

In the United States, the Federal Communications Commission (FCC) operates through a government allocation of funds. However, the FCC is required by Congress to collect regulatory fees to offset a portion of the annual allocation. In recent years, regulatory fees have represented about 90 per cent of the total annual budget. As such, the FCC’s operating budget relies very little on government allocation.

Reference Documents

- Canada: New Telecommunications Fee Regulations

6.5.1.3 FUNCTIONALITY

The mandate and competences of the regulatory authority as well as its relationship with government and other market players depend on the delegation of powers by the state. The degree of delegation of such powers is determined by the political tradition of the country and on the political will to create an independent and competent regulatory authority. These factors influence the specific responsibilities, authority, and accountability for the performance of the regulator’s specific activities.

Although complete “independence” is nearly impossible to attain, the regulator should have sufficient independence to implement regulations and policies without undue interference from interested parties such as politicians or other government agencies (functional independence). The institutional regulations put in place by laws and regulations as well as the administrative structure of the regulatory authority are critical to ensure such independence. The degree of independence differs considerably from country to country.
Independence does not mean that regulators should function in a vacuum, particularly in countries where the legal and judiciary infrastructure is weak. Independence must be balanced with clearly identified requirements for accountability, including strict procedural requirements, reporting mechanisms, public consultation, and substantive judicial review. Accountability involves establishing: (i) detailed policies and laws that set forth explicit objectives governing the regulator; (ii) specific requirements for reporting to the government or Parliament; (iii) procedural requirements; and (iv) the possibility of judicial review.

It is clear that even if independent, a regulator is still an administrative body of the government. Accordingly, its actions should be monitored so that it is accountable for its actions, and administrative measures must be in place to oversee the activities of the regulator.

When regulators are first established, there are inevitably strained relations between the regulator and the ministry that formerly performed the regulatory functions. Relations between the regulator and the incumbent may also be strained as the incumbent experiences a policy change (normally associated with the formation of a formal regulator and the inception of its activities). In addition, when appeals are made to the court, the court is often examining new issues arising from new legislation about the powers of a new type of government agency. Thus, there is a learning process for all parties.

One mechanism for this oversight relates to the financing of the regulator. In many cases, the independent regulator’s budget must be approved or endorsed by the government before the finalization of the national budget by the legislative body.

A related issue is the reporting mechanisms for independent regulators. There are three types of reporting mechanisms for independent regulators. As stated in the 2000 OECD Working Party Report, the most popular mechanism requires the regulator to report to the ministry responsible for telecommunications policy. In some countries, such as Austria, Germany, and the United States, the independent regulator must report to the legislative body. The third model is exemplified in Canada, where the CRTC reports to Parliament through the Minister of Canadian Heritage. There are a few countries, such as Belgium and France, which do not impose any statutory reporting obligation on the telecommunications regulator except for the publication of an annual report.

In most of these cases, the reporting obligation is not very specific. Reporting in many OECD member countries occurs through a publication of an annual report that describes the regulator’s activities. Some countries, however, impose very specific reporting obligations on the regulator. For example, in Australia, ACMA reports each year to the Minister of Communications, Information Technology and the Arts on significant matters relating to the “performance” of carriers and carriage service providers.

As noted in Section 5.3, another key oversight relationship that influences the independence of the regulator relates to the way in which the head of the regulatory body is appointed and under what conditions he or she can be replaced.

In some cases, the decision-making body of the regulator is composed of commissioners who are appointed by different branches of the government (for instance, some of the commissioners are appointed by the head of the administrative body and the others by the legislative body).

In most OECD member countries, the head of the independent regulator is appointed by the minister responsible for the sector or the president based on the recommendation of the Cabinet or the minister. For example, in Germany, the president and two vice-presidents of the Federal Network Agency are nominated by the federal government upon the proposal of the Advisory Council to the Federal Network Agency. Then, they are appointed by the President of Germany. The responsibilities of the president of the Federal Network Agency are stipulated in a contract between the Ministry of Economics and Technology and the president of Federal Network Agency. This contract is subject to approval by the federal government.

Another important element relates to the enforcement of regulatory decisions. In the majority of countries, the independent regulator’s decision cannot be overruled except through a court decision. In addition, in many countries, while the court can nullify the decisions of the independent regulator it cannot impose a new decision on the issue. However, there are countries, such as Canada, Hungary, and Mexico, which give the minister or the Cabinet power to make changes to the decisions of the independent regulator either based on appeals or on their own discretion. In Canada, nevertheless, appeals to the Cabinet must be conducted in a public manner and the power of Cabinet is generally limited to requiring the CRTC to reconsider the decision – this is the case with broadcasting. With regard to telecommunications matters, the Cabinet can directly change the decision, although this occurs rarely.

### Relationships with Other Entities

The most common institutional structure used today is the establishment of an independent regulatory authority with responsibility for implementing and administering the regulatory framework, but policy-making responsibility resides with a particular ministry. (See Table 5-2.)

<table>
<thead>
<tr>
<th>Function</th>
<th>Responsible Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy development</td>
<td>Government, ministry or executive branch</td>
</tr>
<tr>
<td>Regulation</td>
<td>Separate regulatory authority</td>
</tr>
<tr>
<td>Network operation/service</td>
<td>Privately and/or commercially operated telecommunications operators</td>
</tr>
</tbody>
</table>

Table 5-2: Regulatory Institutional Structure
Within this structure, the division of regulatory tasks differs greatly. Currently, a highly fragmented and inconsistent pattern of regulatory responsibilities exist among countries for telecommunications, postal services, and broadcasting and media matters. In addition, telecommunications regulators can have sector-specific or multi-sectoral regulatory functions (for more detail on the institutional design of regulators, see Section 5.2). This can lead to an inconsistent pattern of the division of regulatory functions (e.g., licensing, numbering, and spectrum management) between policy-makers and regulators around the world.

As stated in the 2000 OECD Working Party Paper on Institutional Structures and Responsibilities, the ultimate objective of the administrative structure of regulation is not to have an independent regulatory body, but rather an effective regulatory framework. This framework and its implementation determine the ability of a country to achieve policy objectives such as making the market more competitive, stimulating technological diffusion and enhancing efficiency, and ensuring that consumers benefit from these developments.

The regulator is, in fact, a stakeholder in this process of market development. This makes transparent, practical cooperation and communication between the regulator and the policy-maker (as well as with other stakeholders) essential to ensuring that regulation is responsive to government policy decisions and the realities of the market.

Although functionally independent, the regulatory authority must maintain relationships with various other entities in order to ensure that each organization’s duties and jurisdiction are clearly delineated, as well as to clarify how the organizations will cooperate where responsibilities overlap.

(a) Coordination with the Ministry in Charge of Communications and Other Ministries

Some countries require that the regulatory authority coordinate most closely with the ministry responsible for telecommunications. Often the regulatory authority is required to support the minister and other relevant government bodies by preparing technical and strategic documents on its country’s international positions for submission to various international fora. The regulatory authority can also propose the general policy for the telecommunications sector to ensure the expansion of telecommunications service offerings and the achievement of universal service objectives. In some cases, the regulator is required to prepare legal texts for the minister to submit to the Cabinet. Other countries require that the minister issue resolutions and regulations regarding, for example, interconnection, pricing and licensing. In some cases the regulator is even required to obtain approval from the minister for licences to be issued.

In addition to the ministry in charge of telecommunications, many regulatory authorities are required to coordinate and interact, from time to time, with various other entities and bodies, such as:

§ The prime minister
§ The ministry responsible for finance or economic affairs
§ The ministry responsible for commerce and industry
§ The ministry responsible for defense and other security entities
§ The ministry responsible for internal administration
§ The ministries responsible for information and broadcasting, media and content
§ The ministry responsible for transportation
§ The ministry responsible for justice
§ The ministry responsible for research and development
§ The ministry responsible for science and technology
§ The competition authority
§ The spectrum administrator
§ Municipalities

Many regulatory authorities are financially and administratively independent. However, in some cases, the annual budget and final accounts must be submitted to the ministry of finance for approval. In addition, some countries require an independent auditor to express an opinion on the final accounts of the regulatory authority to the Cabinet.

While the regulator generally is responsible for overseeing tariff policies, sometimes the basis for determining the service tariffs must be approved by the Cabinet after being evaluated by the ministry of telecommunications and the ministry of finance.

To issue radio licences for the purpose of the radio or television services, some regulatory authorities must obtain the approval of the minister of information or the ministry in charge of broadcasting, media, or content.

(b) Coordination with the Competition Authority

A key relationship within this context is the relationship between the telecommunications regulator and the competition authority. As the telecommunications market shifts from monopoly to competition-based, there has been increasing involvement of the competition authority in the telecommunications sector. In most countries, the telecommunications regulator is responsible for technical regulation (e.g., spectrum allocation, number allocation, type approval, and standard setting) as well as telecommunications-specific economic and social regulation (e.g., licensing, universal service, price regulation, the interconnection regime, and rights-of-way), whereas the competition authority is responsible for anti-competitive behaviour and mergers. In practice, however, there is some overlap between the telecommunications
regulatory authority and the competition authorities and within that context, it is important to ensure concurrent jurisdiction and coordination (see Section 3.3) for more detail regarding the role of the competition authority).

(c) Coordination with the Broadcasting and Media/Content Authorities

In countries where telecommunications, broadcasting and/or media (i.e., content) are regulated by different entities, it is critical for clear channels of coordination to be established between the various authorities, particularly as the trend towards greater technological and service convergence continues. In particular, close coordination is necessary to enable the growth of IPTV, which may be hampered if there is conflict between the telecommunications and broadcasting regulatory authorities. In India, for example, the Ministry of Communications and Information Technology (MCIT) is tasked with telecommunications policy while the Ministry of Information and Broadcasting (MIB) monitors content related to television and radio broadcasting and film. In order to clarify the ministries’ roles in licensing IPTV services, in August 2008, India’s Union Council of Ministers of India approved IPTV guidelines that formally permit telecommunications operators to provide IPTV. Under the guidelines, the MIB allows any operator to offer IPTV, without further registration with the MIB, provided that the operator:

- Holds a unified access service and/or commercial mobile telecommunications service license duly licensed by Department of Telecommunications (DOT), which is a housed within the MCIT; no further registration with the MIB is necessary;
- Is an ISP with net worth of more than Rs. 100 Crores (USD 22 million) and having permission from the DOT to provide IPTV.

Although IPTV licensing of telecommunications operators and ISPs is under the purview of the MCIT, the MIB is responsible for licensing of cable TV operators. Under the guidelines, any licensed cable TV operator is permitted to provide IPTV services without any further permission. All IPTV providers—whether telecommunications operators, ISPs or cable TV operators—must submit a declaration prior to beginning IPTV services to the MIB, MCIT and TRAI that provides details regarding the proposed service areas, start date and network infrastructure information. Once operators begin providing IPTV services, the MIB has the authority to monitor and inspect the facilities, as well as to address content-related issues.

As India exemplifies, where various authorities are held jurisdiction over telecommunications and broadcasting matters, high-level coordination (e.g., the Council of Ministers) and rules that set out each ministry’s responsibilities are important—if not necessary—to ensuring that such converged services are available in the country in a timely and orderly fashion.

(d) Coordination with Non-government Entities

In addition to the various government entities that the regulator must coordinate with, the regulatory authority also is required to interact with users, consumer groups, telecommunications operators, service providers, and investors.

In addition, regulators frequently meet with other regulators either on a bilateral basis or in regional and other international fora (e.g., CITEL, Regulatel, IRG, ERG, CEPT, APT, WATRA, TRASA, COMESA, ETSI, and ITU).

Best Practices in Building Effective Regulatory Institutions

As stated in the 2000 OECD Working Party Paper on Institutional Structures and Responsibilities, the ultimate objective of the administrative structure of regulation is not to have an independent regulatory body, but rather an effective regulatory framework. This framework and its implementation determine the ability of a country to achieve policy objectives such as making the market more competitive, stimulating technological diffusion and enhancing efficiency, and ensuring that consumers benefit from these developments.

The regulator is, in fact, a stakeholder in this process of market development. This makes transparent, practical cooperation and communication between the regulator and the policy-maker (as well as with other stakeholders) essential to ensuring that regulation is responsive to government policy decisions and the realities of the market. At the 2009 Global Symposium of Regulators (GSR-09), the participating regulators established Best Practices Guidelines for innovative regulatory approaches in a converged world to strengthen the foundation of a global Information Society. A key part of these guidelines, related to building effective regulatory institutions, provides for the following best practices:

1. Regulatory authorities should be able to carry out their mandate efficiently, while ensuring consistency and transparency of regulation, equal treatment of market players and accountability of regulatory decisions.

2. Regulatory authorities should be empowered with suitable tools to ensure enforcement of the various laws, by-laws, regulations and procedures.

3. The creation of a converged regulator in charge of Icts and broadcasting could be an effective step towards enabling market integration in a converged environment. Should this not be feasible, closer coordination and collaboration between the sector-specific regulatory authorities in charge of telecom, broadcasting and electronic media, as well as authorities in charge of competition is essential.

4. A converged regulator will require skilled human resources and adequate financial resources in order to perform its extended mandate successfully.

5. Strategic and policy activities to build the information society and to play an inter-sectoral coordinating role should be integrated into the converged regulator’s mandate.

6. Close collaboration with other concerned agencies is needed to ensure that appropriate measures and tools are put in place to safeguard Intellectual Property Rights (IPR), Internet safety covering such issues as the protection of the children online and fraudulent activities.

7. Monitoring and examination of the evolution of regulatory institutions should continue in order to develop effective, efficient regulation for the development of domestic markets and consumer welfare, as well as to share best practices.
8. International cooperation is necessary between national and regional regulatory authorities in building a harmonized and coordinated approach to oversee the evolution of the converged markets.

6.5.2 INSTITUTIONAL DESIGN OPTIONS

Governments have a range of options for regulating the telecommunications sector. When establishing a regulatory authority, governments must take into consideration the level of development and liberalization of the ICT sector, resources available within the country, as well as the historical context and the administrative and legal frameworks available for regulating the sector.

As competition increases, new regulatory priorities (e.g., market entry regulation) emerge, and issues of regulatory autonomy gain prominence (with the separation of regulation and operation) and can affect the choice of structure for the telecommunications regulator. The main issues relate to ensuring separation between regulation and operation (especially in the case where the historical operator was still under public ownership), guaranteeing an independent and long-term strategy for regulation and competition in the market and ensuring protection of regulation from short-term and sometimes personal political and economic pressures. The regulator also has to be insulated from undue influence by politicians, industry, legacy operators, and consumers. As a result, much emphasis has been placed on the need to create independent regulatory authorities for the telecommunications sector.

Today, a majority of countries have a national regulatory authority for telecommunications—the ITU T-Reg website lists 131 countries with a “separate regulatory authority.” Although some of the agencies fall into what are generally called “converged” regulatory authorities, the majority can still be described as focusing primarily on the telecommunications sector. Initial consensus often led to the establishment of a specific sector regulator, but the growing force of convergence has prompted a new and growing trend towards creating converged regulators. The justification is that a converged regulator is better suited to respond to new technologies and the interdependency of different communications services. Some countries have taken a different approach by including the regulation of the telecommunications sector in the mandate of a multi-sector utilities regulator, or by opting for an approach that veers away from sector-specific regulation and relies on the application of competition and antitrust rules to the communications sector.

In selecting the appropriate institutional structure, countries have various design options available from which to select, including economy-wide, infrastructure-wide, communication-wide or purely telecommunications-focused institutions. The choice depends in part on the extent to which the telecommunications sector is similar to (or different from) other sectors of the economy in a particular country and on the availability of suitably qualified staff. The greater the degree of openness and liberalization in the telecommunications sector, the greater the similarity in developments among the sectors, the larger the scope for the application of cross-sector rules that are applicable to competitive activities in general. A key question that ultimately drives the choice of institutional format is whether the regulatory framework strikes the right balance between recognizing the specificity of the telecommunications sector and promoting the coherence of regulatory decisions across sectors.

As the telecommunications market becomes liberalized and more competitive, disputes among operators, and between users and operators, generally increase. The regulator needs to have the authority to effectively resolve disputes and establish procedures to adjudicate them, and sufficient manpower to oversee enforcement (for further details on dispute resolution, see Section 6.2). These factors impact government decisions regarding the mission statement and mandate of the regulator and in some cases influence the choice of institutional design, including internal administration and staffing.

Flexibility is also a key issue that must be considered in choosing among the institutional design options. Appropriate regulatory structures change over time as sectors evolve. The change depends on the nature of the issues at stake—in transport and telecommunications, for example, where monopolies previously considered “natural” are eroding, the mandate of regulators is likely to change more rapidly.

The choice of institutional design per se will not guarantee success of the regulator. Whatever the institutional design option chosen, several important principles should be kept in mind, including:

$\text{Regulators must be perceived by industry to be independent – thus the importance of transparency and accountability of the regulator;}$

$\text{Regulators should have the expertise to assess and make sound judgments on both technical and industry-specific issues – thus the importance of appropriate appointment and staffing mechanisms;}$

$\text{The regulator must take into account various viewpoints and interests, including economic, social and political objectives. This balance should be reflected in the institutional structure and in the system of checks and balances;}$

$\text{The institutional design, internal structure, and administration must be flexible enough to allow the regulator to adapt to market realities.}$

6.5.2.1 OVERVIEW AND COMPARISON OF DIFFERENT INSTITUTIONAL DESIGNS

There are four main institutional designs for telecommunications regulatory entities. First is the single-sector regulator whose sole function is to oversee the telecommunications sector (designated as Model 1 in this Section). The term “single-sector” is somewhat misleading as these entities, which in most cases originated from the separation of the operational and regulatory activities of state-owned post and telecommunications companies (PTTs), often include the postal and telecommunications industry as well as radiocommunications. The second design is known as the “converged” regulator, meaning those regulatory entities that oversee a broader range of services which, in addition to telecommunications, also include information and communications technologies and broadcasting (designated as Model 2 in this Section). The multi-sector regulatory authority (Model 3) usually encompasses various industry sectors that are considered public utilities, e.g., telecommunications, water, electricity, and transportation. The fourth category is not a regulatory authority per se, but an approach in which general competition policy is the main method of overseeing the telecommunications sector (designated as Model 4 in this Section).

Characteristics of these models of institutional entities for telecommunications regulatory agencies are as follows.

Model 1 – Single sector regulators
Prior to liberalization it was common for a state-owned operator to be responsible for regulating the post and telecommunications industries as well as for radiocommunications issues, and in some cases, even serving as international representatives of their respective countries with regard to their operations. After liberalization, this structure was no longer possible under most countries’ legislation. Thus, the operation and regulation functions were separated and independent regulators were established. In many countries, when telecommunications regulators were initially established, they simply took over the “regulatory function” from government-owned PTTs and therefore their mandate almost automatically included the administration of radiocommunications and postal services in addition to telecommunications.

In Europe, once the PTTs were separated and privatized, the regulation of telecommunications, radio and the postal sector often was assigned to one agency. Telecommunications regulators in Europe were established by combining certain units within the public administration (or from the state-owned operator) or by transferring employees or units from the ministry to the new organization. The units that were transferred often remained the same and were integrated into the structure of the new organization, which was based on fields of activity and communications technologies. Within this context, regulators in Europe were generally organized in a technology/field-oriented regulatory structure and emphasis was placed on the recruitment of technologically-oriented staff (e.g., engineers).

A key advantage of a single-sector regulatory authority is that it can be focused on the complex technical challenges of the telecommunications sector, including network and service development. The telecommunications sector tends to be more dynamic than other utilities and a single-sector regulator can often adapt to this more easily. One disadvantage of sector-specific regulators is that sufficient resources may not be available to staff the different regulator agencies and there may be duplication for regulatory activities that are common to different industries.

A justification for a single-sector regulator is based on the perception that the telecommunications sector includes specific technical issues, such as numbering, that are unique to the telecommunications sector and exhibits specific characteristics that differentiate it from other industries. Decision-making within communications policy is based on the expertise of the regulators. As experts, they participate in drafting laws and act as advisors to the appropriate ministry or other authorities when necessary. Regulators require not only need expertise in the technical, financial, and legal aspects of communications, they also need to systematically analyse present and future developments, and be able to cooperate with other countries on sector issues at the international level. Therefore, it is vital that staff is sufficient in number and suitably qualified to be able to face such a task. The perceived need for a specialized skill-set led the Cape Verde Government to establish a separate ICT specific regulator in 2004 (Institute of Communications and Information Technology - ICTI) in parallel with and despite the existence of a multi-sector (economic) regulator (Autoridade de Regulamentação Económica – ARE) which also has a mandate to regulate telecommunications. Since becoming operational, ICTI has in practice undertaken both the technical and economic tasks in the ICT sector, with ARE focusing on the other sectors. This has been in part because ICTI has the staff and desire to review a wide range of telecommunications issues, including tariffs, that would normally be within the purview of ARE, and because the two institutions have come to an agreement allowing ICTI to take the lead role on telecommunications issues.

Another advantage of single-sector regulators relates to the origin of their staffing. In many cases, single-sector regulators tend to inherit staff from the former PTT and therefore have a core of specialized professionals from the start with a thorough understanding of the technical issues and strong engineering skills, a key advantage when dealing with complex network issues. Opponents of the single-sector regulatory structure argue that the origin of this specific skill set is, in fact, one of the key disadvantages of establishing a single-sector regulator. These critics argue that staff could be biased in favour of the incumbent, and thus more subject to capture by dominant forces. While this is an issue to be considered, it is not unique to the single-sector regulator. Whatever the option chosen, there must be a series of “checks and balances” to ensure that the regulator can perform its mandate independently.

One major concern within the single-sector model is the possibility of institutional rigidity. Since a single-sector regulator is restricted to telecommunications, this type of structure can limit the effectiveness of the agency and its staff members as it faces the issues raised by convergence. Given that regulatory authority has historically focused on a narrow sector, the regulatory authority may become nearly frozen in time in terms of defining the sector it is regulating. As a consequence, it may not necessarily draw the appropriate staff from across the broader communications sector necessary to be flexible and, therefore, is unable to adapt to the continuous changes in the communications sector. A practical example of such difficulties has been the case of single-sector telecommunications regulators having difficulties when incorporating next generation technologies and services into the regulatory framework.

In recent years, and especially with convergence in the communications sector blurring the boundaries between industries, overlapping responsibilities between sectoral regulators has also become an issue, leading sometimes to duplication of regulations and required authorizations for what are essentially similar services being offered to the public. This can cause conflicting decisions across sectors, or indeed lack of decisions where overlap between mandates cannot be resolved on a political level. The challenges of convergence have led several countries, including South Africa and the United Kingdom, to move away from single-sector regulators and evolve towards a converged regulator, thus merging agencies in charge of the various aspects of the communications sector. 

Model 2 – Converged regulator With a converged institutional design, all communications services (i.e., telecommunications), including radiocommunications, broadcasting and media (and in some instances postal services), are under the umbrella of one agency.

Several countries have followed the route of converging their institutions dealing with the communications sector, typically combining formerly discrete agencies responsible for telecommunications, broadcasting or information technology into one entity:
Aimed at providing basic needs to the public; they often use similar rights-of-way; and they typically involve the economic regulation of large infrastructure sector along with other utilities, such as electricity and water, and that infrastructure services share certain aspects: they are to effectively regulate the different infrastructure industries and sectors. It is often argued that with this type of structural organization, one arguments generally raised in favour of a multi-sector regulator is based on the perceived lack of resources and the need for economies of scale to effectively regulate the different infrastructure industries and sectors. It is often argued that with this type of structural organization, one set of staff can be used to oversee a variety of industries. The rationale is that telecommunications is considered to form part of the overall infrastructure sector along with other utilities, such as electricity and water, and that infrastructure services share certain aspects: they are aimed at providing basic needs to the public; they often use similar rights-of-way; and they typically involve the economic regulation of large

In December 1999, the Info-Communications Development Authority of Singapore Act of 1999 disbanded the former telecommunications regulator (Telecommunications Authority of Singapore, TAS) and the information technology agency (National Computer Board, NCB), to create one new statutory board, the InfoComm Development Authority (IDA).

The Independent Communications Authority of South Africa (ICASA) is the regulator of telecommunications and the broadcasting sectors. It was established in July 2000 as a result of the Independent Communications Authority of South Africa Act No.13 of 2000. It took over the functions of two previous regulators, the South African Telecommunications Regulatory Authority (SATRA) and the Independent Broadcasting Authority (IBA).

In 2001, the Saudi Arabian Council of Ministers issued a decision changing the name of the Saudi Communications Commission to the Communications and Information Technology Commission in light of new tasks it assumed in information technology.

Finland established a converged regulator, the Finnish Communications Regulatory Authority (FICORA) in 2001, which took over the responsibilities of the Telecommunications Administration Centre. In addition to telecommunications-related issues, FICORA is tasked with collecting television and license fees, issuing licenses for short-term television and radio broadcasting, monitoring the content of TV and radio programs and advertisements, as well as monitoring the level and quality of general postal services. FICORA also centrally administers radio frequencies.

In 1997, Italy created a single regulatory body—Communications Regulatory Authority (Agcom)—with responsibility for all telecommunications and broadcasting matters. Austria also established such a regulatory authority in 2001.

A similar approach was also taken by the United Kingdom. The Office of Communications (Ofcom) was established in the United Kingdom in December 2003 as a result of the Communications Act 2003 and became the regulator for television, radio, and telecommunications. Ofcom combines five former agencies: the Broadcasting Standards Commission (BSC), the Independent Television Commission (ITC), the Office of Telecommunications (OfTEL), the Radiocommunications Agency (RA), and the Radio Authority.

In February 2008, the Korean Government merged the Ministry of Information and Communication (MIC) and the Korean Broadcasting Commission (KBC) to create the converged Korea Communications Commission (KCC), which has jurisdiction over both television and telecommunications-related matters.

Even the European Commission’s Information Society Directorate was granted new responsibilities for audiovisual and media policies. The new Information Society and Media Directorate General brings together all three aspects of modern day electronic communications: broadcasting; computer networks; and electronic communication services.

Like the single-sector telecommunications regulator, the converged communications regulator tends to be strong in specialized engineering skills in the communications sector, which is an important core expertise in dealing with complex network issues. In addition, the converged communications regulator also meets the challenges posed by service convergence by bringing in related skills, and therefore overcomes what is generally viewed as being one of the main disadvantages of a single-sector regulator (e.g., a telecommunications regulator overly focused on the telecommunications sector).

This model also better meets the need for flexibility in terms of its internal administration’s ability to meet market realities. It gives the regulatory authority and its staff the flexibility to better handle the continuous technological and regulatory changes and developments within the ICT sector. By having all services – which are increasingly provided over a single network – under one regulator, the staff responsible for specific services can work with other parts of the regulator that are dealing with related issues, and therefore the regulator can take a more consistent approach when considering changing technologies and their effect on legacy regulations.

In addition, the converged model tends to resolve some of the overlap between telecommunications and broadcasting that has tended to become one of the regulatory issues regarding convergence. As was clearly shown in the EU’s 1997 Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors,10 and in its “99 Review,”11 convergence in communications has called into question the service-based vertical regulatory system, with industry increasingly demanding a reorganization of the regulatory institutions in order to address the challenges posed by convergence.

As further stated by David Currie:12

Ofcom believes that convergence is a reality and that a converged regulator is best placed to nurse that convergence. When the Internet can deliver what looks to all intents and purposes like television broadcasting in a few years’ time, then Ofcom and the Government will face awkward choices. Should, in the interests of fairness, the content regulation of terrestrial, cable and satellite broadcasting be rolled out to Internet broadcasters? Or should the content regulation of terrestrial, cable and satellite broadcasters be significantly rolled back, passing the baton to smart navigational devices that allow people to find the content that they want (subject to the law) and avoid the content that they do not want to see or hear? A converged regulator like Ofcom will I hope be able to bring wisdom to that debate.

Model 3 – Multi-sector regulator

Multi-sector regulators oversee not only the telecommunications sector, but other industry sectors with common economic and legal characteristics (e.g., telecommunications, water, energy, and transportation). Costa Rica, the Gambia, Jamaica, Latvia, Luxembourg, Niger and Panama, as well as state public utility commissions in individual states in the United States, have chosen this type of organizational structure.

The advantages and disadvantages of multi-sector regulators have been discussed in various fora, and opinions vary. One of the main arguments generally raised in favour of a multi-sector regulator is based on the perceived lack of resources and the need for economies of scale to effectively regulate the different infrastructure industries and sectors. It is often argued that with this type of structural organization, one set of staff can be used to oversee a variety of industries. The rationale is that telecommunications is considered to form part of the overall infrastructure sector along with other utilities, such as electricity and water, and that infrastructure services share certain aspects: they are aimed at providing basic needs to the public; they often use similar rights-of-way; and they typically involve the economic regulation of large
monopolies with network economic characteristics (i.e., high sunk and fixed costs). However, experience in some countries, such as Latvia, has shown that existing multi-sector regulators are performing poorly.

The answer to the staffing question is straightforward on the one hand and more complex on the other. Looking at the question in the strictest sense, single-sector regulators will look for highly technical staff focused on the telecommunications sector and generally organize their staff in industry-based units (e.g., post, telecommunications, radiocommunications). Converged regulators will look for staff that can bring in the expertise and know-how from the different sectors they are regulating. Generally these regulators are organized in functional units or indeed in horizontal, project-based units. Multi-sector regulators will recruit staff specialized in the different sectors, and are generally organized in terms of the sectors within their mandate although some pool legal and economic resources to deal with, for example, tariffing issues that may be common across the different sectors.

An important question within this context, however, is to what extent staff can actually be used across the sectors. Often, staff members within this model are generally recruited in terms of the sector they are regulating and only legal and occasionally economic staff is pooled to deal with specific issues that occur across the sectors. Luxembourg, for example, has organized its agency according to industries/services: telecommunications, electricity, gas, postal and spectrum management issues - these are then divided into smaller issue-specific units. This can also be seen in Belize and Niger. An interesting discussion of this issue vis-à-vis state-level PUCs in the United States is presented in the WDR Discussion Paper # 0204 of March 2002, which claims that:

Examination of the actual organization of U.S. state-level multi-sector regulatory agencies, the Public Utility Commissions (PUCs), does not provide much evidence of economies of regulation, except at the level of the decision-makers, or Commissioners. Generally, staff members specialize in a particular sector such as telecommunications or water and work within distinct divisions that are devoted to sector-specific regulation. Resources are shared at the levels of commissioners, who hear cases pertaining to all sectors, the senior staff who manage the agency as a whole, and the legal staff responsible for hearings and related procedural matters. Generally, the different divisions are located in common facilities and use common amenities such as libraries, which may yield certain savings. ... It must also be noted that U.S. PUCs do not have jurisdiction over frequency management, cable and broadcasting. ... The U.S. PUC experience shows that there may be significant economies in areas such as use of buildings, libraries, and training facilities in common. This does not, however, justify multi-sector regulation as such, only close collaboration among sectoral regulatory agencies. 14 It is also often the case that a multi-sector regulatory authority is not created from scratch, but is the result of merging several existing agencies. In most countries it is not possible to dismiss employees in the course of such a merger, negating the realization of the hoped-for economies of regulation. In addition, a merger of two going concerns often creates significant morale problems and results in increased expenditures. 16

Another disadvantage of this model is that often the telecommunications sector is the most liberalized sector under the auspices of the multi-sector regulator and therefore can be negatively affected if the telecommunications regulator is merged with other more highly regulated and less agile industries. Indeed, it may make matters worse by having telecommunications regulated in an environment with utilities that are progressing at a different pace where the needs and priorities are different, or where resources are practically non-existent. Moreover, by adding sectors, such as electricity and gas, that do not always produce revenues for the regulator, the telecommunications sector may bear a disproportionate share of the costs of regulation, potentially driving up regulatory costs for telecommunications providers.

Supporters of this model argue that having a multi-sector regulator can reduce political and other influences regarding the decision-making process as opposed to, for example, the single-sector regulator. Despite such claims concerning "capture" (meaning undue influence by politicians and/or dominant players), this does not necessarily seem linked to the institutional design option per se but is more a product of whether a clear set of "checks and balances" is incorporated in the design of the regulator. Indeed, a risk of the multi-sector regulator could even be that "capture" by a dominant ministry or entity not only affects a single sector but all sectors regulated by the multi-sector regulator. In addition, there may be greater complexity in establishing the legal framework for the multi-sector regulator, including the level of independence and allocation of functions as between the minister and the regulator. 17 Furthermore, potential delays in instituting necessary reforms may result due to the disadvantages mentioned above.

Some argue that using cross-sector institutions to regulate telecommunications is justified in light of the growing convergence between telecommunications and other sectors. Ensuring that cross-sector rules and institutions are used to regulate telecommunications as well as other similar (utility) sectors may bring benefits, such as greater regulatory certainty (as operators may better forecast what to expect by observing how the regulatory framework is applied in other sectors) and lower risks of distortion between different activities. A counterargument is that the rationale behind establishing a multi-sector regulator is more a question of regulatory efficiency than of dealing with convergence in the communications sector. Even within this model it really depends on the mandate of the multi-sector regulator (i.e., whether it deals with just telecommunications or with communications as well as water, electricity, and transport) to determine whether a utilities-based regulator has the staff and internal administration that allows it to effectively cope with the challenges posed by ICT convergence.

As the market develops, and convergence affects the way in which communications is offered to the people, regulators not only are expected to possess high technical expertise, but to have an understanding of the structure and development trends of the communications market. Furthermore, regulators should be able to anticipate potential situations that could threaten or interfere with the development of the electronic communications industry. The concern that staff in a single-sector telecommunications regulator may face difficulties when incorporating next generation technologies and services into the regulatory framework is heightened with a multi-sector regulator since the staff of a multi-sector regulator would not necessarily be as technically focused on the communications sector. Obviously, a multi-sector regulator could recruit staff suited to the task of regulating the communications market, but the risk, especially where economists and legal experts are shared across the utilities sector, is that the pool of expertise becomes more diluted, thus compromising the capability and ultimately the credibility of the regulator.

A clear discussion of the advantages and disadvantages of multi-sector regulators is presented by Schwartz and Satola in the Table 5-3.
An alternative approach is to rely on the application of competition and antitrust rules rather than on detailed sector-specific rules and institutional designs. Until the passage of the Telecommunications Act of 2001, New Zealand, for example, had chosen to entrust antitrust authorities with the task of administering all rules controlling market power in telecommunications. There was no sector-specific regulatory requirement except for special obligations on Telecom New Zealand, called the Kiwi Share Obligations, which effectively regulated the price and availability of residential telephone service. Instead of sector-specific regulation, the regulatory regime for telecommunications in New Zealand relied primarily upon general competition law, the Commerce Act 1986, to prevent anticompetitive behaviour. Thus, the primary constraint on the conduct of telecommunications firms in New Zealand was the same competition law that applied to all economic enterprises in New Zealand.

However, in late 2000, the Minister of Communications determined that New Zealand’s reliance on the Commerce Act and general competition authority was inadequate in some respects to regulate the telecommunications sector. As a result, the Telecommunications Act 2001, which contained sector-specific provisions, was passed in December 2001 to complement the generic competition provisions of the Commerce Act. Furthermore, the position of a Telecommunications Commissioner, a specialist stand-alone commissioner within the Commerce Commission, was established, to regulate the telecommunications sector, and in particular to resolve disputes over regulated services, to report to the Minister on further designations or specifications of additional services, and to monitor and enforce the Kiwi Share obligations. Additionally, the Telecommunications Commissioner has statutory responsibility for decisions made under the Telecommunications Act.

### Table 5-3: Model 3 – Multi-Sector Regulator

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>May reduce risk of “industry capture” because the creation of a regulator with responsibility for more than one sector can help avoid the rule-making process being captured by industry-specific interest groups</td>
<td>May increase risk of “industry capture” by a dominant industry player not only of the single sector regulator but of the entire MSR body</td>
</tr>
<tr>
<td>May reduce risk of “political capture” because a regulator with responsibility for more than one sector will necessarily be more independent of the relevant line Ministries, and, in addition, the broader range of entities regulated by such a regulator will be more likely to resist political interference in a decision on, say, price regulation in one sector since that could set a precedent for other sectors</td>
<td>May increase “political capture” by a dominant ministry of not only the single sector regulator but of the entire MSR body</td>
</tr>
<tr>
<td>May create more precedents, and therefore less uncertainty for investors because a decision by an MSR in relation to one sector on a regulatory issue common to other sectors will set a precedent that is valuable to potential investors in those other sectors</td>
<td>May increase risk that a precedent set in relation to one sector could be applied inappropriately in another sector (although this can also be mitigated by creating strong sector-specific departments underneath a central cross-sectoral decision-making body)</td>
</tr>
<tr>
<td>May achieve economies of scale in the use of one set of high caliber professionals</td>
<td>May have a dilution of sector-specific technical expertise required where, for example, the skills of a tariff expert for one sector are not transferrable to similar tariffing issues in another sector</td>
</tr>
</tbody>
</table>

### Model 4 – No specific telecommunications regulatory authority

An alternative approach is to rely on the application of competition and antitrust rules rather than on detailed sector-specific rules and institutional designs. Until the passage of the Telecommunications Act of 2001, New Zealand, for example, had chosen to entrust antitrust authorities with the task of administering all rules controlling market power in telecommunications. There was no sector-specific regulatory requirement except for special obligations on Telecom New Zealand, called the Kiwi Share Obligations, which effectively regulated the price and availability of residential telephone service. Instead of sector-specific regulation, the regulatory regime for telecommunications in New Zealand relied primarily upon general competition law, the Commerce Act 1986, to prevent anticompetitive behaviour. Thus, the primary constraint on the conduct of telecommunications firms in New Zealand was the same competition law that applied to all economic enterprises in New Zealand.

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6.5.2.2 OVERVIEW AND COMPARISON OF DIFFERENT ORGANIZATIONAL AND ADMINISTRATIVE STRUCTURES

Organizational Structures

Determining the ideal organizational structure for a regulatory authority requires an assessment of various factors including: the country’s needs and objectives; political environment; legal requirements; and available expertise in the labor market. There are essentially two models of leadership organization for regulatory authorities: (i) the collegial body (a board or commission composed of multiple members); and (ii) the single regulator (often given the title of chairperson or president). Each has its advantages and disadvantages, and variations of each model are in use around the world.

The collegial body model usually involves a board or commission made up of individuals with different areas of expertise, potentially bringing those varied perspectives to bear on each regulatory issue. In addition, a collegial body could be seen as more independent, as it is less likely that all members would be influenced by the same actors, whether in the government or the private sector. Collegial bodies also often impart a sense of legitimacy in decision-making, as it is less likely that a single individual was responsible for any particular decision. However, as in any decision-making process involving more than one actor, the development of regulatory decisions can be a slower process and more subject to internal struggle.

By comparison, the single regulator model has the potential benefit of a consistent approach to regulation and decision-making, as decision-making authority is vested in a single individual who may have a unified plan for the telecommunications sector. In contrast to the collegial body model, single regulators can make decisions much more quickly, even when constrained by due process regulations. However, the single regulator is also potentially more vulnerable to undue influence exerted by external actors, whether in the government or in the private sector. In addition, a single individual may not be able to match the expertise of a collegial body made up of individuals from different backgrounds, although experienced staff can provide substantial expertise.

The number of regulators led by collegial bodies and single regulators continues to fluctuate as governments restructure their regulatory frameworks for telecommunications. However, based on responses received by the ITU to its annual Telecommunications Regulatory Survey in 2010, approximately 58 per cent of the regulators worldwide are collegial bodies. Based on 2010 data, it can be seen that there are significant differences between the balance of collegial bodies in various regions, ranging 25 per cent in the CIS region to 74 per cent in Africa. (See Figure 5-C.)
Management Structure

(a) Regulatory authorities headed by a collegial body

Nearly 60 per cent of the 158 countries that submitted responses to the 2010 ITU survey indicated that their regulatory agencies are collegial bodies.5 These multi-member commissions or boards of directors are composed of a varying number of members (usually an odd number from three to seven to minimize tie votes) that oversee and direct all activities of the regulator. One member is the chairperson or president of the commission/board and sometimes has a “casting” or deliberative vote that counts twice and acts as a tie-breaking vote, if necessary.

Depending on the appointment process of the regulator, collegial body members can be appointed by one single branch of government, multiple branches of government and/or other industry stakeholders. This issue is further discussed in Section 5.3 on Staffing and Remuneration.

Management and administrative functions

The day-to-day management and administrative functions of the regulator are handled in varying combinations by: an executive director, chief executive officer (CEO), the chairperson, and/or managing director (collectively referred to herein as managing director). In some countries, like Botswana, Brazil, Canada, Greece, Ireland, Jordan, Malaysia, Mexico, Portugal, South Africa, and Venezuela, the managing director of the regulatory authority is the chairperson of the commission/board.6

The managing director acts as a liaison between the commission or board of directors and the departments/divisions that comprise the regulatory authority. In the Dominican Republic, the managing director is part of the board and acts as its secretary, but does not vote.7 In Peru, the managing director of the Organismo Supervisor de la Inversión Privada en Telecomunicaciones (OSIPTEL) participates in the board of directors’ meeting sessions, but essentially acts as an observer and cannot vote.8

The duties and responsibilities of the managing director differ from country to country. In Bahrain, the general director not only handles the day-to-day affairs of the regulator, but also determines the internal structure and organization of the agency, and has authority to: delegate his functions to other agency staff; employ staff members and consultants; and establish conditions of employment for staff members (this last one with approval from the board).9 In Peru, OSIPTEL’s managing director is responsible for managing the regulator and carrying out the policies established by the board of directors and president of the regulator. In addition, the managing director is responsible for: the legal, administrative and judicial representation of the regulator; proposing policies and strategies for the development of OSIPTEL; developing the annual report and the regulator’s budget for approval; and hiring, promoting, suspending and firing staff members (decisions regarding management staff members need approval from the board of directors and president of OSIPTEL).10

(b) Single individual structure

Single individual regulators are headed by a CEO, president or director general (collectively referred to herein as CEO) who oversees all policy, management, and administrative activities of the regulatory authority. In most cases, the CEO is appointed by the central government, often the minister responsible for communications. The term of office is fixed and generally varies from two to six years. However, in certain countries, including Estonia, Ethiopia, Liechtenstein and Norway, the CEO does not have a specific term of office.11

The duties and responsibilities of the CEO differ from country to country, but they are generally granted a broad scope of authority and responsibility. In Romania, the president of the National Authority for Management and Regulation in Communications (ANCOM) has a broad slate of responsibilities including approving ANCOM’s strategies, activity plans, investment plans and internal regulations, issuing decisions, approving the regulator’s organizational structure, including the powers of the two vice-presidents, and representing ANCOM in its relations with the Parliament, Government, ministries and other public authorities and organizations.12 In Guatemala, the Superintendencia de Telecomunicaciones (SIT) is headed by a superintendent who is responsible for managing and defining SIT policies, developing the regulator’s organizational structure, appointing and removing SIT employees, preparing its annual budget, and informing (at least twice a year) the Ministry of Communications, Transportation and Public Works of the regulator’s activities and internal administration issues.13

The CEO is typically assisted by one or more deputies to whom he can delegate responsibilities. For example, in Romania, the law sets out that the president of the ANCOM is to be assisted by two vice-presidents.14 Similarly, in Denmark, the director general of the National IT and Telecom Agency is assisted by two deputy director generals.15

Administrative Structure regarding Functions of Regulatory Authorities

Once the scope of work and type of management structure is established, a country must determine how the functions of the regulatory authority will be organized (e.g., whether by industry/service, function or project).

(a) Industry or service-based departments

Many regulators follow a vertical (all regulatory issues) structure comprised of departments that address specific services areas (e.g., broadcasting, telecommunications, and information technology) under the authority of the regulator, as well as departments typically responsible for operations and administrative functions.16
Denmark’s National IT and Telecom Agency, a converged regulator, is divided into 12 divisions: (1) Telecommunications User Policy; (2) Market Affairs; (3) Mobile Communications; (4) Spectrum; (5) Technical; (6) Green ICT Management and Green ICT; (7) Citizen Communications; (8) E-Inclusion; (9) Digitisation and ICT Standardisation—Policy; (10) Digitisation and ICT Standardisation—Development; (11) ICT Security; (12) Centre for Digital Signature. In addition, the Department of Strategy and Coordination addresses management and communication; strategic affairs; financial affairs and international affairs. Figure 5-D below shows the organizational chart for Denmark’s National IT and Telecom Agency.

In the case of Luxembourg, which has a multi-sector regulator, departments/divisions are responsible for the following sectors: electronic communications, spectrum management, transport and distribution of electricity and natural gas, postal and railway. Each of these departments/divisions is divided into smaller issue-specific units.

(b) Function-based departments/divisions

These regulators follow a horizontal (narrow range of regulatory issues) structure, but they cover all the specific service sectors that are regulated. Function-based departments/divisions have responsibility for areas such as: administration and human resources; enforcement; legal analysis; licensing; public relations; technical analysis and development; research and market analysis; user/customer services; and universal service fund administration.

For example, Chile’s Subsecretaria de Telecomunicaciones (SUBTEL) is divided into seven function-based divisions: Administration and Finance; Regulatory Policy and Market Analysis; Legal; Concessions; Enforcement; Universal Access to the Information Society; as well as a division for Strategic Planning, Management Control and Technological Policy. Each of these divisions is subdivided into units that are responsible for more specific topics. The Administration and Finance Division, for instance, is subdivided into five units that are responsible for finance, human resources, procurement, documentation, and a unit that handles information (including claims and suggestions). The Regulatory Policy and Market Analysis Division of SUBTEL is subdivided into three units, one for spectrum engineering and administration, one for economic regulation, and one for strategic studies.

Malaysia’s Communications & Multimedia Commission (MCMC), a converged regulator, is also divided into function-based divisions. They include: Industry Development; Regulatory State Coordination; Technical; Resource Planning & Management; Monitoring & Enforcement; and Management & Support Services. Similar to the Chilean model, each of these divisions is then subdivided into topic-specific units. The Regulatory State Coordination Division is subdivided into two departments, one for regulatory coordination (which includes units for licensing and for universal service provision) and the other for state coordination (which includes a unit to manage regional office matters).

Some regulators combine aspects of the industry/service and function-based structure models. The Canadian Radio-television and Telecommunications Commission (CRTC) divides the Commission’s responsibilities into the following departments/divisions: Broadcasting; Telecommunications; General Counsel; Legal; Strategic Communications and Parliamentary Affairs; Policy Development and Research; and Compliance and Enforcement. The SIT of Guatemala distributes responsibilities among three main departments/divisions:
Figure 5-F provides a diagram of Canada’s CRTC showing how a regulatory authority can combine both industry/service and function-based departments/divisions within its organizational structure.

(c) Project-based departments/divisions

These regulators can be organized as either industry/service-based or function-based departments/divisions, but they have a horizontal structure because departments/divisions collaborate when a project needs the support and expertise of various competencies. Morocco’s Agence Nationale de Réglementation des Télécommunications (ANRT) is a function-based regulator divided into departments/divisions that deal with technical, administrative and operator issues, but has as a horizontal structure because staff members from units within these different departments/divisions are, as a matter of course, brought together to work on projects that require varied skills. The Malta Communications Authority (MCA) also utilizes a matrix organizational structure that allows the regulator “to adapt to change and maximize its expertise by shifting emphasis from a functional to a project-based approach.” Figure 5-G shows a diagram of Malta’s MCA, showing how this function-based regulatory authority uses a horizontal structure.

However, it should be pointed out that regardless of the departmental/division structure of the regulators, it is often the case that multiple departments and subunits will work together to accommodate the evolving needs of the telecommunications market, as well as facilitate and expedite internal procedures.

6.5.3 ADMINISTRATIVE STRUCTURES: STAFFING AND RENUMERATION

The administrative structure of the regulator, including staffing processes, the legal status of the staff, remuneration principles, and the ability to contract outside consultants provide key insights into the independence, depth of knowledge, and impartiality of the regulator, as well as its ability to attract and retain qualified personnel. By examining a regulator’s qualifications (for both leadership and staff positions), we can discern the types of expertise present among the regulatory leadership and staff, while the appointment and removal processes for regulatory authority leaders can provide an indication of the influence over the regulator wielded by other government agencies. The legal status of the regulator’s staff is an important indicator of the protections afforded to the staff, particularly regarding liability for the decisions made by the regulator, as protection from liability is an important consideration for current and potential staff members. Analysis of remuneration principles for both leadership and staff positions provides insight into multiple issues, including the status afforded to the leadership and staff as compared to other government employees and the flexibility afforded to the regulator to offer salaries that will attract and retain qualified personnel. The ability of regulators to contract outside experts is another important enhancement to the regulator’s ability to act independently and efficiently, providing the potential for impartial analysis, enhancement of capacity that is lacking within the regulator, and solicitation of advice from concerned stakeholders.
6.5.3.1 STAFFING PROCESS (STAFF RETENTION AND RESOURCE DEVELOPMENT)

Qualification Requirements for Heads of Regulatory Authorities

Most regulatory authorities are empowered by laws or regulations that provide some guidance as to the qualifications of the single regulator or collegial body members. Such qualifications vary, ranging from specific disciplines for collegial body members from various backgrounds to general requirements for relevant expertise. For example, under Bulgaria’s Electronic Communications Law promulgated in 2007, members of the five-member Communications Regulation Commission (CRC) must be Bulgarian nationals with professional qualification in the field of communications, information technologies, media, economics and/or law.  

Qualifications for members of TRAI in India are similar to Bulgaria’s current requirements—members of the TRAI must have special knowledge of or professional experience in telecommunications, industry, finance, accountancy, law, management or consumer affairs. However, Indian law also requires that members appointed from within the Government previously must have held a high position in the Government. By requiring regulators or collegial body members to have experience in certain professional sectors, an effort is being made to ensure that the regulatory authority is led by individuals with expertise beyond simply telecommunications. Regulators face issues involving questions of law, finance, economics, trade, consumer affairs and security, in addition to telecommunications; thus, it is important that such expertise be reflected not only among the regulatory staff, but also among the regulator’s leadership.

The difference between, for example, the former Bulgarian and current Bulgarian and Indian approaches is that Bulgaria’s former membership of the CRC always included at least one lawyer and one economist. One potential downside to this approach is that some countries may find it difficult to find appropriately qualified candidates for the specifically mandated positions. If, for example, the authorizing law requires the presence of an economist and a qualified economist is not available, there would be a vacancy among the regulatory authority leadership. This vacancy might not only manifest itself in a lack of economic expertise, but could also complicate decision-making by a collegial body that is a member short of its intended size and/or which lacks a tie-breaking vote. On the other hand, while the balance of areas of expertise among the members of Bulgaria’s current CRC and India’s TRAI may fluctuate over time and lack certain areas of expertise depending on the composition of the regulatory authority leadership, it also provides for the flexibility to emphasize differing areas of expertise among the regulatory leadership as the government, as well as market conditions and other factors, influence regulatory priorities.

In addition to mandating specific areas of expertise that the regulator must reflect and setting general expertise qualifications, a third approach to determining regulatory authority or collegial body qualifications is to avoid specifying any requirements regarding expertise (e.g., Cameroon, Ecuador, Malaysia, and the United States). This approach provides greater flexibility than the Indian and Bulgarian approach, by allowing the regulatory authority to be led by anyone appointed to the task. While this approach certainly provides the most flexibility to appoint regulators, it also opens the door to the possibility of appointing unqualified regulatory authority leaders. However, in practice, it is unlikely that a completely unqualified individual would be appointed to lead a regulatory authority. In cases where appointees are selected by – or at least recommended by – multiple branches of government, such as Ecuador and the United States, it is improbable that multiple stakeholders would approve of an unqualified appointee. Even in countries such as Cameroon and Malaysia, where the regulatory authority leadership is appointed by a single branch of government, the appointing authority runs the risk of not only negatively impacting the telecommunications sector, but also the political risk of being seen as having made an unwise appointment.
Appointment Process

The manner in which the head of the regulatory authority is appointed provides important insight into the independence of the regulator. Generally, if the head of a regulatory authority is appointed by a single branch of government it is less likely to exhibit independence than those who have the support of multiple branches of government. For example, a collegial body may feature members selected by different branches of the government, ensuring that no single branch has excessive influence over the regulatory authority. In Bulgaria, for example, the chair of the CRC is determined by the Council of Ministers and appointed by order of the Prime Minister, the deputy chair and two other members are elected by the National Assembly, and one member is appointed by the President of Bulgaria.

In a 2000 report, the Organisation for Economic Cooperation and Development (OECD) found that the majority of its members were characterized by independent regulators that are led by an individual or individuals appointed by the president or minister upon the recommendation of the cabinet or minister. In addition, the legislature may be involved in approving the members of the collegial body. For example, a nomination or appointment may be made by the head of government or a minister and then confirmed or approved by another government body (e.g., council of ministers, cabinet, or Senate). In the United States and Nigeria, the commissioners are appointed by the president of the country, but require confirmation by the country’s Senate. In Portugal, the governing ministry (currently the Ministry of Public Works, Transportation and Communication) proposes board member candidates for the Autoridade Nacional de Comunicações (ICP-ANACOM) and their appointments are made official through a resolution issued by the Council of Ministers.

An interesting example of the appointment process is Colombia, which has a rotating leadership. The Comisión de Regulación de Telecomunicaciones (CRT) is officially headed by the Minister of Communications, who serves as the President of the CRT. However, the CRT is also advised by a Committee of Commissioned Experts (Comité de Expertos Comisionados) selected by the President of Colombia. Each year, this panel of three experts elects one of its members to serve as the Executive Director of the CRT for a one-year term. As such, the President...
of the CRT (the Minister of Communications) is a member of the Government, and the Executive Director is an expert who serves at the will of the President of Colombia.10

In addition to appointments recommended by a cabinet or minister, regulatory authority leaders may be nominated by other industry stakeholders. In Turkey, for example, the Telecommunications Authority collegial body includes members who represent the telecommunications sector and consumers. The member representing the sector is selected from among candidates put forward by each operator who claims at least 10 per cent market share. The member representing consumers is selected from among candidates nominated by the Ministry of Industry and Commerce and the Turkish Association of Chambers and Exchanges.11

In the Dominican Republic, the head of the five member board is appointed by the central government (i.e., the president), but three members are nominated by various industry groups – one by the telecommunications service providers, two by the broadcasting service community (one nominated by the television networks and the other by the radio and cable television networks), and the last member is selected, based on their professional qualifications, to represent consumer interest groups. However, the central government ratifies all nominations.12 In Uganda, seven commission members are appointed by the Minister with the approval of the cabinet. However, five of the board members are appointed based on a recommendation from each of the following institutions: the Institution of Professional Engineers, the Uganda Law Society, the Broadcasting Council (nominee must be a member of the council), and the remaining two members are well-respected professionals chosen from the public. Similarly, the legislation establishing the regulatory authority may require that the members of the board represent the different regions of the country (e.g., Nigeria12).

By comparison, regulatory authority heads that serve at the pleasure of the government – or the pleasure of one particular branch of the government – may be viewed as less independent because their job security is closely linked to one particular actor. Cases in which regulatory authority heads are appointed by a single or limited group of actors include Barbados14 and Indonesia.15 In Botswana, the Minister for Science, Communications and Technology appoints all five members of the Board of Directors, Including the Chairperson of the Board.16

A variation of the view of such appointees as less independent is when they are appointed by a figure outside the government, such as a monarch. For example, the head of Morocco’s ANRT is appointed by a royal decree and can only be removed from office by another royal decree.17 In the case of Morocco, this arrangement theoretically confers a greater degree of independence upon the ANRT’s director general with respect to the government, because the director general serves at the pleasure of the king, rather than the government or the prime minister. However, while the director general enjoys a degree of independence from the government, he or she may still be removed from office by the king at any time.

Fixed Terms

A large majority of countries mandate fixed terms for the heads or members of the board of the regulatory authority. Of the 85 countries that responded to the 2005 ITU Telecommunication Regulatory Survey, 75 indicated that their regulators had fixed terms, with the majority ranging between two and five years. The remaining 10 countries indicated that no fixed term of office was specified in their laws or regulations.18 Similarly, a 2000 OECD report noted that most member states had fixed terms for their regulatory authority heads.19 In some countries, like Bahrain, Panama and South Africa, the term can vary depending on the position the person holds within the authority.20 In most countries, collegial body members can serve no more than two consecutive terms of office.

Individuals with fixed terms of office, particularly those that do not coincide with changes in government, are likely to feel more secure in their position and exhibit more independence than those individuals who serve at the pleasure of the government. Often the applicable law or regulation indicates whether individuals can be reappointed to a position after their term has expired. Much like term limits for legislators and heads of state, it is debatable whether limiting an individual’s tenure in a regulatory leadership position permits them more freedom to act without regard for reappointment or forces qualified individuals to give up their position due to an arbitrary regulatory or legislative provision.

Removal from Office

Just as important as the appointment process and criteria in establishing regulatory independence is the power of removal of regulatory heads from office. Legislation or regulation often specifies the cases in which a regulatory authority head or collegial body member may be removed from office (such as conflict of interest or failure to perform official duties). For example, in Canada, members of the Canadian Radio-television and Telecommunications Commission (CRTC) must not have any direct or indirect role in a telecommunications undertaking or business and may only be removed during his or her term for good cause.21 Similar conflict of interest prohibitions are common among telecommunications regulators. For example, in Uganda, a member of the Uganda Communications Commission may be removed if the officer 1) is continuously and persistently unable to discharge the functions of the office; 2) engages in misbehavior or abuse of office; 3) is subsequently disqualified from membership due to holding any interest in a telecommunications company, bankruptcy or mental/physical illness that prevents performance of duties; or 4) fails to disclose to the Commission any interest in contract or proposed contract or any other matter before the Commission.22 In some cases, conflict of interest extends to cover the immediate family of the regulatory body official, as is the case in Jordan where a board member of the Telecommunications Regulatory Commission may be removed if the board member, spouse or first-degree or second-degree relatives have a direct or indirect investment in the ICT sector during the member’s term of office.23 In India, members of the collegial regulatory body, TRAI, can also be removed from office for conflict of interest reasons or for abuse of their position, although the Supreme Court must support such a dismissal.24

In addition, it is not uncommon for laws or regulations to specify that regulatory authority heads or collegial body members can be removed from office for failure to commit appropriate time to their duties. In Hungary, members of the Communications Regulatory Commission’s collegial body are to be removed from office if they are unable to carry out their duties continuously for more than 90 days.25 In Jordan,26 Sudan,27 and Tanzania,28 members of the collegial bodies can be removed from office for failure to attend a minimum number of meetings. In India, for example, TRAI board members may be removed from office if they fail to attend three consecutive sessions or six non-consecutive sessions in one year without a reason acceptable to the board. Similar to conflict of interest or abuse of power rules, minimum attendance or participation rules increases the likelihood that regulatory authority leaders are carrying out the job to which they were appointed.

Some regulators also hold their agency leaders to a high moral standard. In India, for example, members of the TRAI can be removed from office
as a result of offenses which are judged to involve "moral turpitude" or as a result of a loss of mental or physical function that prevents the member from fulfilling their duties. Similar moral qualifications are found in the laws and regulations governing membership in the collegial bodies of telecommunications regulators in countries including Brazil, Jordan, and Sudan.

### Legal Status of Staff

In the majority of cases, the staff members of regulatory authorities are considered public employees (or other similar terms, such as civil servant or public servant), making their employment subject to the same rules applied to public employees throughout the government.

In some cases, the head(s) of the regulatory authority are also considered to be public employees for some or all purposes. For example, the Canadian Radio-Television and Telecommunications Commission Act specifically states that Commission members are public employees for purposes of superannuation. All collegial body members and other employees of the TRAI in India are considered public employees. Similarly, all members, officers, and employees of Singapore’s Infocom Development Authority (IDA) are considered public servants for the purposes of Singapore’s penal code. The Singapore penal code includes statutes relating to crimes carried out by public servants, as well as punishments for crimes carried out against public servants and contempt for the authority of public servants. In cases such as Singapore, the explicit application of the penal code to all IDA personnel is in line with the conflict of interest and abuse of power rules previously discussed, stating that IDA members and staff are not immune to the laws of conduct applicable to other citizens.

However, not all regulatory authorities classify their employees as public employees. In Botswana, employees of the BTA are considered parastatal staff in which the terms and conditions of staff employment is determined by the board in the staff members’ respective contracts of employment. No other civil service rules apply to BTA staff. In addition, as will be discussed below, the fact that BTA employees are not classified as public employees provides the regulatory authority with greater flexibility to offer competitive salaries and benefits. Although not subject to civil service regulations, BTA staff is protected from liability for actions taken in their professional capacities by principles of common law. Similarly, Singapore IDA personnel (including collegial body members, officers and staff) are also protected from personal liability for actions taken in good faith or to carry out the provisions of the IDA Act.

In some jurisdictions, such as India, the law specifically protects not only the personnel authority, but also extends protection to the federal government and the authority itself from liability for any actions carried out in good faith under the law or relevant regulations. Despite the freedom conferred by such protections, some countries do permit the assignment of liability to regulatory authority personnel. For example, all personnel of Venezuela’s Comisión Nacional de Telecomunicaciones (National Telecommunications Commission - CONATEL) are jointly and severally liable under civil, penal and administrative law for the decisions undertaken by the regulator. While such laws are likely intended to impress upon all regulatory personnel the importance of taking the appropriate regulatory actions, they are more likely to result in an overly conservative regulatory approach due to fear of personal liability among authority personnel.

Protection from individual liability is important to the functioning of a regulator, as it empowers regulatory personnel to make their best efforts in support of the regulator’s goals, or the duties assigned to the regulatory authority by applicable laws and regulations, without fear of being held personally liable for adverse consequences. This freedom is an important protection for employees (and incentive for potential employees) who have an interest in contributing to the effective regulation of the telecommunications sector, but who cannot afford the risk of personal liability for regulatory actions. Protection from liability for actions carried out on behalf of the regulatory authority is a specific protection afforded to regulatory personnel; however, in certain countries, such as Singapore, that protection does not confer immunity from all criminal laws and rules of conduct upon all regulatory authority personnel.

### 6.5.3.2 STAFFING DESIGN

Many factors affect the staffing design of a regulatory authority. Principally among these are market conditions, established objectives and goals, scope of the regulator’s responsibility, selected management structure, distribution of responsibilities/duties within the regulator, and available resources.

In most cases, the head of the regulatory authority is empowered by the applicable law or regulation to hire appropriate staff as deemed necessary to conduct the business of the regulatory authority provided such appointments are made within the confines of the regulator’s budget. The hiring of staff for the regulatory authority also is usually subject to national civil service or public employment laws or regulations.

Often the regulatory authority has detailed requirements that it must follow when filling a vacancy within the agency. India’s TRAI, for example, must fill each position by promotion, deputation or direct recruitment, with specific guidelines laid out for each method. Detailed regulations, such as TRAI’s, provide transparency to the public, ensure that candidates are informed of selection procedures, and facilitate the orderly internal process of hiring new staff.

However, the fact that regulatory authorities may be empowered to hire staff does not guarantee an abundance of qualified applicants. Regulators face significant challenges in recruiting and maintaining qualified staff. First, they need to identify individuals with the relevant expertise. Second, they must be provided by the government with the resources to offer compensation packages that will attract such qualified individuals. Third, they must be able to retain their staff members despite a highly fluid sector in which technologies, business plans, and regulations change with some frequency. Without addressing such challenges, regulators are likely to face staff shortages and high turnover rates.

In general, telecommunications regulators are composed of a diverse group of professionals that include: attorneys, economists, engineers, market analysts, accountants, and administrative support personnel. In addition, depending on the needs and resources of the regulatory authority, some have provisions that allow them to hire consultants on an “as needed” basis.

According to the results of the ITU’s World Telecommunication Regulatory Database survey for 2010, telecommunications regulator staff sizes range from three (Micronesia) to over 2,300 employees (Germany). (See Table 5-6 below.)
Gender composition, a factor taken into consideration by many human resources departments within telecommunications regulators, shows that the number of male staff members is usually much higher than that of women. According to the 2010 ITU World Telecommunication Regulatory Database, 36 of the 149 (about 25 per cent) responding countries indicated that their regulators currently have at least 50 per cent females on their staffs. Notably, however, female staff members in an additional 39 countries make up between 40 and 50 per cent of the total staff. As such, women comprise at least 40 per cent of the total staff members in over half of the responding countries. The table below (Table 5-7) shows those countries, per region, which have at least an equal number of female and male staff members:

<table>
<thead>
<tr>
<th>Region of the World</th>
<th>Country</th>
<th>Staff Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Namibia</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>South Africa</td>
<td>300</td>
</tr>
<tr>
<td>Americas</td>
<td>St. Lucia</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>1,993</td>
</tr>
<tr>
<td>Arab States</td>
<td>Comoros</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Egypt</td>
<td>429</td>
</tr>
<tr>
<td>Asia and Pacific</td>
<td>Micronesia</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Korea (Rep.)</td>
<td>1600</td>
</tr>
<tr>
<td>Europe &amp; CIS</td>
<td>Liechtenstein</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Germany</td>
<td>2,238</td>
</tr>
</tbody>
</table>

Gender composition, a factor taken into consideration by many human resources departments within telecommunications regulators, shows that the number of male staff members is usually much higher than that of women. According to the 2010 ITU World Telecommunication Regulatory Database, 36 of the 149 (about 25 per cent) responding countries indicated that their regulators currently have at least 50 per cent females on their staffs. Notably, however, female staff members in an additional 39 countries make up between 40 and 50 per cent of the total staff. As such, women comprise at least 40 per cent of the total staff members in over half of the responding countries. The table below (Table 5-7) shows those countries, per region, which have at least an equal number of female and male staff members:

<table>
<thead>
<tr>
<th>Region</th>
<th>Country and Percentage of Female Staff Members (50% or more)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Rwanda (60%)</td>
</tr>
<tr>
<td>Americas</td>
<td>Antigua and Barbuda (50%), Bahamas (59%), Barbados (84%), Canada (59%), Colombia (62%), Dominica (57%), El Salvador (54%), Grenada (50%), Guyana (60%), Jamaica (55%), St. Vincent and the Grenadines (63%), Suriname (52%), Trinidad and Tobago (52%), United States (55%), Venezuela (55%)</td>
</tr>
<tr>
<td>Asia and Pacific</td>
<td>Samoa (60%), Philippines (50%), Solomon Islands (50%)</td>
</tr>
<tr>
<td>Arab States</td>
<td>Lebanon (50%)</td>
</tr>
<tr>
<td>Europe &amp; CIS</td>
<td>Austria (56%), Bosnia and Herzegovina (57%), Bulgaria (60%), Cyprus (50%), Czech Rep. (52%), Estonia (53%), Greece (51%), Latvia (58%), Kazakhstan (50%), Kyrgyzstan (50%), Serbia (53%), Spain (54%), TFYR Macedonia (55%), Ukraine (60%)</td>
</tr>
</tbody>
</table>

Interestingly, developing countries as likely to have more equal numbers of female and male staff members within their telecommunications regulators as developed countries. Overall, however, Barbados has the highest percentage of female staff (84 per cent) while Saudi Arabia and Micronesia have the lowest, with no women working at the regulator. (See Table 5-8 for the lowest and highest percentages of female staff members by region).

Table 5-6: Lowest and Highest Staff Size of Regulators per Region

Table 5-7: Percentage of Female Staff Members by Region

The average age of employees is another aspect of a regulator’s staffing composition. For the most part, regulatory authority staff members around the world range from 25 to 65 in age, with the 25 to 34 and 35 to 44 age groups being the most significant in number. In Chile, for instance, SUBTEL’s staff of 236 employees had the following age group composition in 2009 (Figure 5-H):6

While the 45 to 50 age range is the largest age group of SUBTEL employees, Romania’s ANCOM has perhaps a slightly younger staff composition with nearly 40 percent of employees between the ages of 31 and 40 years. (Figure 5-I):7
The academic levels of staff members vary from one regulatory authority to another, but usually include: higher education (university degrees such as Ph.D., M.A. and B.A. or their equivalents), vocational/technical education, and high school education. As Figure 5-J shows, of the 667 positions filled at Romania’s ANCOM, nearly 85 percent of employees held a degree in higher education (i.e., college/technical school or university). Of those with higher education degrees the majority hold them in technical fields, as well as economics, law and humanities.

Telecommunications regulators usually organize their staffs hierarchically. There are various levels including: high-ranking management staff; professionals (which can have different levels based on their expertise, as well as their degree of responsibility); technical staff; administrative staff; and others, including consultants. It is not only the hierarchical levels that differ between regulators, but also the distribution of their staffs within each of these levels. For example, ICP-ANACOM in Portugal has the following levels and distribution (Figure 5-K):8

In contrast, the Independent Communications Authority of South Africa (ICASA) shows the following levels and distribution of staff within them (Figure 5-L):9
These graphs show how two regulators, with a somewhat similar hierarchical staff structure, can have very different distribution of their employees. While almost 50 per cent of ICP-ANACOM’s staff is upper/senior management and its semi-qualified professionals represent 30 per cent of the total staff, ICASA seems to have an inverted pyramid in comparison, as its senior management is only 6 per cent of the total staff and its administration staff members represent almost 60 per cent of all employees.

Staff members are commonly selected based on their professional background, experience in the sector, and academic accomplishments. Similar to other staff composition characteristics, this distribution also varies among regulatory agencies. In the case of OSIPTEL in Peru, the agency relies on lawyers, engineers and economists for 70 per cent of its staff (Table 5-9):

<table>
<thead>
<tr>
<th>Professional Background</th>
<th>Total Number of Employees</th>
<th>Percentage (of total staff)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountants</td>
<td>11</td>
<td>8%</td>
</tr>
<tr>
<td>Attorneys</td>
<td>37</td>
<td>28%</td>
</tr>
<tr>
<td>Economists</td>
<td>23</td>
<td>17%</td>
</tr>
<tr>
<td>Engineers</td>
<td>32</td>
<td>24%</td>
</tr>
<tr>
<td>Other Professions</td>
<td>14</td>
<td>11%</td>
</tr>
<tr>
<td>Secretaries</td>
<td>15</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>132</td>
<td>100%</td>
</tr>
</tbody>
</table>

In Colombia, lawyers, engineers and economists make up 82 per cent of the staff of the Comisión de Regulación de Telecomunicaciones (CRT) (Table 5-10):

<table>
<thead>
<tr>
<th>Professional Background</th>
<th>Total Number of Employees</th>
<th>Percentage (of total staff)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Support/Programmers</td>
<td>11</td>
<td>28%</td>
</tr>
<tr>
<td>Attorneys</td>
<td>11</td>
<td>28%</td>
</tr>
<tr>
<td>Business/Finance</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Economists</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Engineers</td>
<td>10</td>
<td>26%</td>
</tr>
<tr>
<td>Journalists</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>
The U.S. Federal Communications Commission (FCC) shows the following distribution by profession, based on respondents to the annual employee survey (Table 5-11):

<table>
<thead>
<tr>
<th>Professional Background</th>
<th>Total Number of Employees</th>
<th>Percentage (of total staff)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attorneys</td>
<td>185</td>
<td>31.2%</td>
</tr>
<tr>
<td>Clerical &amp; Administrative Support</td>
<td>29</td>
<td>4.9%</td>
</tr>
<tr>
<td>Consumer Affairs &amp; Consumer Outreach</td>
<td>28</td>
<td>4.7%</td>
</tr>
<tr>
<td>Economists</td>
<td>20</td>
<td>3.4%</td>
</tr>
<tr>
<td>Engineers</td>
<td>85</td>
<td>14.3%</td>
</tr>
<tr>
<td>Finance/Accounting/Auditing</td>
<td>31</td>
<td>5.2%</td>
</tr>
<tr>
<td>Information Technology</td>
<td>19</td>
<td>3.2%</td>
</tr>
<tr>
<td>Management/Program Analyst</td>
<td>58</td>
<td>9.8%</td>
</tr>
<tr>
<td>Specialist</td>
<td>78</td>
<td>13.2%</td>
</tr>
<tr>
<td>Other</td>
<td>60</td>
<td>10.1%</td>
</tr>
</tbody>
</table>

As shown above, the FCC, OSIPTEL, and the CRT all rely heavily on attorneys, accountants, engineers and other technical specialists. However, there are no specific guidelines regarding the percentage of employees per profession that should comprise a regulatory authority’s staff. The particular expertise required is better determined by assessing the needs and upcoming workload of the regulatory authority. In addition, the legislation establishing the regulatory authority often allows the regulator to hire outside consultants and experts if the need arises, as will be discussed in Section 5.3.5.

Another aspect that certain countries consider regarding the staffing design is racial/ethnic diversity. In South Africa for instance, ICASA strives to have a staff that reflects the demographic diversity of its society (Table 5-12):

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Total Number of Permanent Employees</th>
<th>Percentage (of total staff)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>241</td>
<td>72%</td>
</tr>
<tr>
<td>Asian</td>
<td>17</td>
<td>5%</td>
</tr>
<tr>
<td>Colored</td>
<td>23</td>
<td>7%</td>
</tr>
<tr>
<td>White</td>
<td>54</td>
<td>16%</td>
</tr>
<tr>
<td>Total</td>
<td>335</td>
<td>100%</td>
</tr>
</tbody>
</table>

### 6.5.3.3 JOB DESCRIPTIONS

In general, most regulatory agencies include the following information on job descriptions:

- key responsibilities and duties;
- experience required;
qualifications/evaluation criteria; special skills (if needed); and how to apply (application instructions and procedures).

Some countries establish specific professional qualifications and background for members of the collegiate body (commissioners/board members) who are chosen on the basis of their knowledge and expertise in the communications field. They can come from both the public and private sectors and have different professional backgrounds (e.g., lawyers, economists, engineers, finance/accounting, academics, and government officials). In some countries, however, the professional background of the chairperson of the commission/board and some members is specified. In India, for instance, members of the TRAI can be drawn from a variety of fields, but the Chairperson must be, or should have been, a Supreme Court Judge or a Chief Justice of a High Court. In the Philippines, the National Communications Commission (NTC) consists of the Commissioner and two Deputy Commissioners, preferably one being a lawyer and the other an economist. In the United States, it is not only the professional background of the candidates that is taken into consideration when considering the composition of the commission, but also their political affiliation. Of the five FCC commissioners, no more than three can be of the same political party at any given time.

Certain regulatory agencies, like the Telecommunications Regulatory Commission (TRC) in Jordan, have minimum requirements for professional applicants, regardless of the position for which they are applying. These qualifications include a degree from an accredited university, fluency in both English and Arabic (spoken and written), and knowledge of MS Office applications. They also must be Jordanian citizens. OSIPTEL in Peru also includes minimum requirements for professional applicants, among them: university degree (in specific field depending on the job position), experience, and an intermediate knowledge of English. Similarly, the Office of the Telecommunications Authority (OFTA) in Hong Kong includes entry requirements for professional candidates, such as: a Hong Kong university degree (or equivalent), fluency in English and Chinese (spoken and written), and knowledge of MS Office.

Countries such as Canada, Dominican Republic, Nigeria, Panama and South Africa require that commission/board members be citizens of the country. In Panama and Peru, commission/board members must have at least ten years of experience in the telecommunications industry and a university degree (master’s degree equivalent) in order to be considered for nomination.

For those regulatory agencies that provide job descriptions, the amount of information requested and/or provided can vary from the most general to the most specific. For instance, below is a sample of a job description published by the Commission for Communications Regulation (ComReg) in Ireland (Box 5-2): Box 5-2: ComReg Sample Job Description

Senior Legal Advisor

Reporting directly to the Commissioners, your prime responsibility will be to provide strategic, mission-critical legal advice to the Commissioners and the organisation, and to handle legal matters arising from ComReg’s remit and activities.

You will develop and implement strategies which result in the provision of well-rounded legal advice to senior management and to the organisation as a whole; oversee the full legal process, including court actions where necessary; and lead and manage ComReg’s relationships with external legal advisors. You will also act as a mentor to other lawyers working in the organisation.

The seniority of this position requires that you are a qualified solicitor or barrister with at least 10 years PQE, and have an outstanding professional record and reputation of providing excellent legal advice at the highest organisational levels. You will have a recognised expertise in competition and regulatory matters preferably relevant to the activities of ComReg - namely the electronic communications and postal sectors, and to demonstrate the ability to contribute effectively as a member of the senior management team.

ComReg is an equal opportunities employer.

In comparison, a job description published by the Infocomm Development Authority (IDA) in Singapore provides more detailed information with regards to the duties and requirements of the position (Box 5-3):
Certain regulatory agencies, such as OFTA in Hong Kong and the FCC in the United States, are even more explicit in the information they include in their job descriptions. OFTA, for example, indicates the term of the appointment (length of contract), newspapers in which the advertisement has appeared, and the policy for applicants with disabilities, among others.

The FCC indicates that it is an equal opportunity employer, whether a security clearance is required or not, whether relocation expenses will be covered or not, the policy for applicants with disabilities and preference in hiring veterans, and information that should be included in the curriculum vitae. In addition, FCC applicants must complete a Declaration for Federal Employment to determine their suitability to work for a government agency and to authorize a background investigation.

Job descriptions for regulatory agencies can readily be found on most regulatory authority websites. However, many regulators do not provide specific job descriptions on their websites. Instead, they provide a description of the different departments/divisions of the regulatory authority and encourage those interested to submit their curriculum vitae for consideration.

The means used to hire employees in the regulatory industry vary from one regulatory authority to the next. For instance, in Nigeria and South Africa, telecommunications regulator employees are considered public/civil servants and as such are entitled to the same salary levels, pension and benefits as other public/civil servants. In Canada, employees of the CRTC are appointed in accordance with the country’s Public Service Employment Act.

In Latvia, Peru, Philippines, and Poland, regulators support the professional advancement of their employees by encouraging their participation in specialized training courses, seminars, and workshops. For example, in an effort to prepare its employees for the country’s ascension into the EU, the URTIP in Poland organized capacity building courses in foreign languages, as well as courses focused on issues related to Europe’s integration. In Latvia, the Public Utilities Commission (PUC) supports efforts by its employees to further university studies at Latvian universities and sponsors employees interested in pursuing foreign language studies and in-service capacity building in regulatory institutions abroad.

In Botswana, in addition to supporting employees’ interests in obtaining specialized training and pursuing university degrees, the BTA has established the Botswana Telecommunications Authority Staff Pension Fund and assists employees in obtaining personal, car, and home loans. The BTA has also established a performance management system with the objective of rewarding performance and encouraging productivity among its employees. This system also helps the regulator determine the training needs of its staff.

In Senegal, employees of the Agence de Régulation des Télécommunications (ART) have access to a pension fund and are offered diverse bonuses and loans, as well as medical coverage and grants for mobile phone service and home remodeling. A capacity building plan has been developed to strengthen employee skills in various areas (e.g., management and technical) and training is carried out in Senegal and abroad. In 2004, the ART focused its capacity-building efforts on effective regulation to ensure that all staff involved had the same level of knowledge and understanding of the subject matter. In 2005, the agency focused its efforts on providing top management personnel with training, based on

<table>
<thead>
<tr>
<th>IT Infrastructure Project Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responsibilities:</strong></td>
</tr>
<tr>
<td>- Involve in the design, management and enhancement of the corporate ICT infrastructure. Lead a small project or assist the Project Manager of a medium to large project, to conceptualise, develop and execute the project plan.</td>
</tr>
<tr>
<td>- Responsible for the client computing, messaging, networking and server aspect of the projects from initiation to implementation. Study business and application specific requirements, review organisational ICT infrastructure as well as design and implement the ICT architecture to meet current and future requirements.</td>
</tr>
<tr>
<td>- Manage the designated vendor and ICT contract to ensure the designated vendor meets contractual obligations, leading to successful delivery of the project.</td>
</tr>
<tr>
<td>- Conduct ICT strategic review, identifying and exploiting suitable technologies, strategies and solutions to meet organization needs. Develop solutions/architectures based on technology trends and standards, to exploit new and emerging technologies and products to meet present and future business needs.</td>
</tr>
<tr>
<td>- Manage the customer's expectations, develop and actively engage customers so as to enhance customer intimacy and influence their alignment with the eGovernment agenda, and to achieve customer satisfaction.</td>
</tr>
</tbody>
</table>

| **Requirements:** |
| - Degree in Computer Science, Computer or Electronics Engineering or Information Technology |
| - 5 - 6 years of relevant IT experience in designing and deploying enterprise level network and systems infrastructure (Experience in network security and/or development of IT Technical Architecture plans will be an added advantage) |
| - Good knowledge of servers, network, IT security, desktop and ICT operations to effectively manage vendors |
| - Experience in designing and managing enterprise infrastructure for application hosting |
| - Excellent communication (both oral and written) as well as strong project, vendor and contract management skills |
| - Pro-active, dynamic, dedicated and responsible self-starter with strong customer orientation and multi-tasking capabilities |

Successful candidates will be posted to work in customers' premises such as ministries and statutory boards.

Source: IDA (Singapore) - Careers @ IDA

---

**Box 1 IDA Sample Job**

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT INFRASTRUCTURE PROJECT MANAGER</td>
</tr>
</tbody>
</table>

| Responsibilities: |
| - Involve in the design, management and enhancement of the corporate ICT infrastructure. Lead a small project or assist the Project Manager of a medium to large project, to conceptualise, develop and execute the project plan. |
| - Responsible for the client computing, messaging, networking and server aspect of the projects from initiation to implementation. Study business and application specific requirements, review organisational ICT infrastructure as well as design and implement the ICT architecture to meet current and future requirements. |
| - Manage the designated vendor and ICT contract to ensure the designated vendor meets contractual obligations, leading to successful delivery of the project. |
| - Conduct ICT strategic review, identifying and exploiting suitable technologies, strategies and solutions to meet organization needs. Develop solutions/architectures based on technology trends and standards, to exploit new and emerging technologies and products to meet present and future business needs. |
| - Manage the customer's expectations, develop and actively engage customers so as to enhance customer intimacy and influence their alignment with the eGovernment agenda, and to achieve customer satisfaction. |

| Requirements: |
| - Degree in Computer Science, Computer or Electronics Engineering or Information Technology |
| - 5 - 6 years of relevant IT experience in designing and deploying enterprise level network and systems infrastructure (Experience in network security and/or development of IT Technical Architecture plans will be an added advantage) |
| - Good knowledge of servers, network, IT security, desktop and ICT operations to effectively manage vendors |
| - Experience in designing and managing enterprise infrastructure for application hosting |
| - Excellent communication (both oral and written) as well as strong project, vendor and contract management skills |
| - Pro-active, dynamic, dedicated and responsible self-starter with strong customer orientation and multi-tasking capabilities |

Successful candidates will be posted to work in customers' premises such as ministries and statutory boards.
each individual’s needs, most of which was carried out abroad. Similar to the BTA in Botswana, the ART has established a performance management system that evaluates each employee’s annual performance based on their accomplishments and those areas where improvement is needed. Employees are awarded a year-end bonus (a maximum of 1.5 times their net salary) based on the results of this evaluation.16

Although various ways exist to engage employees and thus improve a regulator’s efficiency and effectiveness, establishing a performance management system such as that in place in Botswana and Senegal can ensure consistency in achieving a regulator’s objectives and goals. Regulators must keep in mind that staff turnover is a business risk requiring management.17 A high turnover rate can be harmful as it can lead to lack of continuity and diminishes the ability to achieve the regulator’s goals and objectives. Therefore, regulators need to establish the measures necessary to create a working environment that will keep staff members motivated and enhance their desire to stay with the regulator. However, a low or non-existent turnover rate is not advisable either, as new employees can often bring new skills and insights with them, so measures should be balanced to also attract new employees to the regulator.

Regulators also should continually re-examine their organizational and administrative structures in order to be prepared for changes that may occur within it, as well as in the sector it regulates. Establishing a solid and well-prepared staff can be instrumental in helping a regulator manage internal and external changes in a successful manner.18 A regulator and its staff should aim to have the skills necessary to keep abreast of the needs and changes of the country’s telecommunications market sector and thus be able to respond to these changes in an independent and transparent manner.

6.5.3.4 REMUNERATION PRINCIPLES

Remuneration for Leadership of Regulatory Authority

Often, the compensation of regulatory authority heads or collegial body members is lower than what could be earned in equivalent executive positions in the private sector. As noted below, this also presents a challenge regarding staff remuneration. However, particularly in the case of leadership positions, it is not uncommon for regulators to be composed of individuals who are less concerned about compensation than about some combination of public service along with the experience, public exposure and contacts that can be gleaned through a regulatory leadership position.

In several cases, the governing law or regulation specifies the manner of compensation for the head(s) of the regulators, with many reserving the right for the government or its appointed representative to adjust salaries as necessary. A typical formulation is found in Uganda’s Communications Act, which states, “The Chairperson and other members of the Commission shall be remunerated upon terms that the Minister shall approve.”1 Another common approach is for the salary of the regulatory authority head(s) to be determined in the decree or other instrument of appointment, as is the case in Jordan.2 Such arrangements provide a clear determination of who sets salaries, but provides the flexibility for salaries to be adjusted as necessary by the responsible party. For those regulators in which the board or commission members serve part-time, they are often paid a per-meeting fee, as well as reasonable expense reimbursement.

In some cases, however, the salaries for the head of the regulatory authority or the collegial body members are set by law, although not in explicit numerical terms. For example, the salary of the chairman of the collegial body of Bulgaria’s Communications Regulation Commission (CRC) is set at 90 percent of the basic remuneration of the Chairperson of the National Assembly, while the salaries of the deputy chairman is set at 95 percent of the basic remuneration paid to the CRC’s chairman and remaining Commission members’ salaries are set at 90 percent of the CRC chairperson’s salary.3 Similarly, the collegial body members of Hungary’s are paid salaries that tied to the compensation and benefits paid to permanent secretaries.4 Such arrangements serve the dual purpose of ensuring that the head of the regulator’s salaries are adjusted in concert with legislators or senior ministry officials, and imbuing the regulatory leadership positions with a level of status on par with such senior government officials. The latter can help to lend legitimacy to regulatory leaders, as well as to attract qualified candidates. Directives regarding remuneration may also be linked to civil service regulations, as is the case in the United States. By law, each member of the U.S. Federal Communication Commission’s (FCC) collegial body receives a salary at a particular level of the public employee pay scale.5

Remuneration for Staff

In countries where regulatory authority employee salaries are tied to government-wide public employee regulations, it is much more common for salaries to be lower than those offered in the private sector. In such cases, the ability of the regulator to attract qualified candidates can be stifled by the availability of higher-paying private sector opportunities. Further complicating the ability to attract qualified candidates, regulatory authority leaders may be required to obtain permission to pursue additional paid employment, as is the case in Australia (for full-time collegial body members),6 or simply prohibited from pursuing additional employment, as is the case in the United States.7 Such restrictions are intended to ensure that employees devote their full attention to their regulatory duties and to eliminate conflicts of interest, but can also prevent candidates from obtaining additional income that would help make up for the income forfeited when accepting a position at the regulatory authority.

In an attempt to circumvent the issues of low civil service salaries or restrictive civil service employment regulations, regulators have attempted to design creative and attractive compensation packages to attract experienced and qualified personnel. In a study of the Botswana Telecommunications Authority, the ITU noted that at the time of the study, the BTA offered an attractive set of fringe benefits and salaries that were likely higher than those available in private sector telecommunications jobs, as shown by the high number of private sector applicants for BTA positions.8 In the case of Botswana, these fringe benefits combined with the fact that civil service rules do not apply to the regulator, allowed the BTA to offer competitive salaries and benefits to attract the most qualified candidates. A similar arrangement is in effect in Singapore, where the IDA is not required to adhere to the hiring, firing, and benefits practices in place for most public employees, allowing the regulator more flexibility to offer compensation packages that are more competitive with the private sector.9

In some cases, the non-leadership staff compensation levels are based upon national public employee regulations when regulatory authority heads are empowered to hire staff as necessary, as long as they comply with applicable public employment laws and regulations. Such is the case in the United States where the majority of the employees of the FCC receive compensation based on a government-wide schedule of
compensation in which there are several compensation “bands” and multiple levels within each band. In such cases, staff remuneration is adjusted in concert with other public employees across the majority of government agencies.

6.5.3.5 CONTRACTING OF CONSULTANTS

Options for Contracting out Services

Acknowledging that regulatory authorities may sometimes be best served by contracting certain functions to outside experts, many regulators are empowered to enter into contracts with outside organizations for specific functions. It should be noted that such outside experts may be private sector individuals or companies, but may also be assigned to the regulator by other branches of government. A typical formulation of the authority granted to the regulator is found in Bahrain’s Telecommunications Law, which authorizes the Telecommunications Regulatory Authority’s General Director (the head of the TRA’s staff) to employ such consultants as will enable the TRA to meet its obligations under the Law, while also taking budget considerations into account. Another arrangement is for the outside expertise to be provided by a regional regulatory authority, as is the case in the Eastern Caribbean states. In that case, the Eastern Caribbean Telecommunications Authority (ECTEL) serves its members as a shared regulatory body and provides specific expertise, such as tariff reviews or impact assessment studies.

In addition to hiring outside experts, many regulators are also empowered to delegate their powers not only to particular divisions within the authority, but also to outside experts. In Singapore, the IDA is empowered to create committees for purposes which the IDA feels would be better managed or regulated by a committee. Such committees may be comprised of personnel from either within or outside the IDA, and the regulator may delegate any of its authority to such committees, with the exception of the power of delegation. The Australian Communications and Media Authority (ACMA) may also delegate powers, but to a more limited pool of experts, namely those within the ACMA or those made available to the ACMA by other government authorities. Other examples of regulators who may delegate some or all of their authority are found in Bahrain, Hong Kong (SAR), India, and Tanzania, among others. The power to delegate provides the regulator with additional flexibility to determine the most effective or efficient method for regulation of any particular aspect of the telecommunications sector.

In addition to hiring outside consultants and delegating authority, another method of outsourcing is the establishment of advisory or consultative committees. Advisory committees are generally comprised of interested parties or key stakeholders as identified by the regulator. The advisory committee structure provides regulatory authorities with outside expertise that can be drawn upon in the course of normal business, but which are not employed to carry out a particular regulatory task or empowered with any delegated authority role. Regulators empowered to employ such advisory committees include Australia, Bahrain, Hong Kong (SAR), and the United States.

Consultative committees generally do not have the power to carry out actions on behalf of regulatory authorities. However, they may provide valuable input to the regulators in devising positions and strategies on domestic and international issues. In Hong Kong (SAR), for example, the Office of the Telecommunications Authority (OFTA) currently has advisory committees addressing radio spectrum, numbering, technical standards, regulatory affairs and consumer issues. All five Hong Kong (SAR) committees provide advice on domestic issues, while the spectrum and standards committees also assist OFTA in the formation of positions and inputs to international fora. Similarly, the U.S. FCC currently has eight advisory committees, including committees on consumer issues, diversity, media security and reliability, network reliability and interoperability, and numbering. The Australian ACMA provides a standard formulation of the authority to establish advisory committees, in which it states, “the ACMA may, by writing, establish advisory committees to assist in performing any of its functions,” and furthermore the ACMA holds the authority to appoint the committee members as well as revoke membership, and provide the committee with specific instructions.

The ACMA Act also notes that committee appointments are not appointments to public office under the terms of Australian law governing remuneration, which brings about another common feature of advisory committees: members are not paid by the regulatory authority for their service. Instead, they provide input to the regulator in order to shape regulatory decision-making, whether for the good of the telecommunications market as a whole or for the good of the stakeholder(s) that they represent.

Reasons for Outsourcing

As more regulatory authorities have been established or reorganized in recent years, outsourcing certain regulatory functions has served as a means for the regulators to perform their duties while building internal capacity and ultimately minimizing the need of outside experts. In the cases of Bahrain and Uganda, a consulting firm was contracted to carry out many of the functions of the regulators as they developed their own internal competencies, which helped to get the regulators quickly functioning after their establishment. In other cases, it may be that a particular staff competency is currently lacking and the regulator determines such a role is better filled by an outside consultant. For example, in the Cayman Islands, an outside consultant was hired to serve as general counsel.

In both of these cases, the deployment of external resources in a regulatory authority can be coordinated so as to maximize opportunities for knowledge transfer. In particular, consultants and regulatory authority personnel can be integrated into teams that address weaknesses in the authority’s capabilities. Such arrangements provide opportunities for the regulatory authority personnel to become more familiar with the relevant issues and stakeholders, and to learn from the consultants how best to address such issues. In order to maximize the potential for knowledge transfer, regulators employing external resources should consider three primary factors, and at different phases of the integration:

- **Traits of the consultant or expert**, such as perceived reliability and motivation, which are important to ensuring successful transfer of knowledge at the initiation of any such collaboration;
- **Traits of the recipient**, such as ability to absorb knowledge, which affects how well the authority personnel will employ the knowledge gained;
- **Level of understanding of subject matter**, which can affect the effectiveness and difficulty of knowledge transfer at all times.

As the knowledge transfer process continues and regulatory authority personnel are better able to take on the roles initially assigned to
consultants, the authority gains the freedom to redeploy the consultants in other areas in which their skills may be needed.

Regulators, both established and new, may also choose to outsource certain functions not because they lack the internal capacity, but because such functions may be best provided by outside experts. In this respect, outsourcing regulatory functions is similar to the outsourcing of business functions: focused on functions and processes that have been problematic and have led to dissatisfaction.17

It is also not uncommon for regulators to contract outside experts on an ad hoc basis for specific short-term needs. For example, regulatory authorities commonly outsource parts of tender processes, such as the development of terms of reference, feasibility studies or evaluation of bids. In Botswana, the regulator employed consultants in 2004 to assist in the evaluation of bids to procure an automated frequency management and monitoring system. Similarly, regulators have engaged the services of consultants to assist in bid evaluation for mobile licence tenders in many countries, including Jordan and the Maldives.

In addition to providing a competency that the regulator may lack, the employment of impartial external analysts for tasks such as bid evaluations may help to avoid conflict of interest issues in environments where the regulator is populated by individuals with close ties to or histories with bidders. This concern extends beyond bid evaluation to any issue for which there is reason to suspect that the regulator may not be able to make an impartial decision, or to cases in which the regulator’s actions would be further legitimized by being based on external analysis and evaluation.

While not quite on an ad hoc basis, outside experts can also be contracted to address short-term needs in conjunction with a particular project. For example, a concession contract may include a provision requiring outside consultants to monitor adherence to the terms of the contract or to ensure the quality of the service being offered by the concessionaire. Furthermore, outside experts often have established networks of expert contacts that enable them to gather relevant information and best practices in a more effective and efficient manner than a regulator, particularly a new independent regulator.

On an operational level, it is also not uncommon for regulatory authorities to outsource certain other functions, such as security, maintenance and cleaning, as well as employing outside contractors to fill temporary staff vacancies or to recruit support personnel.

Outsourcing can also involve different types of deliverables from the outside experts. In some cases, consultants provide a set of key issues and potential options for the regulator to take, but leave the ultimate decision up to the regulator. In other cases, the consultant may be offered the opportunity to provide binding recommendations that the regulator has no choice but to implement.

Outsourcing can be a useful tool, allowing regulators to act more independently and efficiently, providing impartial analysis of key issues or processes, and augmenting the regulator’s own capacities (or lack thereof). Seeking advice from concerned stakeholders provides the regulator with important insights into the current state of the telecommunications sector as well as the possibilities for its future.

### 6.5.4 LEGAL STATUS OF REGULATORY AUTHORITIES

The legal status of the regulatory authority is a product of the political and legal system of each country. Most regulatory authorities are either public or semi-public institutions, although some regulatory bodies are established as corporate bodies.1

#### 6.5.4.1 CORPORATE BODY VS. ADMINISTRATIVE BODY

The legal status of the authority is generally based on providing the most appropriate organizational structure in order to ensure consistency with the legal and administrative framework of the country. Portugal and Austria are two examples of countries that structured their regulatory authority as a corporate body instead of as an administrative body. In Portugal, the new statutes of the Instituto das Comunicações de Portugal (ICP) changed the previous legal status of ICP from a public institute to a public corporation named ICP-AUTORIDADE NACIONAL DE COMUNICAÇÕES (ICP-ANACOM) endowed with administrative and financial autonomy, as well as its own assets.1 This new legal form was intended to enhance the powers and procedures of the regulator and to provide greater legal and financial flexibility through its regulatory instruments. In practice, the change of legal status had an impact on the internal administration of ICP-ANACOM because the Board was granted more flexibility with regard to internal administrative matters, including salaries of the Board Members and staff, the internal organization of the Institute and procurement of goods. However, the budget is still approved by the Ministry of Public Works, Transportation and Communications and the members of the Board of Administration are appointed by resolution of the Council of Ministers, upon a proposal from the member of government responsible for communications. In terms of regulatory functions, ICP-ANACOM has wide-ranging powers, with the Ministry responsible for the establishment of licence fees. ICP-ANACOM, however, must coordinate with other entities as follows:

- **Numbering Plan:** The member of government responsible for the communications sector approves the guidelines and general principles of the national numbering plan and then ICP-ANACOM administers the plan and grants the numbers.2
- **Tariff approval:** The pricing system of the provision of universal service is established through an agreement signed between the central government, represented by the Department of Commerce and Competition (DGCC), ICP-ANACOM and the organization with universal service obligations.3
- **Technical standards:** ICP-ANACOM must coordinate with the National Standardization Organization (Instituto Português da Qualidade).
- **Frequency allocation:** ICP-ANACOM must coordinate with the sector ministry which is responsible for public tender procedures.4

In Austria, the independent regulator (RTR GmbH) is also a corporate body – specifically, a private sector, non-profit, limited-liability company, and 100 per cent of its shares are owned exclusively by the Austrian federal government. These shares are administered by the Federal Chancellery in cooperation with the Federal Ministry for Transport, Innovation and Technology. RTR’s share capital totals €5,741,153.90 and was solely contributed by the federal government. Additional financing of the regulatory authority is governed by law, and inflows of funds include licence fees and financing amounts contributed by telecommunications providers operating in Austria. RTR’s regulatory activities with regard to broadcasting are financed by contributions from broadcasting organizations located in Austria.
RTR is in charge of running the day-to-day regulatory business and also acts as the managerial unit of the Austrian Communications Authority (KommAustria – the broadcasting regulator)\(^5\) and the Telekom Control Commission (TKK, which acts as the judicial arm of the regulator.)\(^6\) The members of the RTR Advisory Board are appointed by the Austrian Federal Ministry of Transport, Innovation and Technology and by the Federal Chancellery. RTR is split into two specialized sections (broadcasting and telecommunications) and has fairly typical functions and duties of a telecommunications authority.

Since October 1, 2010, KommAustria has also been responsible for legal supervision of the Austrian Broadcasting Corporation (ORF) and its subsidiaries, for the legal supervision of private providers of audiovisual media services on the Internet, and for certain tasks under the Austrian Act on Exclusive Television Rights.\(^7\) Thus, in practice, regulators legally established as corporate bodies appear to function in much the same way as regulators which are administrative bodies in terms of reporting lines, budget and internal administration.

6.5.5 ETHICS RULES AND CONFLICTS OF INTEREST

A major component of effective and transparent telecommunications regulation is the management of conflict of interest issues between private interests and public service duties.\(^1\) Regulators must be fair, impartial and transparent, and just as importantly, the public must perceive them as such in order for the regulators to inspire confidence of the industry and of investors. For instance, in order to maintain the public confidence and address the conflict of interest over the roles of the Telecom Regulatory Authority of India (TRAI) as a regulator and an adjudicator, TRAI amended the telecommunications legislation in 2000 to create an independent Telecom Disputes Settlement and Appellate Tribunal (TDSAT), transferring to it all powers for dispute resolution in the sector. (For a more detailed analysis, see the practice note on the case of India in Section 7.4.1 in the online module.) The ability of a regulator to govern legitimately and effectively is based on the real and perceived integrity, honesty and ethical behavior of its officials and employees and their decisions. Thus, it is necessary for regulators to implement an ethics framework to govern the activities of their employees and ensure the adherence to minimum standards of professional and ethical behavior. Box 5-3 below provides an example of the core values of civil service for Hong Kong (SAR).

**Box 5-3** Core Values of Civil Service in Hong Kong (SAR)

Source: Hong Kong (SAR) Civil Servants’ Guide to Good Practices\(^2\)

- Commitment to the rule of law;
- Honesty and integrity;
- Accountability for decisions and actions;
- Political neutrality;
- Impartiality in the execution of public functions; and
- Dedication, professionalism and diligence in serving the community.

At the heart of any ethics framework is the prevention of conflicts of interest, which can jeopardize the ability of a regulator to make an objective and transparent decision. One way to establish the core values and standards of conduct that should govern public service is to adopt and enforce a code of ethical conduct that binds all employees. A code of ethics can be part of a more comprehensive administrative code, such as the United Kingdom’s Civil Management Code.\(^3\) or it can be promulgated as separate legislation, such as Canada’s Conflict of Interest and Post-employment Code for Public Office Holders.\(^4\) Other regulators, such as Bahrain’s TRA, include conflict of interest provisions in the telecommunications legislation. In general, the ethics codes for the public service sector in most countries serve as general ethical guidelines for all government agencies, including independent regulatory entities, although different departments, agencies and regulators may develop supplemental guidelines to take into account their specific functions and circumstances. Ethics codes can vary in content, but should generally address the following:\(^5\)

- Establishing provisions for disclosure of personal and financial conflicts of interest (which include provisions regarding gifts, impartiality in performing official duties, and seeking outside employment);
- Rules for maintaining confidentiality of information;
- Setting procurement rules;
- Rules on staff relations (such as prohibitions on sexual harassment);
- Establishing methods to report and handle misconduct and what the proper grounds are for disqualification or dismissal; and
- Safeguarding agency assets through rules on spending and financial reporting.

Generally, ethics rules prescribe four approaches to avoiding or mitigating ethical conflicts, whether real, potential or apparent: (1) avoidance, (2) disclosure, (3) divestment or resignation, or (4) recusal.\(^6\) A code of ethics may encourage employees to take precautions to avoid situations that may result in a potential conflict of interest or give the appearance of impropriety. For example, the Hong Kong (SAR) Civil Servant’s Guide provides the following guidelines: “avoid being placed in a position of obligation to anyone by accepting excessive entertainment or favors” and “avoid putting yourself in a position that may arouse any suspicion of dishonesty, or of using your official position to benefit yourself, your family, relations or friends.”\(^7\) Employees are also typically required to disclose any conflicting financial interests or personal interests or the receipt of any gifts over a certain monetary value. Where a conflict of interest is identified, the employee may be asked to resign or to divest the conflicting interest. Another resolution may be the recusal, the disqualification or removal, of the employee from the particular matter that involves a conflict of interest. The Organisation for Economic Co-operation and Development (OECD) provides guidelines in dealing with conflict of interest situations (Box 5-4).

The main issues regulators encounter regarding ethics can be grouped into three broad categories: (1) acceptance of gifts; (2) personal and financial conflicts of interest; and (3) post-employment prospects.

Most recently in 2009, immediately upon inauguration, United States President Barak Obama issued an Executive Order requiring that every
accept in his Administration adhere and commit to an ethics pledge. The pledge includes bans on accepting gifts from lobbyists or lobbying organizations for the duration of service as a political appointee as well as restrictions on communications with employees of the former government agency.

6.5.5.1 ACCEPTANCE OF GIFTS

Most ethical codes of conduct prohibit the improper acceptance of gifts between employees or from outside sources, which can influence the independent judgment and performance of official duties of a public employee to the benefit of the gift giver. In almost all countries, civil employees cannot solicit and must decline any gifts, hospitality or other benefits from persons dealing with the agency that give rise to impropriety or the appearance of impropriety, which could influence them in their personal judgment and integrity. For example, the Charter for the Public Service in Africa, which serves as a policy framework for public service administrations of African countries and as a source of inspiration for the development, strengthening or updating of national codes of conduct, states that: “Public service employees shall not solicit, accept, demand or receive, directly or indirectly, any payment, gifts or other advantage in kind in return for performing or refraining from performing their functions or obligations. It shall be reprehensible for public service employees to offer gifts or other advantages that might influence in their favor or in favor of family members and friends, the judgment or decisions of another person.”

Where it is impossible to decline a gift, there are different ways to handle it, such as disclosing the gift and reporting the gift to one’s supervisor immediately, returning the gift or paying its market value, or obtaining permission prior to accepting the gift. For example, in Hong Kong (SAR), civil employees are required to seek permission from an authorizing officer before accepting or soliciting any prohibited gifts, and the approving authority may either allow the acceptance or solicitation of the gift unconditionally or subject to certain conditions, or refuse permission. If the gift is already in the civil employee’s possession, the approving authority may (i) require the gift to be returned to the donor, (ii) require the gift to be donated to a charitable organization, or (iii) require the disposal of the gift in such other manner as the approving authority may direct.

The practice of gift-giving is common in building and maintaining business or personal relationships, and may not always constitute bribery, so it is important to clearly define the difference between token niceties and outright bribery or influence-buying. Therefore, rules regarding the acceptance of gifts usually contain certain exceptions to account for local customs, for gifts below a certain monetary value, or for situations where acceptance of gifts is permissible. Differentiating between token gifts and improper bribes can be done in several ways:

1. By a general rule prohibiting any gifts, invitations or courtesies;
2. By establishing situational guidelines on acceptance of gifts (e.g., whether there is an impending hearing involving the giver or whether acceptance may be justified on policy grounds, such as to fund or pursue training or developmental programs);
3. By setting guidelines on the nature of the gift (e.g., meals or invitations to ribbon-cuttings may be acceptable, while leisure resort weekends or substantial cash payments would be forbidden);
4. By imposing ceilings on the value of the gift; or
5. By requiring the declaration and registration of all gifts in a central register.

In Brazil, public service employees are prohibited from receiving a salary or any other prohibited remuneration from a private source, or receiving any means of transportation, lodging or any favours that could generate doubts as to the employee’s honesty or integrity. However, the public service employee’s participation in seminars and conferences is permitted provided that the information on any financial compensation and/or payment of travel expenses by the event promoter, who must not have a personal interest in any decisions made by the employee, is disclosed. Additionally, items are not considered gifts if they do not have any commercial value, or they are distributed by an entity as courtesy, for publicity purposes, as a customary public affairs matter, or on the occasion of a special event or commemorative date, and do not have a value of over BRL 100.

In the United States, exceptions to the acceptance of gifts under the Standards of Ethical Conduct for Employees of the Executive Branch include, among others: (i) gifts with an aggregate market value of USD 20 or less, provided that the total value gifts received from the same person does not exceed USD 50 in one calendar year; (ii) gifts based on a personal relationship, such as a friend or family; (iii) awards and honorary degrees, other than cash or an investment interest, with an aggregate value of USD 200 or less if such gifts are a bona fide award given for meritorious public service or achievement; and (iv) discounts and similar benefits given to all government employees.

In Hong Kong (SAR), acceptance of gifts (advantages) is permissible for: (i) gifts, discounts, loans of money or passages from tradesmen, companies or other organizations which are available on equal terms to non-civil servants; (ii) gifts, discounts, loans of money or passages from a relation; (iii) gifts and/or passages not exceeding in total HKD 2,000 from a close personal friend or HKD 1,000 from any other person on each occasion when gifts are traditionally given or exchanged, and not exceeding HKD 400 in total from a close personal friend on each other occasion; and (iv) loans of money from a close personal friend or any other person not exceeding HKD 2,000 and HKD 1,000 respectively, provided it is repaid within 14 days. Additionally, acceptance of entertainment, which is defined as the provision of food or drink, is not considered an advantage, and is not a criminal offense. However, a public service employee is advised to refuse lavish or unreasonably generous or frequent entertainment that might result in embarrassment in performing one’s duties or bring the public service into disrepute.

In addition to ethics rules adopted by regulators, many countries also have laws against bribery of government officials. The Canadian Criminal Code states that: “...every one commits an offense who being an official or employee of the government, demands, accepts, or offers or agrees to accept, from a person who has dealings with the government, a commission, reward, advantage or benefit of any kind directly or indirectly, by himself or through a member of his family or through any one for his benefit, unless he has the consent in writing of the head of the branch of government that employs him or of which he is an official, the proof of which lies on him.” In the United States, under the Foreign Corrupt Practices Act (FCPA), it is unlawful for U.S. persons to bribe foreign government officials to obtain or retain business. In Hong Kong (SAR), under the Prevention of Bribery Ordinance, which is enforced by the Independent Commission Against Corruption (ICAC), it is considered a
bribery and an offense for public officials to solicit or accept any gifts offered as an inducement to or reward in connection with the performance of their official duty, and it is also an offense for any person to offer such gifts.\textsuperscript{15}

In some countries, specific local practices are prohibited. For example, the Hong Kong (SAR) Civil Servants’ Guide also notes that the red packet (hong bao), traditionally given during Chinese New Year, is a gift of money and is considered a prohibited advantage under Section 4 of the Prevention of Bribery Ordinance, unless it is between family relations.\textsuperscript{16} The Kenya Public Officer Ethics Act 2003 explicitly prohibits the solicitation and collection of harambees.\textsuperscript{17} In Kenya, harambee, which means “pulling together,” is a local practice that entails voluntary contributions in cash and in kind, such as labour, for community activities and projects such as schools and health clinics, and is considered to predispose people, particularly politicians, to corruption because it provides a means for people who steal public funds to legitimize themselves to the public.\textsuperscript{18}

6.5.5.2 PERSONAL AND FINANCIAL CONFLICTS OF INTEREST

Another major consideration in establishing a code of ethical conduct is the conflict of interest arising from an employee’s pecuniary interests, personal affiliations and family relations. A conflict of interest is likely to arise when a public office employee's loyalty to the government conflicts with his loyalty to: (a) family and other relations; (b) personal friends; (c) clubs and societies to which they belong; (d) professional colleagues in the private sector; or (e) any person to whom they owe a favor or are obligated in any way.\textsuperscript{1}

Common examples of such conflicts include an employee’s participation in proceedings that involve close associates or family members (nepotism), an employee’s stockholdings in companies that have dealings with the employee’s agency, or stockholdings in companies that the employee has gained confidential information through official capacities.\textsuperscript{2} For example, the Brazilian telecommunications regulator Anatel’s internal administrative regulations prohibit the agency’s employees from participating in administrative procedures in instances where they: (i) have a direct or indirect interest on the subject matter being acted upon; (ii) have participated or may participate as an expert, witness or representative, or if such situations involve a spouse, relative or relative in the third degree of consanguinity; or (iii) are in judicial or administrative litigation with the interested party. Anatel employees who find themselves in one of the above situations must communicate this information to their superior and abstain from participating in the procedure. Employees may be subject to investigation if there is suspicion that they have intimate friendship or enmity with any of the interested parties or their respective spouses, companions, or relatives up to the third degree of consanguinity.\textsuperscript{3}

Similarly, Peru’s telecommunications regulator, OSIPTEL, issued a Transparency Regulation that governs transparency in the agency’s procedural and administrative activities and in the activities of its employees. Article 7 of the Regulation requires that OSIPTEL directors or employees who have decision-making powers or whose opinion on the substance of the proceeding can influence the decision at issue, shall abstain from participating in activities in the following instances:\textsuperscript{4}

1. If their participation can affect their own economic interests, or the interests of their spouse or family member up to the fourth degree of consanguinity or second degree of affinity;

2. If their participation can affect the economic interests of their partners, organizations, companies or groups of which they are a member;

3. If their participation can affect the economic interests of individuals or legal entities with whom they are seeking employment;

4. If they are a family member to the fourth degree of consanguinity or second degree of affinity with any of the other parties or their representatives, or the other party's management staff;

5. If they have acted as advisor, expert or witness in the same proceeding, or if they have taken a stand on the issue at hand, except if their manifestation on the matter involved the correction of an error or the appeal of the decision; and

6. If they have worked in the past year with any of the other parties directly involved in the proceeding or have participated in any project with any of the other parties regardless of whether the project was actually carried out.

To avoid conflict of interest, many regulators also prohibit their employees from holding shares in companies that they regulate. For example, the Romanian Telecommunications Law prohibits the regulator’s employees, including the president and vice-president, from having shares or participating as board members in any company under the regulator’s competence.\textsuperscript{5} Similarly, the Telecommunications Act of the Independent Communications Authority of South Africa (ICASA) disqualifies persons from being a councilor if they or their family members have a substantial financial interest in the telecommunications or broadcasting industry, or if they or their business partners are employed by any person or entity in the telecommunications or broadcasting industry.\textsuperscript{6} The Kenya Public Officer Ethics Act prohibits a public office employee from holding shares or any interest directly or indirectly, in a corporation, partnership or any other body, which would result in a conflict of personal interests with official duties.\textsuperscript{7} Such conflicts of interest must be reported and the employee must refrain from participating in any deliberations with respect to the matter.\textsuperscript{8} The Act also prohibits the practice of nepotism or favouritism.\textsuperscript{9}

Civil employees should not take advantage of their positions to further their own private interests, nor should they allow private interests to conflict with their public position. Conflicts may arise when employees use confidential information obtained in the course of employment to further personal interests. In Canada, for example, public office employees are not permitted to give preferential treatment in connection to any official matter to relatives or friends, or to any organization in which they, relatives or friends have an interest, nor are they allowed to use information obtained in their position as a public office employee that is not generally available to the public to further their own or any person’s private interests.\textsuperscript{10}

Ethics legislation in most countries also mandates the disclosure of financial and personal interests and even the divestment of such interests in order to prevent personal or financial interests from influencing the independent judgment of a civil employee. The Kenya Public Officer Ethics Act, for example, requires every public employee to annually declare their income, assets and liabilities, as well as those of their spouse(s) and dependent children under 18 years of age.\textsuperscript{11} In Canada, other than “exempt assets,” public office employees must declare and/or divest themselves of “controlled assets,” which are those assets that could be directly or indirectly affected as to value by government decisions or policy in which the employee’s agency has some role.\textsuperscript{12} Public office employees are also prohibited from participating in outside activities and
6.5.3 POST-EMPLOYMENT PROSPECTS

Regulatory provisions regarding post-employment prospects are intended to prevent any suspicion that the public office employee’s duties and decisions might be influenced by the expectation or hope of future employment with a particular firm or organization, and to avoid the risk that a particular firm or organization might gain improper advantage over its competitors by employing someone who had access to information on the competitor through the course of their prior official duties. In order to prevent conflicts between the employee’s current responsibilities and outside employment, ethics regulation typically require employees to report any outside appointment if there is a potential conflict, such as when an employee had significant contacts with a company while in office, or if the company was a party to the matter that the employee’s department was in charge of handling. In addition to reporting requirements, former employees may be required to either avoid certain proceedings or obtain permission from a former employer prior to taking a new appointment for a specified time period after termination of employment.

In Brazil, the members of the Board of Directors of the telecommunications regulator Anatel have a four month “quarantine” period (quarentena) before they can undertake a new position after termination of employment if the Public Ethics Commission finds that there exists a conflict of interest between the employee’s former appointment and his new position. Pursuant to Article 13 of the Code of Conduct for Senior Government Officers, any proposals of future work or business in the private sector as well as any negotiations for work that may involve a conflict of interest must be communicated immediately to the Public Ethics Commission, regardless of whether it was accepted or rejected. Article 15 of the Code states that in the absence of a law specifying a different period of time, there shall be a four-month period beginning from the date of their departure from public service, during which former public service employees are barred from performing any activity that is incompatible with the office held previously. Within this period, former public service employees must comply with the following rules: (a) they may not accept any position as a manager or counselor, or establish professional relationships with an individual or legal entity with which they had previously maintained a direct official and relevant relationship within the last six months prior to their departure from public position; and (b) they may not interfere for the benefit of, nor on behalf of, any individual or legal entity, before any federal government entity or agency, with which they had a direct and relevant official relationship during the last six months prior to their departure from a public position. In addition, the Telecommunications Law prohibits the former Board member from representing any person or interest before Anatel for a period of one year after termination of employment.

The United Kingdom’s Civil Service Management Code provides that under specific circumstances, within two years of leaving government service, civil employees must file an application pursuant to the Business Appointment Rule and obtain government approval before taking any full-time, part-time, or fee-paid employment in the United Kingdom or overseas in a public or private company or in the service of a foreign government or its agencies. Such specific circumstances requiring government approval include: (i) if the employee is at a senior level; (ii) if the employee has had any official dealings with the prospective employer during the last two years of employment or if they had official dealings of a continued or repeated nature with their prospective employer at any time during government employment; (iii) if the employee has had access to commercially sensitive information of competitors of the prospective employer; or (iv) if the employee’s official duties during the last two years of government employment involved giving advice or decisions benefiting the prospective employer for which the offer of employment could be interpreted as reward, or have involved developing policy, knowledge of which might be of benefit to the prospective employer. All civil service employees are required to report if they are considering any approach from an outside employer offering employment. Civil employees dealing with procurement or contract work must report any offer of outside employment whether or not they are considering the offer. The government’s approval of an application under the Business Appointment Rule can be: (i) unconditional; or (ii) conditional subject to a waiting period before taking up the new appointment; or (iii) include a ban on the involvement of the applicant in dealings with the prospective employer and the government or with competitors of that employer.

Canada’s Conflict of Interest and Post-Employment Code for Public Office Holders requires that before leaving office, all public service employees must disclose in writing to the Ethics Commissioner all firm offers of outside employment that could place the employee in a position of conflict of interest, and any employee who accepts an outside offer must disclose in writing the acceptance of the offer. If the employee is engaged in significant official dealings with the future employer, the employee will be removed from their current duties and assigned to other responsibilities immediately. Within one year of leaving office, or two years for ministers of the Crown or ministers of state, employees are prohibited from accepting service contracts, appointments to a board of directors of, or employment with an entity with which they had direct official dealings during the one year period preceding the termination of employment, or to represent an entity in front of a department that they had direct and significant dealings with during public office. Additionally, employees who have official dealings, other than dealings consisting of routine provision of a service to an individual, with former public office employees who are or may be governed by the post-employment compliance measures of the Code must report those dealings to the Ethics Commissioner.

6.5.6 ACCOUNTABILITY OF REGULATORS AND JUDICIAL REVIEW

The accountability of regulators can be monitored by implementing regulatory transparency and reporting regulatory activities to the government. Additionally, the regulator is also accountable to the public whose interests are affected by the regulator’s activities, so adequate mechanisms should be implemented to educate and protect consumers, and allow consumers to voice their opinions and concerns with the regulator. This section will provide an overview of different approaches to ensure the accountability of regulators.

Parliamentary oversight and judicial review

The accountability of regulators is determined by various factors, but principally by the organizational structure of the regulator and its place within the governmental structure. In many cases, telecommunications regulators report administratively to sector ministries or other governmental agencies. Accountability can be facilitated if regulators adopt internal procedures to guarantee transparency in their activities (such as ensuring an open and participatory decision-making process through public consultations, as discussed in Section 7.2) and staff accountability, and by fulfilling obligations to report to the legislature which provides external control. Additionally, most telecommunications regulators have the obligation to provide annual reports to Parliament or other
executive branch entities such as ministries. According to a recent ITU survey of 192 countries, nearly all indicated that they must provide regular reports to the sector ministry, other ministry, the legislature and/or other governmental body. Only five countries, Cambodia, Ecuador, Nicaragua, Turkey and Uruguay have no reporting requirements.

Note: Regulators may be required to report to more than one entity.

The Canadian Radio-television and Telecommunications Commission (CRTC), which was established by Parliament in 1968, is a typical example of an independent public authority that reports to Parliament, in this case, through the Minister of Canadian Heritage. The accountability of the CRTC is addressed by various mechanisms. The CRTC must submit annual Departmental Performance Reports (DPR) to Parliament. These reports are based on specific principles contained in the DPR Preparation Guide and must reflect a comprehensive, balanced, and transparent picture of the organization’s performance for each fiscal year. This report is made available on the CRTC’s website. The CRTC also must prepare and publish its financial results in accordance with Treasury Board Guidelines and submit an annual report to the Standing Committee on Justice and Human Rights.

Additionally, Canada has implemented a “Proactive Disclosure” public policy so that all Canadians are better able to hold Parliament, their government, and public sector officials accountable. Under this policy, there is a requirement of mandatory publication on departmental websites of travel and hospitality expenses for selected government officials, contracts entered into by the Government of Canada, and reclassification of positions.

Procedures to overturn regulatory decisions

Another mechanism to ensure the accountability of regulators is to allow for appeals of regulatory decisions to a higher level in the regulatory and institutional framework. The legal framework for individual countries is of paramount importance when considering what mechanisms are available for appealing or overturning regulatory decisions. The effectiveness of the regulator can be undermined if the appeal process is closely linked to the executive branch, if regulatory decisions are put on hold or “stayed” during the appeal process, or if the appeal process is easily manipulated for the benefit of particular stakeholders.

In the first instance, the country’s telecommunications law usually articulates the general process for appeals or reconsiderations of the regulator’s decisions, and then the regulatory authority implements detailed internal procedures for reviewing and appealing administrative decisions. Clear and transparent appeal procedures enhance the independent regulator’s credibility and give operators and other stakeholders, including consumers, a sense of stability in the regulatory process.

(a) To whom regulatory decisions are appealed

Typically, regulatory decisions may be appealed to the regulatory authority itself as an initial step. After reconsideration by the regulator, the decision usually may be appealed to a higher authority, such as the sector ministry, or to a court. In the Philippines, for example, appeals of the National Telecommunications Commission Board’s decisions, rulings, orders, and resolutions can be filed with the Supreme Court. In many countries, including Malaysia and Nigeria, the regulator may require that all other remedies for review and appeal provided under the telecommunications law be exhausted before a person can seek judicial review. Sometimes regulatory decisions may be appealed to a specialized body established within the regulatory agency itself, such as an Appeal Tribunal or Appeal Board. For example, Hong Kong (SAR)’s OFTA has established an Appeal Board comprised of a chairman and deputy chairman that are “eligible to be appointed a judge of the High Court” and panel members who are not public officers. The decision of the Appeal Board is final.

When the appeal to the judiciary concerns policy matters or technical issues, the trend is for courts to defer to the specialized regulatory authority. Rather than making a decision on policy or technical matters, courts will often “remand” or refer a decision back to the authority for further review and action, sometimes indicating the scope of the further review.

The ITU World Telecommunication Regulatory Database indicates that the judiciary has the authority to overturn a decision of the regulatory authority in almost two-thirds of the countries responding to the survey. Only 14 per cent of the respondents stated that the sector ministry had ultimate authority to overturn the regulator’s decisions. Appeals to other government authorities also may be possible. For example, in the Maldives, parties who believe that a decision by the regulator, the Telecommunications Authority of Maldives (TAM), adversely affects their interests may first appeal to the minister charged with the responsibility of telecommunications, and if the aggrieved party remains dissatisfied with the decision of the minister, then a petition of appeal may be presented to the President of the Maldives. The President’s decision is final and binding on the aggrieved person.

(b) Timeframe for an appeal to be filed and decided

The timeframe for aggrieved parties to file an appeal varies from 10 days, such as in the Dominican Republic, to no specific timeframe (e.g., the United States). Most countries responding to the
2005 ITU World Telecommunication Regulatory Database indicated that they did not have a defined timeframe for resolving an appeal; among those which did have a timeframe, it was usually one to six months.

(c) Reasons for filing an appeal

An aggrieved party may file an appeal of a decision made by the regulatory authority in specific instances usually set forth in the telecommunications law. The reasons can be quite broad (any decision made by the regulator) or more narrowly focused to allow only procedural appeals. In New Zealand, for example, appeals from the Telecommunications Commission to the High Court are limited to questions of law.14 On the other hand, in the Philippines, the authority to appeal a decision is very broadly defined, where “a party adversely affected by a decision, order, ruling or resolution may, within 15 days from receipt of a copy thereof, file a motion for reconsideration.”15 In Hong Kong (SAR), the scope of an acceptable appeal is more carefully defined as:

(1) Any person aggrieved by:

(a) an opinion, determination, direction or decision of the Authority relating to:

(i) anticompetitive practices, abuse of position, misleading or deceptive conduct, and non-discrimination, or
(ii) any licence condition relating to any such section; or

(b) any sanction or remedy imposed or to be imposed under this Ordinance by the Authority in consequence of a breach of any such section or any such licence condition, may appeal to the Appeal Board against the opinion, determination, direction, decision, sanction or remedy, as the case may be, to the extent to which it relates to any such section or any such licence condition, as the case may be.16

(d) Effect of an appeal on a regulatory decision

The question of what happens to a regulatory decision during the appeal process can have a serious effect on the regulator’s ability to enforce its decisions. If decisions can easily be appealed and are stayed or put on hold, then parties have an incentive to appeal every decision of the regulator to delay the implementation process of new rules and regulations that might affect them. This is particularly true of incumbent operators when faced with new rules dealing with the introduction of new licensing regimes or competition.

When asked about the effect of an appeal on a regulatory decision in the 2005 ITU World Telecommunication Regulatory Database, the vast majority of responding countries reported that they either: (i) allowed a regulatory decision to remain in force while it is under appeal; or (ii) depending on the merits of the particular case, either permitted suspension of the decision (or a stay) or allowed a choice between putting the decision on hold or allowing the regulation to remain in force. Hong Kong (SAR) is an example of the latter case, where it is the subject matter of the appeal that determines whether the appeal suspends the operation of the decision.17 A much smaller number of countries, about ten per cent of those responding, automatically stay a regulation when it is undergoing an appeal process.18

6.6 FUNCTIONAL ASPECTS OF REGULATION

When measuring the effectiveness and independence of a regulator, it is necessary to look not only at the structural and organizational design, but also at the functional aspects of regulation. In addition to the institutional design, in order to regulate effectively, a regulator should possess the proper authority and competency to exercise its regulatory functions. The scope of the regulator’s mandate should be clearly established, which can vary depending on the degree of independence of the regulator and its interaction with other entities responsible for the ICT sector, such as the sector ministry, as well as its institutional design. Effective regulation also requires that the regulator adopt and implement procedures that are transparent and open to public participation and ensure accountability. These elements encourage public confidence in the regulator, compliance with regulatory decisions, laws and regulations, and create an enabling environment conducive to growth and development in the sector.

This Chapter provides an analysis and overview of the regulator’s competencies and mandate, as well as regulatory procedures, focusing on three main issues: (i) ensuring an open participatory decision-making process through public consultations, (ii) ensuring the accountability of regulator’s activities to the state and to consumers, and (iii) ensuring regulatory efficiency and promoting growth and competition of the sector through dispute resolution and enforcement procedures.

Practice Notes

- Box 6-4: OECD Guidelines on Dealing with Conflict of Interest Situations [6.5]
- Case Study Converged Regulator: Ofcom [6.1.1]
- Case Study Multi-Sector Regulator: Latvian Public Utilities Commission (PUC) [6.1.1]
- Case Study Single Sector Regulator - Instituto das Comunicações de Portugal (ICP-ANACOM) [6.1.1]
- Case Study Single Sector Regulator: Botswana Telecommunications Authority (BTA) [6.1.1]
- Case Study: Conflict of Interest Regulations in Bahrain [6.5]
- Table 6-1: Model 1 – Single-Sector Regulator [6.1.1]
- Table 6-2: Model 2 – Converged Regulator [6.1.1]
- Table 6-3: Model 3 – Multi-Sector Regulator (MSR) [6.1.1]

Reference Documents

- Australian Communications and Media Authority Act 2005
Regulating Utilities: Contracting out Regulatory Functions

Tanzania - Communications Regulatory Authority Act 2003
Turkey - Amending Law No. 4502
Uganda - Communications Act 1997
UK Civil Service Management Code
US Spam Act
US Standards of Ethical Conduct for Employees of the Executive Branch
World Bank - Code of Ethics

6.6.1 OVERVIEW OF REGULATOR’S FUNCTIONS AND RESPONSIBILITIES

Telecommunications regulators generally are granted authority to carry out a broad range of functions through legal instruments such as the telecommunications law, subordinate regulations, and government decrees. These functions include the authority to conduct rulemakings and issue regulations, grant licences and other authorizations, undertake adjudication and enforcement matters, as well as address various telecommunications issues, including interconnection, price regulation, numbering, and spectrum management.

In a global survey conducted by the ITU, 158 countries reported a wide range of responsibilities under the regulator’s jurisdiction (see Figure 6-A). Nearly 90 per cent reported that the regulator is responsible for price regulation and spectrum allocation/assignment. Other prominent functions under the regulator’s mandate include licensing; spectrum monitoring and enforcement; interconnection rates; universal access/service; and broadcasting transmission (i.e., non-content related issues). Less often, regulators are also responsible for cybersecurity; broadcasting and Internet content; and climate change issues.

Similarly, in Taiwan, the 1996 Telecommunications Act specifies that the Directorate General of Telecommunications (DGT) is responsible for developing an integrated telecommunications development plan, supervising telecommunications enterprises, and promoting the development of an information society so as to enhance public welfare.

The rapid development of the telecommunications and information technology sectors, as well as the evolution of convergence, creates an increasing number of responsibilities for regulators regarding the manner in which to regulate (i.e., the appropriate structure and regulations), as well as the manner in which to treat new technologies and services. This has produced a need to reorganize administrative functions in the telecommunications sector. For example, as described in Chapter 6, many regulators are including information technology as one of the areas of focus, and therefore have created offices dealing with such issues. In other countries, regulators are also dealing with broadcasting issues. Moreover, in yet other countries, regulators are still charged with dealing with other sectors such as postal services.

6.6.1.1 OVERVIEW AND COMPARISON OF DIFFERENT INSTITUTIONAL DESIGNS

There are four main institutional designs for telecommunications regulatory entities. First is the single-sector regulator whose sole function is to oversee the telecommunications sector (designated as Model 1 in this Section). The term single-sector is somewhat misleading as these entities, which in most cases originated from the separation of the operational and regulatory activities of state-owned post and telecommunications companies (PTTs), often include the postal and telecommunications industry as well as radiocommunications. The second design is known as the “converged” regulator, meaning those regulatory entities that oversee a broader range of services which, in addition to telecommunications, also include information and communications technologies, including broadcasting (designated as Model 2 in this Section). The multi-sector regulatory authority (Model 3) usually encompasses various industry sectors that are considered public utilities, e.g., telecommunications, water, electricity, and transportation. The fourth category is not a regulatory authority per se, but an approach in which general competition policy is the main method of overseeing the telecommunications sector (designated as Model 4 in this Section).

Characteristics of these models of institutional entities for telecommunications regulatory agencies are as follows.

Model 1 – Single sector regulators

This organizational structure focuses mainly on the telecommunications (and sometimes postal) sector, with other government entities responsible for broadcasting and information technology issues. Many countries around the world still use the single-sector regulatory
Several countries have followed the route of converging their institutions dealing with the communications sector, typically combining radiocommunications, broadcasting and media (and in some instances postal services), are under the umbrella of one agency. Model 2 – Converged regulator regulator, thus merging agencies in charge of the various aspects of the communications sector. countries, including South Africa and the United Kingdom, to move away from single-sector regulators and evolve towards a converged authorizations for what are essentially similar services being offered to the public. This can cause conflicting decisions across sectors, or indeed responsibilities between sectoral regulators has also become an issue, leading sometimes to duplication of regulations and required authorizations for what are essentially similar services being offered to the public. This can cause conflicting decisions across sectors, or indeed lack of decisions where overlap between mandates cannot be resolved on a political level. The challenges of convergence have led several countries, including South Africa and the United Kingdom, to move away from single-sector regulators and evolve towards a converged regulator, thus merging agencies in charge of the various aspects of the communications sector.

In recent years, and especially with convergence in the communications sector blurring the boundaries between industries, overlapping responsibilities between sectoral regulators has also become an issue, leading sometimes to duplication of regulations and required authorizations for what are essentially similar services being offered to the public. This can cause conflicting decisions across sectors, or indeed lack of decisions where overlap between mandates cannot be resolved on a political level. The challenges of convergence have led several countries, including South Africa and the United Kingdom, to move away from single-sector regulators and evolve towards a converged regulator, thus merging agencies in charge of the various aspects of the communications sector. Model 2 – Converged regulator With a converged institutional design, all communications services i.e., telecommunications including radiocommunications, broadcasting and media (and in some instances postal services), are under the umbrella of one agency. Several countries have followed the route of converging their institutions dealing with the communications sector, typically combining formerly discrete agencies responsible for telecommunications, broadcasting or information technology into one entity:

- In December 1999, the Info-Communications Development Authority of Singapore Act of 1999 disbanded the former telecommunications regulator (Telecommunications Authority of Singapore, TAS) and the information technology agency (National Computer Board, NCB), to create one new statutory board, the InfoComm Development Authority (IDA).
The Independent Communications Authority of South Africa (ICASA) is the regulator of telecommunications and the broadcasting sectors. It was established in July 2000 as a result of the Independent Communications Authority of South Africa Act No.13 of 2000. It took over the functions of two previous regulators, the South African Telecommunications Regulatory Authority (SATRA) and the Independent Broadcasting Authority (IBA).

In 2001, the Saudi Arabian Council of Ministers issued a decision changing the name of the Saudi Communications Commission to the Communications and Information Technology Commission in light of new tasks it assumed in information technology.

Several EU member states, including Finland and the Netherlands, are also moving to converged regulators that regulate the licensing of infrastructure across the telecommunications and broadcasting sectors through a single regulatory body. In 1997, Italy created a single regulatory body with responsibility for all telecommunications and broadcasting matters. Austria also established such a regulatory authority in 2001.

A similar approach was also taken by the United Kingdom. The Office of Communications (Ofcom) was established in the United Kingdom in December 2003 as a result of the Communications Act 2000 and became the regulator for television, radio, and telecommunications. Ofcom combines five former agencies: the Broadcasting Standards Commission (BSC), the Independent Television Commission (ITC), the Office of Telecommunications (Oftel), the Radiocommunications Agency (RA), and the Radio Authority.

Even the European Commission’s Information Society Directorate was granted new responsibilities for audiovisual and media policies. The new Information Society and Media Directorate General brings together all three aspects of modern day electronic communications: broadcasting; computer networks; and electronic communication services.8

Like the single-sector telecommunications regulator, the converged communications regulator tends to be strong in specialized engineering skills in the communications sector, which is an important core expertise in dealing with complex network issues. In addition, the converged communications regulator also meets the challenges posed by service convergence by bringing in related skills, and therefore overcomes what is generally viewed as being one of the main disadvantages of a single-sector regulator (e.g., a telecommunications regulator overly focused on the telecommunications sector).

This model also better meets the need for flexibility in terms of its internal administration’s ability to meet market realities. It gives the regulatory authority and its staff the flexibility to better handle the continuous technological and regulatory changes and developments within the ICT sector. By having all services – which are increasingly provided over a single network – under one regulator, the staff responsible for specific services can work with other parts of the regulator that are dealing with related issues, and therefore the regulator can take a more consistent approach when considering changing technologies and their effect on legacy regulations.

In addition, the converged model tends to resolve some of the overlap between telecommunications and broadcasting that has tended to become one of the regulatory issues regarding convergence. As was clearly shown in the EU’s 1997 Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors,9 and in its “99 Review,”10 convergence in communications has called into question the service-based vertical regulatory system, with industry increasingly demanding a reorganization of the regulatory institutions in order to address the challenges posed by convergence.

As further stated by David Currie: 11

“Ofcom believes that convergence is a reality and that a converged regulator is best placed to nurse that convergence. When the Internet can deliver what looks to all intents and purposes like television broadcasting in a few years’ time, then Ofcom and the Government will face awkward choices. Should, in the interests of fairness, the content regulation of terrestrial, cable and satellite broadcasting be rolled out to Internet broadcasters? Or should the content regulation of terrestrial, cable and satellite broadcasters be significantly rolled back, passing the baton to smart navigational devices that allow people to find the content that they want (subject to the law) and avoid the content that they do not want to see or hear? A converged regulator like Ofcom will I hope be able to bring wisdom to that debate.”

Model 3 – Multi-sector regulator

Multi-sector regulators oversee not only the telecommunications sector, but other industry sectors with common economic and legal characteristics (e.g., telecommunications, water, energy, and transportation). Costa Rica, the Gambia, Jamaica, Latvia, Luxembourg, Niger and Panama, as well as state public utility commissions in individual states in the United States, have chosen this type of organizational structure.12

The advantages and disadvantages of multi-sector regulators have been discussed in various fora, and opinions vary. One of the main arguments generally raised in favour of a multi-sector regulator is based on the perceived lack of resources and the need for economies of scale to effectively regulate the different infrastructure industries and sectors. It is often argued that with this type of structural organization, one set of staff can be used to oversee a variety of industries. The rationale is that telecommunications is considered to form part of the overall infrastructure sector along with other utilities, such as electricity and water, and that infrastructure services share certain aspects: they are aimed at providing basic needs to the public; they often use similar rights-of-way; and they typically involve the economic regulation of large monopolies with network economic characteristics (i.e., high sunk and fixed costs). However, experience in some countries, such as Latvia, has shown that existing multi-sector regulators are performing poorly.

The answer to the staffing question is straightforward on the one hand and more complex on the other. Looking at the question in the strictest sense, single-sector regulators will look for highly technical staff focused on the telecommunications sector and generally organize their staff in industry-based units (e.g., post, telecommunications, radiocommunications). Converged regulators will look for staff that can bring in the expertise and know-how from the different sectors they are regulating. Generally these regulators are organized in functional units or indeed in horizontal, project-based units (See section 6.1.2.3. for details on administrative structures regarding functions of regulatory authorities). Multi-sector regulators will recruit staff specialized in the different sectors, and are generally organized in terms of the sectors within their mandate although some pool legal and economic resources to deal with, for example, tariffing issues that may be common across the different sectors.
An important question within this context, however, is to what extent staff can actually be used across the sectors. Our experience shows that staff within this model is generally recruited in terms of the sector they are regulating and only legal and occasionally economic staff is pooled to deal with specific issues that occur across the sectors. Luxembourg, for example, has organized its agency according to industries/services: telecommunications, electricity, gas, postal and spectrum management issues – these are then divided into smaller issue-specific units.13 This can also be seen in Belize and Niger. An interesting discussion of this issue is presented in the WDR Discussion Paper # 0204 of March 2002 which claims that:

“Examination of the actual organization of U.S. state-level multi-sector regulatory agencies, the Public Utility Commissions (PUCs), does not provide much evidence of economies of regulation, except at the level of the decision-makers, or Commissioners. Generally, staff members specialize in a particular sector such as telecommunications or water and work within distinct divisions that are devoted to sector-specific regulation. Resources are shared at the levels of commissioners, who hear cases pertaining to all sectors, the senior staff who manage the agency as a whole, and the legal staff responsible for hearings and related procedural matters. Generally, the different divisions are located in common facilities and use common amenities such as libraries, which may yield certain savings. ... It must also be noted that U.S. PUCs do not have jurisdiction over frequency management, cable and broadcasting. ... The U.S. PUC experience shows that there may be significant economies in areas such as use of buildings, libraries, and training facilities in common. This does not, however, justify multi-sector regulation as such, only close collaboration among sectoral regulatory agencies.”14

It is also often the case that a multi-sector regulatory authority is not created from scratch, but is the result of merging several existing agencies. In most countries it is not possible to dismiss employees in the course of such a merger, negating the realization of the hoped-for economies of regulation. In addition, a merger of two going concerns often creates significant morale problems and results in increased expenditures.15

Another disadvantage of this model is that often the telecommunications sector is the most liberalized sector under the auspices of the multi-sector regulator and therefore can be negatively affected if the telecommunications regulator is merged with other more highly regulated and less agile industries. Indeed, it may make matters worse by having telecommunications regulated in an environment with utilities that are progressing at a different pace where the needs and priorities are different, or where resources are practically non-existent. Moreover, by adding sectors, such as electricity and gas, that do not always produce revenues for the regulator, the telecommunications sector may bear a disproportionate share of the costs of regulation, potentially driving up regulatory costs for telecommunications providers.

Supporters of this model argue that having a multi-sector regulator can reduce political and other influences regarding the decision-making process as opposed to, for example, the single-sector regulator. Despite such claims concerning “capture” (meaning undue influence by politicians and/or dominant players), this does not necessarily seem linked to the institutional design option per se but is more a product of whether a clear set of “checks and balances” is incorporated in the design of the regulator. Indeed, a risk of the multi-sector regulator could even be that “capture” by a dominant ministry or entity not only affects a single sector but all sectors regulated by the multi-sector regulator. In addition, there may be greater complexity in establishing the legal framework for the multi-sector regulator, including the level of independence and allocation of functions as between the minister and the regulator.16 Furthermore, potential delays in instituting necessary reforms may result due to the disadvantages mentioned above.

Some argue that using cross-sector institutions to regulate telecommunications is justified in light of the growing convergence between telecommunications and other sectors. Ensuring that cross-sector rules and institutions are used to regulate telecommunications as well as other similar (utility) sectors may bring benefits, such as greater regulatory certainty (as operators may better forecast what to expect by observing how the regulatory framework is applied in other sectors) and lower risks of distortion between different activities. A counterargument is that the rationale behind establishing a multi-sector regulator is more a question of regulatory efficiency than of dealing with convergence in the communications sector. Even within this model it really depends on the mandate of the multi-sector regulator (i.e., whether it deals with just telecommunications or with communications as well as water, electricity, and transport) to determine whether a utilities-based regulator has the staff and internal administration that allows it to effectively cope with the challenges posed by ICT convergence.

As the market develops, and convergence affects the way in which communications is offered to the people, regulators not only are expected to possess high technical expertise, but to have an understanding of the structure and development trends of the communications market. Furthermore, regulators should be able to anticipate potential situations that could threaten or interfere with the development of the electronic communications industry. The concern that staff in a single-sector telecommunications regulator may face difficulties when incorporating next generation technologies and services into the regulatory framework is heightened with a multi-sector regulator since the staff of a multi-sector regulator would not necessarily be as technically focused on the communications sector. Obviously, a multi-sector regulator could recruit staff suited to the task of regulating the communications market, but the risk, especially where economists and legal experts are shared across the utilities sector, is that the pool of expertise becomes more diluted, thus compromising the capability and ultimately the credibility of the regulator.

A clear discussion of the advantages and disadvantages of multi-sector regulators is presented by Schwartz and Satola in the Table 6-3. 17

Model 4 – No specific telecommunications regulatory authority

An alternative approach is to rely on the application of competition and antitrust rules rather than on detailed sector-specific rules and institutional designs. Until the passage of the Telecommunications Act of 2001, New Zealand, for example, had chosen to entrust antitrust authorities with the task of administering all rules controlling market power in telecommunications.18 There was no sector specific regulatory requirement except for special obligations on Telecom New Zealand, called the Kiwi Share Obligations, which in effect regulate the price and availability of residential telephone service. Instead of sector specific regulation, the regulatory regime for telecommunications in New Zealand relied primarily upon general competition law, the Commerce Act 1986, to prevent anticompetitive behaviour. Thus, the primary constraint on the conduct of telecommunications firms in New Zealand was the same competition law that applied to all economic enterprises in New Zealand.19

However, in late 2000, the Minister of Communications determined that New Zealand’s reliance on the Commerce Act and general...
competition authority was inadequate in some respects to regulate the telecommunications sector. As a result, the Telecommunications Act 2001, which contained sector-specific provisions, was passed in December 2001 to complement the generic competition provisions of the Commerce Act. Furthermore, the position of a Telecommunications Commissioner, a specialist stand-alone commissioner within the Commerce Commission, was established, inter alia, to regulate the telecommunications sector, and in particular to resolve disputes over regulated services, to report to the Minister on further designations or specifications of additional services, and to monitor and enforce the Kiwi Share obligations. Additionally, the Telecommunications Commissioner has statutory responsibility for decisions made under the Telecommunications Act.

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**Table 6-4: Model 4 – No Specific Telecommunications Regulatory Authority**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Simple to implement.</td>
<td>Non-specialized judges are ill-equipped to deal with complex telecommunications regulatory issues (e.g., local interconnection cases in New Zealand).</td>
</tr>
<tr>
<td>Inexpensive.</td>
<td>Legal processes are often not designed to give a voice to those who are not directly parties to the dispute.</td>
</tr>
<tr>
<td>Reliance on economy-wide rules and institutions to regulate the sector promotes a coherent treatment between telecommunications and other sectors.</td>
<td>Costs of protracted litigation and regulatory mistakes can be very high.</td>
</tr>
<tr>
<td>Less risk of political capture where the judges are ultimately in charge of enforcing economic regulation in the telecommunications. Judges are seen to enjoy a clearer and more straight-forward protection against undue pressures from the government and are independent from industry.</td>
<td>Sector-specific issues such as interconnection and number portability may be difficult to resolve in the absence of sector-specific requirements.</td>
</tr>
<tr>
<td></td>
<td>Lack of clear accountability channels renders it unnecessary to set and achieve sector objectives such as universal service, thereby opening the door for ineffective or sometimes unnecessary regulation.</td>
</tr>
<tr>
<td></td>
<td>There is no actual functioning example of this model.</td>
</tr>
</tbody>
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**Practice Notes**

- **Case Study Converged Regulator: Ofcom** [6.1.1]
- **Case Study Multi-Sector Regulator: Latvian Public Utilities Commission (PUC)** [6.1.1]
- **Case Study Single Sector Regulator - Instituto das Comunicações de Portugal (ICP-ANACOM)** [6.1.1]
- **Case Study Single Sector Regulator: Botswana Telecommunications Authority (BTA)** [6.1.1]
- **Table 6-1: Model 1 – Single-Sector Regulator** [6.1.1]
- **Table 6-2: Model 2 – Converged Regulator** [6.1.1]
- **Table 6-3: Model 3 – Multi-Sector Regulator (MSR)** [6.1.1]

**6.6.1.2 OVERVIEW AND COMPARISON OF DIFFERENT ORGANIZATIONAL AND ADMINISTRATIVE STRUCTURES**

**Organizational Structures**

Determining the ideal organizational structure for a regulatory authority requires an assessment of various factors including: the country’s needs and objectives; political environment; legal requirements; and available expertise in the labor market. There are essentially two models of leadership organization for regulatory authorities: (i) the collegial body (a board or commission composed of multiple members); and (ii) the single regulator (often given the title of chairperson or president). Each has its advantages and disadvantages, and variations of each model are in use around the world.
The collegial body model usually involves a board or commission made up of individuals with different areas of expertise, potentially bringing those varied perspectives to bear on each regulatory issue. In addition, a collegial body could be seen as more independent, as it is less likely that all members would be influenced by the same actors, whether in the government or the private sector. Collegial bodies also often impart a sense of legitimacy in decision-making, as it is less likely that a single individual was responsible for any particular decision. However, as in any decision-making process involving more than one actor, the development of regulatory decisions can be a slower process and more subject to internal struggle.

By comparison, the single regulator model has the potential benefit of a consistent approach to regulation and decision-making, as decision-making authority is vested in a single individual who may have a unified plan for the telecommunications sector. In contrast to the collegial body model, single regulators can make decisions much more quickly, even when constrained by due process regulations. However, the single regulator is also potentially more vulnerable to undue influence exerted by external actors, whether in the government or in the private sector. In addition, a single individual may not be able to match the expertise of a collegial body made up of individuals from different backgrounds, although experienced staff can provide substantial expertise.

The number of regulators led by collegial bodies and single regulators continues to fluctuate as governments restructure their regulatory frameworks for telecommunications. However, based on responses received by the ITU to its annual Telecommunications Regulatory Survey during the past two years, approximately 75 per cent of the regulators are collegial bodies with the remaining 25 per cent constituting single regulators. Based on 2005 data, it can be seen that there are significant differences between the balance of collegial bodies and single regulators in various regions. (See Figure 6-A.)

In the Americas, 20 per cent of the 29 countries indicated that their regulatory agencies were headed by a single regulator, while among the 38 European/CIS states, 47.4 per cent reported regulators headed by a single individual. Approximately 30 per cent of countries from both the African and Asia-Pacific regions reported that they had single regulators, as did 25 per cent of the Arab states.

Management Structure

(a) Regulatory authorities headed by a collegial body

Almost two-thirds of the 131 countries that submitted responses to the 2005 ITU survey indicated that their regulatory agencies are collegial bodies. These multi-member commissions or boards of directors are composed of a varying number of members (usually an odd number from three to seven to minimize tie votes) that oversee and direct all activities of the regulator. One member is the chairperson or president of the commission/board and sometimes has a “casting” or deliberative vote that counts twice and acts as a tie-breaking vote, if necessary. Depending on the appointment process of the regulator, collegial body members can be appointed by one single branch of government, multiple branches of government and/or other industry stakeholders. This issue is further discussed in Section 6.2 on Staffing and Remuneration.

Management and administrative functions

The day-to-day management and administrative functions of the regulator are handled in varying combinations by: an executive director, chief executive officer (CEO), the chairperson, and/or managing director (collectively referred to herein as managing director). In some countries, like Botswana, Brazil, Canada, Greece, Ireland, Jordan, Malaysia, Mexico, Portugal, South Africa, and Venezuela, the managing director of the regulatory authority is the chairperson of the commission/board. The managing director acts as a liaison between the commission or board of directors and the departments/divisions that comprise the regulatory authority. In the Dominican Republic, the managing director is part of the board and acts as its secretary, but does not vote. In Peru, the managing director of the Organismo Supervisor de la Inversión Privada en Telecomunicaciones (OSIPTEL) participates in the board of directors’ meeting sessions, but essentially acts as an observer and cannot vote.

The duties and responsibilities of the managing director differ from country to country. In Bahrain, the general director not only handles the day-to-day affairs of the regulator, but also determines the internal structure and organization of the agency, and has authority to: delegate his functions to other agency staff; employ staff members and consultants; and establish conditions of employment for staff members (this last one with approval from the board). In Peru, OSIPTEL’s managing director is responsible for managing the regulator and carrying out the policies established by the board of directors and president of the regulator. In addition, the managing director is responsible for: the legal, administrative and judicial representation of the regulator; proposing policies and strategies for the development of OSIPTEL; developing the
annual report and the regulator’s budget for approval; and hiring, promoting, suspending and firing staff members (decisions regarding management staff members need approval from the board of directors and president of OSIPTEL).10

(b) Single individual structure

Single individual regulators are headed by a CEO, president or director general (collectively referred to herein as CEO) who oversees all policy, management, and administrative activities of the regulatory authority. In most cases, the CEO is appointed by the central government, often the minister responsible for communications. The term of office is fixed and generally varies from two to six years. However, in certain countries, including Estonia, Ethiopia, Iran, Liechtenstein, Norway, Oman, and Sudan, the CEO does not have a specific term of office.11

The duties and responsibilities of the CEO differ from country to country, but they are generally granted a broad scope of authority and responsibility. In Romania, the president of the National Regulatory Authority for Communications (ANRC) has a broad slate of responsibilities including managing the regulator, issuing decisions, approving the regulator’s organizational structure, and acting as the liaison with high-ranking authorities and officials both in Romania and abroad.12 In Guatemala, the Superintendencia de Telecomunicaciones (SIT) is headed by a superintendent who is responsible for managing and defining SIT policies, developing the regulator’s organizational structure, appointing and removing SIT employees, preparing its annual budget, and informing (at least twice a year) the Ministry of Communications, Transportation and Public Works of the regulator’s activities and internal administration issues.13 In addition, recent global events such as the Enron and Worldcom incidences have led to the evolution and shaping of a broad body of corporate governance and reporting principles which are gaining wide acceptance globally. The move to define principles for corporate standards of performance has also been quite active leading to new legal requirements as shown by the King Report in South Africa and the Sarbanes-Oxley Act in the United States.

The CEO is typically assisted by one or more deputies to whom he can delegate responsibilities. For example, in Romania, the president of the ANRC is assisted by a vice-president.14 Similarly, in Denmark, the director general of the National IT and Telecom Agency is assisted by two deputy generals.15

Administrative Structure regarding Functions of Regulatory Authorities

Once the scope of work and type of management structure is established, a country must determine how the functions of the regulatory authority will be organized (e.g., whether by industry/service, function or project).

(a) Industry or service-based departments

Many regulators follow a vertical (all regulatory issues) structure comprised of departments that address specific services areas (e.g., broadcasting, telecommunications, and information technology) under the authority of the regulator, as well as departments typically responsible for operations and administrative functions.16

Denmark’s National IT and Telecom Agency, a converged regulator, is divided into seven departments/divisions: (1) telecommunications; (2) IT and Media; (3) frequency and technical; (4) IT security; (5) documentation and international coordination; (6) corporate IT; and (7) the administration secretariat. The Telecommunications, IT and Media and Frequency and Technical departments are further divided into smaller units that are responsible for specific issues such as public content, frequency, consumer and market affairs within those industries/services.17

Below is the organizational chart for Denmark’s National IT and Telecom Agency:

In the case of Luxembourg, which has a multi-sector regulator, departments/divisions are responsible for the following industries/services: telecommunications, electricity, gas, postal and spectrum management issues. Similar to Denmark’s regulatory authority, each of these departments/divisions is divided into smaller issue-specific units.18

(b) Function-based departments/divisions

These regulators follow a horizontal (narrow range of regulatory issues) structure, but they cover all the specific service sectors that are regulated. Function-based departments/divisions have responsibility for areas such as: administration and human resources; enforcement; legal analysis; licensing; public relations; technical analysis and development; research and market analysis; user/customer services; and universal service fund administration.
For example, Chile's Subsecretaria de Telecomunicaciones (SUBTEL), is divided into seven function-based divisions: Administration and Finance; Regulatory Policy and Market Analysis; Legal, Concessions; Enforcement; Universal Access to the Information Society; as well as a division for Strategic Planning, Management Control, and Technological Policy. Each of these divisions is subdivided into units that are responsible for more specific topics. The Administration and Finance Division, for instance, is subdivided into five units that are responsible for finance, human resources, procurement, documentation, and a unit that handles information (including claims and suggestions). The Regulatory Policy and Market Analysis Division of SUBTEL is subdivided into three units, one for spectrum engineering and administration, one for economic regulation, and one for strategic studies. 19

Malaysia’s Communications & Multimedia Commission (MCMC), a converged regulator, is also divided into function-based divisions. They include: Industry Development; Regulatory State Coordination; Technical; Resource Planning & Management; Monitoring & Enforcement; and Management & Support Services. Similar to the Chilean model, each of these divisions is then subdivided into topic-specific units. The Regulatory State Coordination Division is subdivided into two departments, one for regulatory coordination (which includes units for licensing and for universal service provision) and the other for state coordination (which includes a unit to manage regional office matters). 20 Below is the organizational chart for Chile’s SUBTEL showing how this regulator has divided responsibilities by function:

Some regulators combine aspects of the industry/service and function-based structure models. The Canadian Radio-television and Telecommunications Commission (CRTC) divides the Commission’s responsibilities into the following departments/divisions: Broadcasting and Telecommunications Directorate; General Counsel Directorate; Communications Directorate; and Secretary General. 21 The SIT of Guatemala distributes responsibilities among three main departments/divisions: telecommunications; administrative; and legal. 22 Below is a diagram of Canada’s CRTC showing how a regulatory authority can combine both industry/service and function-based departments/divisions within its organizational structure:

(c) Project-based departments/divisions
These regulators can be organized as either industry/service-based or function-based departments/divisions, but they have a horizontal structure because departments/divisions collaborate when a project needs the support and expertise of various competencies. Morocco’s Agence Nationale de Réglementation des Télécommunications (ANRT) is a function-based regulator divided into departments/divisions that deal with technical, administrative, and operator issues, but has as a horizontal structure because staff members from units within these different departments/divisions are, as a matter of course, brought together to work on projects that require varied skills. The Malta Communications Authority (MCA) also utilizes a matrix organizational structure that allows the regulator “to adapt to change and maximize its expertise by shifting emphasis from a functional to a project-based approach.” Below is a diagram of Malta’s MCA, showing how this function-based regulatory authority uses a horizontal structure:

However, it should be pointed out that regardless of the departmental/division structure of the regulators, it is often the case that multiple departments and subunits will work together to accommodate the evolving needs of the telecommunications market, as well as facilitate and expedite internal procedures.

**6.6.2 GENERAL FUNCTIONS**

**6.6.2.1 RULEMAKING FUNCTION**

The rulemaking function allows regulators to issue proposed regulations setting forth their intended procedures before issuing new rules and regulations. In order to fulfill this function, regulators must implement appropriate internal procedures that not only include detailed steps to govern all aspects of the regulator’s decision-making process, but also have the institutional capacity necessary to effectively handle all of its regulatory roles. The rulemaking function generally includes the following procedures: petitions for rulemaking; requests for declaratory ruling; complaint procedures; licence applications; licence modification requests; guidelines for interaction with members of the public and interested parties during consideration of a particular issue; procedures for the formal issuance and publication of decisions; and procedures for seeking formal appeal or reconsideration of regulatory decisions. Box 6-1 below describes the decision-making process of the FCC in the United States.

Many regulators have implemented detailed procedures which address each of the processes mentioned. A complete analysis of the decision-making and public consultation processes is included in Section 6.6.
The following are examples of various procedures implemented by regulators as part of their oversight functions (Box 6-2):

1. **Petition for rulemaking**: The initiative to change FCC rules and regulations, or to adopt new ones, originates from sources both within and outside the Commission. When submitted from outside the FCC, the interested party must file a “petition for rulemaking” requesting that the FCC undertake such action. If the FCC determines that the petition presents sufficient reasons to warrant the initiation of a rulemaking proceeding, an appropriate notice of the proposed rulemaking will be issued. In cases where the FCC determines that insufficient grounds exist for initiating a rulemaking proceeding, the petition will be denied and the petitioner will be notified of the FCC’s decision along with the basis for the decision.

2. **Notice of Inquiry (NOI)**: If the FCC is interested in a particular issue but has not formulated a specific rule change proposal, the agency may issue an NOI. In an NOI, the FCC generally asks interested parties to respond to specific questions regarding novel issues or concerns for which the FCC seeks further information before deciding on the appropriate course of action. For example, recent NOIs have addressed such issues as IP-enabled services and mobile termination rates. NOIs are initiated either in response to an outside request or by the FCC itself.

3. **Rulemaking/Notice of Proposed Rulemaking (NPRM)**: When the FCC seeks to introduce changes to its rules, it issues an NPRM and seeks public comments on these proposals. NPRMs are publicly available, placed on the FCC website, and summarized in the Federal Register. A deadline is specified for both comments and reply comments. Interested parties may visit the FCC commissioners and staff to express views on the proceeding, but they must file an ex parte letter in the public record of the proceeding, detailing whom they visited and what they discussed. In any rulemaking where the FCC determines that an oral argument, hearing or any other type of proceeding is warranted, notice of the time, place, and nature of such proceeding will be published in the Federal Register. After considering comments in response to an NPRM, the FCC renders its decisions in the form of a Report and Order (R&O). In the R&O, the FCC not only issues its final rules, but discusses and responds to comments submitted by interested parties. The R&O explains the FCC’s decision and its rationale. It may develop new rules, amend existing rules or decide not to take any action.

Confidentiality request: If the public requests that the comments be withheld from public inspection, the documents must be clearly marked as “Confidential - Not for public inspection.”

### 6.6.2.2 OVERSIGHT FUNCTIONS: OVERVIEW OF DISPUTE RESOLUTION AND ENFORCEMENT

This function consists of the regulator’s ability to monitor the performance of telecommunications companies and ensure compliance with the telecommunications regulation and other subordinate rules. To ensure the effectiveness and transparency of the oversight function, regulators must put in place detailed subordinate guidelines such as dispute resolution and enforcement procedures.

Dispute resolution regulations generally include procedures for handling and resolving disputes between: (i) licensees and consumers; (ii) licensees, and (iii) the regulator and investors, operators or service providers.

Additionally, to ensure compliance and enforcement of regulations and licence conditions, the regulator must have the authority to investigate the activities and company records of all service providers when needed, and to impose penalties for violation of laws, regulations or licence conditions. This need is accentuated in markets transitioning to a competition market. Here, the regulator must focus on facilitating the development of the marketplace to ensure that the market power of previous monopolies, or dominant players, does not damage the prospects and opportunities for commercial development in the sector by the newer participants. In these conditions, incumbents have clear incentives to delay the entry of such new market players (e.g., by obstructing interconnection) in order to prolong their dominance. Therefore, the overall success of a regulator’s mandate is directly related to the adequate discharge of oversight powers in order to track the performance of incumbent operators, as well as their compliance with regulatory obligations.

Generally, regulations regarding monitoring and enforcement include procedures for conducting investigations regarding violations, determining fault standards, imposing penalties, requesting the regulator’s review of enforcement decisions, and submitting appeals to the regulator or to the courts.

The following are examples of various procedures implemented by regulators as part of their oversight functions (Box 6-2):
Regulators have implemented internal procedures and guidelines to ensure that information requests to stakeholders and the public are issued in accordance with pre-established parameters. These information requests are to effectively monitor and analyse telecommunications markets.

Peru The regulator, Organismo Supervisor de Inversión Privada en Telecomunicaciones (OSIPTEL), has oversight functions that include the power to request information from both public and private parties. For instance, OSIPTEL may request telecommunications companies to provide information regarding items such as their financial records, customer contracts, and installed infrastructure. Any information provided to OSIPTEL in response to its request will be considered as having been submitted in the form of a sworn legal statement. If the information provided is incomplete, unclear or equivocal in any way, the providing party may be deemed in breach of its statutory obligation to supply information and documentation to OSIPTEL.

Portugal Regulators have also implemented oversight procedures allowing their personnel to access a licensee’s premises. Portugal’s regulator, Autoridade Nacional de Comunicações (ICP-ANACOM), for example, has regulations governing the inspection of a licensee’s premises or sites.

**Article 12 - Exercise of Oversight**

1. Under terms of the law, ICP-ANACOM may proceed with inquiries and tests at any site or entity within the scope of those functions. 2. For effects of the aforementioned paragraphs, ICP-ANACOM may accredit especially skilled or qualified persons or entities.

**Article 48 - Supervisory Functions**

ICP-ANACOM’s workers, respective attorneys and the qualified and duly accredited personnel or entities who perform oversight functions, when exercising their functions, shall be considered agents of the authority and thus shall enjoy the following prerogatives:

- Access to installations, equipment and services of entities subject to inspection and control by ICP-ANACOM;
- Authority to requisition documents and analysis, as well as material to conduct tests;
- To identify, for subsequent action, all individuals who violate the laws and/or regulations whose observance they are obliged to respect;
- To demand the collaboration of the proper authorities when deemed necessary for the performance of their duties.

### 6.6.2.3 DISPUTE RESOLUTION AMONG ICT PROVIDERS

As the telecommunications sector continues to undergo changes caused by privatization, liberalization, and convergence, it becomes increasingly important for countries and regulators to have an effective and efficient dispute resolution and enforcement system. The failure to resolve disputes quickly can limit competition, cause delays in the introduction of new services and infrastructures, block or reduce investment in the sector, and impede liberalization and development of the sector. The appropriate dispute resolution mechanisms, however, vary depending on the stage of a country’s telecommunications market and regulatory development, regulatory framework and approaches, as well as general business culture.

The following sections review the various dispute resolution and enforcement mechanisms employed in the telecommunications sector, with particular emphasis on regulatory adjudications and the various mechanisms of alternative dispute resolution. In addition, this section tracks the systems of dispute resolution available to foreign telecommunications operators, mainly international investment disputes and trade disputes arbitrations.

**Overview of the main types of disputes in the telecommunications sector**

Disputes in the telecommunications sector generally arise out of various circumstances. However, disputes with the greatest impact on telecommunications investment and growth typically relate to: (i) interconnection and other relations between various network, service, application and content providers; (ii) liberalization; (iii) foreign investment and trade; and (iv) radio frequency use (e.g., harmful interference or spectrum refarming).

Interconnection disputes are among the most prevalent type of disputes between service providers, as operators of all different types of access networks (e.g., fixed-mobile, wireline-wireless) must be able to interconnect with each other. (See Box 6-3) Many aspects of the interconnection relationship involve key policy considerations for the telecommunications sector; therefore, most regulators consider it important to maintain some form of regulatory oversight of the negotiation and implementation of interconnection arrangements. In recent years, for example, an increasing issue regarding mobile interconnection has been the often high rates charged by mobile providers to terminate traffic on their networks. As a result, many regulators have made determinations that mobile providers have a monopoly over termination on their own networks and should be regulated. Regulators have opted between various mechanisms in order to strike an appropriate balance between the need to protect the interests of new market entrants while also leaving room for parties to negotiate agreements on their own. Among such approaches are: (i) prescribing interconnection arrangements on an ex ante basis; (ii) establishing interconnection guidelines; (iii) approving reference interconnection offers (RIOs) or model interconnection agreements; (iv) policing operators with significant market power; and (v) generally overseeing the interconnection process.

In addition, disputes also may arise as a consequence of introducing competition into the telecommunications market. The liberalization
process often undermines the established financial and business interests of incumbent network operators. These liberalization-related disputes generally derive from the incumbent’s desire to protect and maintain its dominant position in the market. Similarly, investment and trade disputes often occur where regulatory reforms or actions diminish the value of private-sector interests. These types of disputes have the potential to internationalize disputes arising between regulators and foreign investors in the telecommunications sector. Investment disputes typically stem from complaints by investors, operators, and service providers about early termination of exclusive rights, licensing of new competitors, new rate-setting structures and changes to licences. Current trends indicate a recent rise in international investment disputes within the telecommunications sector, based primarily on provisions of bilateral investment treaties. Trade disputes in the context of the WTO, on the other hand, are instituted by member states against other member states primarily due to lack of compliance with obligations assumed under the GATS and related documents.

Finally, radio frequency allocation and assignment disputes are dealt with internationally through mechanisms available through the ITU, particularly the Radiocommunications Bureau (ITU-R). Domestically, disputes may arise from interference, licence conditions, and pricing.

Approaches towards dispute resolution

Dispute resolution can be addressed from two separate approaches, namely through official and non-official mechanisms. Governmental authorities, statutory bodies and courts commonly discharge official functions in dispute resolution, their authority deriving principally from the constitutional, legislative and regulatory framework applicable to the telecommunications sector. Non-official dispute resolution – or alternative dispute resolution (ADR) – consists of mechanisms such as arbitration, mediation, and negotiation, where the individuals associated with these processes do not discharge any executive or judicial duties.

A well-resourced “official” sector, utilizing regulatory adjudication and the courts, is crucial to a successful dispute resolution environment. The resolution of disputes through regulatory adjudication with the option to seek final determination through the courts has emerged as a preferred method in both developed and developing countries. Alternative approaches, however, are often useful to deal with the lack of available regulatory or judicial resources, or where less formal techniques offer particular advantages. Therefore, it is important to identify those circumstances in which the use of each mechanism is more appropriate.

ADR mechanisms, such as arbitration and mediation, traditionally have been associated with solving private and commercial disputes, while regulatory adjudication has been understood as best suited for public policy issues. This compartmentalization may be too strict. As the case of interconnection disputes in the United States and Jordan evidence, regulators are increasingly using arbitration tools, either informally or formally. Moreover, in light of the rapid changes in the telecommunications sector, countries such as Saudi Arabia have instituted highly flexible approaches to determine which mechanisms (i.e., mediation, arbitration, or regulatory adjudication) to adopt for resolving specific disputes.

From a different perspective, other countries, as is the case of the United Kingdom, take the position that ADR techniques can be employed where disputing parties have similar levels of market power, since in that case parties are more likely to negotiate solutions that meet their mutual or on-going needs. In such cases, regulatory intervention is more often considered necessary where disparities of market power mean that one party effectively requires the protection of the official sector from abuse of process by the other.

Thus, when designing and evaluating the role of the official sector in dispute resolution processes, the concern should be:

§ Less about rigid lines between official and non-official sectors, and
§ More about seeking the roles in which the official sector can best use its efforts and presence to assist in the speedy resolution of disputes – and in a manner consistent with regulatory policy, the rule of law, and due process.

Due to differences in social, legal, and commercial traditions the approach for selecting a method of dispute resolution varies considerably between jurisdictions; even with regard to similar types of disputes. The following are certain elements to consider when making such a determination:

§ Drawing on “non-official” resources

The commercial world’s extensive experience with arbitration and other ADR techniques can help policy-makers and regulators encourage the use of non-official dispute resolution approaches in a regulated industry. Commercial arbitration illustrates how regulators can keep control over important policy issues and also ensure the usefulness of their dispute resolution systems – while easing their workload burdens.

§ Quality control over official and non-official processes

The type of dispute resolution process that is chosen influences what role regulators and courts will play in dispute resolution. Regulatory adjudication and arbitration require court oversight of procedures, because the parties have relinquished control over the outcome to the adjudicator or arbitrator. Regulatory adjudication also may be subject to various levels of “internal” agency and “external” court review for substantive appeal. It is important, however, not to undermine the credibility or timeliness of regulatory adjudication through over-use of review procedures.

The success of voluntary negotiated processes, including mediation, depends on their freedom from official review. Even where doubts exist about the efficacy of voluntary negotiations, regulators may be able to provide incentives for good faith engagement in negotiations instead of imposing substantive decisions.

§ Confidence factors in relying on non-official approaches

There are several important factors in gauging whether non-official dispute resolution approaches are as mature and suitable as regulatory adjudication or court action in any given setting. These factors include how professional the arbitration and mediation boards are, how well developed the arbitration and mediation institutions are, and the effective use of the oversight procedures.
Regulatory adjudication refers to the legal powers exercised by regulators pursuant to the resolution of the disputes brought before them. Currently, regulatory adjudication is recognized as the cornerstone of dispute resolution in telecommunications sector. However, regulatory adjudication is a relatively new mechanism since until recently, with the exception of a few countries, regulatory and policy-making responsibilities were concentrated in a single governmental structure. With liberalization and the introduction of competition in the telecommunications market, these functions were separated and regulatory authorities were created and charged with responsibility for overseeing and regulating the telecommunications sector.

In the United States, a country with long-developed administrative tradition, the FCC interprets, coordinates, and adjudicates policy issues, as well as disputes arising out of them. The FCC’s internal processes for dispute resolution include a final decision handed out by a Commissioner or a panel of Commissioners. Such decisions may be subject to internal review by the agency within a prescribed period, and can also be appealed before the U.S. Court of Appeals. In Canada, the CRTC follows court-like dispute settlement procedures. An Industry Committee consisting of parties and experts also has been established to resolve most telecommunications issues. Recourse to the CRTC is taken only when consensus cannot be reached by the Committee. In the United Kingdom, Ofcom follows a methodology for dispute settlement that involves the placing of evidence into a complaint before initiating a formal investigation. Investigation into the complaint involves clear identification of a relevant obligation or abuse under the Competition Act and deadlines are given for settlement of a complaint or dispute.

France’s regulator, ARCEP, is also vested with dispute settlement authority to rule on disputes between network and service providers in four areas: i) interconnection and access disputes; ii) provision of telecommunications services on cable networks; iii) shared use of infrastructure on public and private rights-of-way; and iv) cross-border disputes. However, ARCEP can only hold a hearing on a dispute if the complaining party has attempted to resolve the issue and negotiations have failed. Many countries with newer regulatory authorities also have empowered such agencies to consider and adjudicate disputes among telecommunications market players. In Morocco, for example, the regulator has been given broad power over interconnection dispute resolution (Box 6-4).

(a) Advantages and disadvantages of regulatory adjudication

When effectively and efficiently applied, regulatory adjudication has certain distinct advantages.

§ It can draw upon the legitimacy of the official sector, as well as the benefits of its enforcement mechanisms;

§ A well-staffed regulatory agency can access staff resources with different expertise (e.g., technical, economic, and legal) to provide input into decisions;11

§ The adjudication process can give the public a channel to provide input into the decision-making process.

However, the potential drawbacks to regulatory adjudication can be significant, and thus warrant paying close attention to the alternative approaches of dispute resolution. Some of these disadvantages are the following:

§ It can result in lengthy and cumbersome procedures;

§ Possibility of misuse of regulatory intervention by market-players, particularly incumbent operators, as part of a strategic response in order to hinder competitive conditions;

§ Legislative mandates dealing with issues of sector development, such as convergence, can reduce the regulator’s flexibility in confronting significant disputes and sector issues; and

§ A tendency of regulatory bodies to fragment or compartmentalize decisions into separate proceedings, as regulatory adjudication is the response of a single regulatory body, based on a narrow jurisdictional mandate and limited enforcement powers, to individual claims defined by parties on specific legal grounds.

(b) Procedural considerations of regulatory adjudication

When establishing a framework for regulatory adjudication, it is important that the procedural rights and obligations of the parties to the dispute, as well as the powers of the regulatory authority, are addressed. This would include establishing whether aggrieved parties are entitled to a closed hearing or whether the dispute, as well as all testimony and other evidence, is to be made publicly available. Additionally, other considerations include the regulatory authority’s power to call witnesses and order the production of documents.

(i) Formal hearings

As an official dispute resolution procedure, regulatory adjudication may involve a hearing by quasi-judicial body, which may be the telecommunications regulator or independent tribunal. Regulatory adjudictory hearings are typically led by a panel or tribunal following formal, written and published procedures for filing initial complaints, introducing evidence and witnesses, hearing parties’ arguments and issuing decisions. Where formal hearings are established, the rules of procedure should generally follow standard best practices for judicial proceedings. In particular, formal hearings should be open to the public to help ensure transparency and fairness. However, there may be provisions for closing certain portions or types of hearings to the public, such as where confidential or proprietary information is discussed. Another consideration in hearings is whether the parties’ testimony is introduced in written or oral form. Unlike traditional court proceedings, hearings for regulatory adjudication often involve the submission of written testimony and other evidence with the tribunal or regulator reserving the right to call witnesses for cross-examination, if needed. Malaysia’s regulator, the MCMC, also follows a public hearing approach in which parties generally submit written arguments, but may be required to present witnesses in front of the tribunal for cross-examination or clarification.12 In such cases, it is important that the regulator or tribunal has the authority to issue subpoenas for witnesses, if necessary, as well as possess the general authority to order the production of documents.

India’s approach to regulatory adjudication provides a clear example of the formal hearing process. The Telecom Regulatory Authority of India (TRAI) Act, as amended in 2000, established the Telecom Dispute Settlement and Appellate Tribunal (TDSAT);13 Independent from TRAI,
Alternative Dispute Resolution (ADR) encompasses different processes and procedures directed at settling disputes by means other than litigation and administrative adjudication. ADR methods include arbitration and mediation, and several other hybrids and variations.

ADR is based on the general premise that, where possible, it is more beneficial for private parties to settle disputes by private process and negotiated agreement as opposed to contentious litigation or regulatory adjudication. These methods have the benefit of preserving and, in some cases even enhancing, business relations that otherwise may be negatively affected by an adversarial process. Moreover, ADR can aid in saving costs associated with litigation. ADR procedures may either take the place of formal adjudication or complement adjudication and litigation by producing settlements within those fields. Flexibility is thus another principal advantage of ADR, as it usually allows parties to address different kinds of disputes through different procedures and approaches.

These mechanisms also may serve to alleviate the burden on official institutions in charge of settling disputes, by redirecting many types of disputes away from traditional courts and regulatory authorities. In Europe, for instance, the EU Framework Directive explicitly contemplates that national regulatory authorities should encourage the use of ADR mechanisms, such as mediation, where they are available. Pursuant to such initiatives, the Office of the Telecommunications Adjudicator was created in the United Kingdom to facilitate swift implementation of the processes necessary to enable competitors to gain access to the local loop. The Telecommunications Adjudicator also has the function of bringing all parties together to find prompt, mediated resolution of working-level implementation disputes. The scheme is a private contractual mechanism for dispute resolution agreed between the parties, and in this respect is similar to arbitration.

ADR procedures fall into three primary categories: (i) negotiation; (ii) mediation and conciliation; and (iii) arbitration.

(a) Negotiation

Negotiation is the premise upon which all consensual ADR activity is based. It is a consensual process designed to allow parties to arrive at a mutually agreeable solution. Negotiations are usually held on a confidential basis, and “without prejudice” to any legal recourse to which the parties may have a right. Negotiation differs from mediation because no third-party facilitator is usually involved. This provides additional flexibility because parties can generally schedule the process of negotiations on their own, avoiding adversarial processes present in other ADR mechanisms.

(b) Mediation and Conciliation

Mediation is a consensual process involving a neutral third party whose role is to facilitate resolution of the dispute. Both regulators and private individuals not involved in the regulatory process may act as mediators.
In discharging its duties, the mediator must initially solicit the views of the parties on the nature of the dispute and its key issues. The objective here is to seek potential points of agreement between the parties and propose constructive “win-win” solutions. The mediator often serves as a neutral third party that conveys views of the dispute between the parties to facilitate communication, and potentially develop a direct negotiation. At the appropriate time in the mediation process, the mediator may be able to suggest potential solutions or views of the underlying issues to both sides. For example, in Japan, mediation is used to resolve interconnection disputes.

Conciliation is closely related to mediation, but involves more formal procedures. Here, the parties do not meet together, as the conciliator assumes the role of an intermediary or liaison. The conciliator’s primary function is to communicate each disputant’s position to the other, relay settlement options, and sometimes offer nonbinding advice in an effort to bring the sides closer to settlement.

The United Nations has long encouraged conciliation and mediation to resolve disputes among states, and has recently recognized that mediation and arbitration are becoming common in commercial practice. On 19 November 2002, the United Nations General Assembly adopted a resolution encouraging all member states to give due consideration to enacting the Model Law on International Commercial Conciliation, which had been completed and adopted by the United Nations Commission on International Trade Law (UNCITRAL). See Box 6-5 for the UNCITRAL Model on International Commercial Conciliation.

Advantages and disadvantages of mediation

Mediation has many benefits. These include the following:

§ It may preserve long-term relationships upon which the telecommunications industry is based;
§ Mediacion costs are usually lower than adjudication or litigation;
§ Parties can select a compatible mediator, usually without regulatory intervention;
§ Mediation processes are more structured than negotiation (specific rules and procedures are available);
§ Professional organizations are available to assist;
§ Mediation allows the selection of a mediator with specific technical experience on the issue;
§ Mediation facilitates resolution without public adversarial processes; and
§ In addition to regulatory support, the benefits of mediation have led to judicial support for established mediation services and institutions.

Notwithstanding such benefits, mediation has certain drawbacks:

§ The success of this method depends on the willingness of the parties to work together in good faith; and
§ Mediation can also be subject to abuse by parties seeking to protract a dispute or obtain information that may be relevant at another stage of a dispute resolution process.

Factors for success

Various factors can contribute to the success of mediation:

§ The parties involved should be committed to arriving at an agreeable outcome;
§ Mediators and the parties must be able to establish a successful rapport;
§ While the parties have ultimate control over their participation in the process, the mediators’ management of the discussion makes it more structured than negotiation;
§ By diplomatic “reality checking” on the positions and assumptions of the parties, the mediator can enable parties to ease back from rigid, embedded, and unrealistic positions;
§ The mediator plays a critical role by focusing parties on their underlying interests rather than the abstract merits of their positions; and
§ Good mediators demonstrate patience, insight, and psychological finesse to convince parties to modify their entrenched positions.

Successful mediation in the regulatory context can depend on the role of regulatory officials. Involving regulatory staff as mediators, or having a neutral mediator report to the regulator, can discourage disputing parties from taking unreasonable positions during the mediation process. In some cases, however, involvement of regulatory staff may compromise the confidentiality of the dispute resolution process. Such confidentiality is a key element in the success of mediation because parties may wish to avoid potentially self-damaging consequences of changing their positions on important regulatory issues. In these cases, it may be preferable to use an outside neutral mediator, who can be trusted by both parties to maintain the confidentiality of the mediation process.

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Arbitration

Arbitration is a dispute resolution method that takes the place of conventional litigation. Through this consensual process, parties agree to submit a dispute to a neutral third party arbitrator or panel of arbitrators for resolution. The commitment to arbitrate may arise at the outset of commercial agreements through arbitration clauses that bind parties to seek arbitration for future disputes, or it may derive from legal instruments or international agreements. Arbitration may also be chosen as an alternative to litigation or regulatory adjudication when a dispute arises.

Arbitration is of particular importance in the international context, since arbitral awards are enforceable in a large number of different countries under the provisions of the New York Convention of 1958 on the Recognition and Enforcement of Arbitral Agreements and
Advantages and disadvantages of arbitration

Arbitration has several advantages. First, since it is generally a private or non-official procedure, it can better assure privacy and secrecy, protecting against disclosure of a party’s confidential business information. Parties can agree on the confidentiality of the information and documents disclosed during arbitration proceedings. In addition, the fear of a negative precedent may be reduced due to the private nature of ADR mechanisms.

The flexibility of ADR mechanisms allows parties to combine arbitration with informal negotiations or mediation, thus resolving their dispute in a manner similar to an assisted negotiation. This helps foster a continuing working relationship which is valuable if the parties’ dealings require ongoing interaction.

Arbitrations can sometimes take less time than conventional litigation or regulatory adjudication because of several factors, including the following:

§ Ability to design and schedule the steps needed at an early stage of the proceedings;
§ Ability to reduce steps that are otherwise mandatory in conventional litigation; and
§ Increased availability and flexibility of arbitrators.

From industry’s perspective, the potential shorter timeframe offers commercial advantages, including reduced interference with business objectives. In the case of international arbitration, a considerable advantage is the availability of more neutral forums for adjudicators than parties would find in either party’s national courts.

Among some of the potential drawbacks of arbitration are the following:

§ Arbitration is an essentially adversarial process, thus when used in isolation, it generally does not create “win-win” solutions or improve relationships;
§ Arbitration may be more expensive than litigation when the issues in dispute are complex and a considerable amount of time is required to hear the dispute; and
§ Arbitration proceedings cannot be consolidated into one action without the consent of all the parties, thus they create a risk of contradictory decisions on closely related issues.

Using arbitration in telecommunications disputes

Although arbitration as a dispute resolution tool is generally agreed upon by the parties involved in a specific contractual relation, in certain instances arbitration is compulsory or encouraged either by regulatory policy or legislation. For example, in certain countries internal regulation require interconnection disputes to be resolved through arbitration. Such is the case in Brazil, where disputes pertaining to the application and interpretation of the regulations during interconnection contract negotiations must be resolved by Anatel through arbitration, which is conducted by an Arbitration Council composed of three members appointed by the President of Anatel. The arbitration process begins when a party submits a petition to the President of the Council. The petitioning party then must submit all relevant information and documentation within the next 10 days. The Council is required to arbitrate the interconnection conditions within 15 days.

In some countries, the regulatory framework adopts a more flexible approach and allows disputants to select the type of dispute resolution method. This is the case of interconnection dispute resolution in Jordan, where after a dispute continues 20 working days after the parties have begun negotiating a solution, the parties may either: (i) ask the regulator to intervene; or (ii) seek the assistance of an arbitrator. The consent of both parties is necessary to send a dispute to arbitration, while a dispute may be referred to the regulator for resolution on the request of only one party. The Jordanian interconnection dispute resolution process also explicitly provides that referring a dispute to arbitration, or to the regulator for resolution, does not prejudice the rights of the parties to seek remedies through the courts.

In addition, arbitration is also used in the context of consumer disputes in the telecommunications sector. For example, some privately-run ADR bodies have created specific programs resolving such disputes. This is the case of the American Arbitration Association (AAA) Wireless Industry Arbitration Rules.

Factors for success

Numerous issues arise out of the use of arbitration mechanisms in the telecommunications regulatory context, including: (i) the role of the regulatory authority in the arbitration process; (ii) whether the arbitrators will be regulatory officials or independent persons approved or appointed by the regulatory authority; and (iii) whether the results of the arbitration proceeding will be subject to public comment and ultimately approved by the regulatory authority.

Because of this, the use of arbitration techniques and tools in the telecommunications sector requires addressing several important public policy concerns such as:

§ Potential limitations in the scope of proceedings (i.e., dealing with the precedent-related aspects of a dispute or with implications for related issues);
§ Potential concerns about the enforceability of proceedings and about initiatives of the regulator to protect the integrity of its own jurisdiction at the expense of the credibility of the arbitration process;
§ Concerns about the expertise and experience of the arbitrator(s);
In addition, investment treaty arbitration also insulates proceedings from extensive review by local court systems. Arbitrations under ICSID investors may not be able to receive a fair hearing in a host government’s courts. Claims out of the local legal system. Proponents of such mechanisms often describe them as safety valves that operate in the event that foreign jurisdiction to hear the dispute between the Government of Ghana and Malaysia Telekom (further developed in Box 6-6) holds true even where contracts between an investor and a state expressly limit recourse to local dispute settlement options. For example, in a rate-setting case, an investor may argue that the government did not take into account certain statutorily required criteria. Such a claim has been made in various cases recently instituted against the Government of Argentina due to price-freezes associated with the emergency economic measures taken in the wake of the 2001 financial crisis. Claims also may derive from an alleged breach of contract between the investor and the government. In such cases, failure to comply with contractual commitments to conduct regulation of the telecommunications sector in a certain way may serve as a basis for an investor’s compensation claims. These types of disputes may arise in the case of privatization of publicly-owned telecommunications companies, where it is not uncommon for contracts governing the sale of a government-owned stake in a telecommunications operator, to include an exclusivity period and a minimum rate of return, as well as to allow an increase in rates within a certain timeframe. As an increasing number of countries have dropped foreign investment restrictions, sometimes in conjunction with commitments to open market access under the WTO GATS, it has become common for local operators, including incumbents, to be owned in whole or in part by foreign investors. Disputes arising in this context often become more complicated because they may raise issues of international law, the application of bilateral and multilateral treaties, conflicts between laws in different jurisdictions, and whether the laws of the parent company’s home jurisdiction apply to the dispute. (b) International investment disputes

International investment disputes (i.e., disputes between states and nationals of different states), may be referred for resolution to the World Bank Group’s International Centre for Settlement of Investment Disputes (ICSID), as well as other centers such as the International Chamber of Commerce (ICC). This may be achieved through: (i) provisions in contracts between governments of member countries and investors from other member countries; and (ii) the operation of local investment laws and bilateral investment treaties. A vast majority of the claims currently pending before the ICSID were brought pursuant to bilateral investment treaties. This reflects a trend whereby the ICSID caseload has shifted in recent years away from disputes brought pursuant to individual investment contracts toward cases invoking an international investment treaty. Relevant aspects of bilateral investment treaty based disputes

Investment treaties typically provide foreign investors with the ability to bypass local and national legal systems, in favour of international arbitration, as they rarely require investors to exhaust their domestic legal remedies as a prerequisite to pursuing an international claim. This holds true even where contracts between an investor and a state expressly limit recourse to local dispute settlement options. For example, in the dispute between the Government of Ghana and Malaysia Telekom (further developed in Box 6-6) the arbitral tribunal upheld its jurisdiction to hear treaty claims, notwithstanding the fact that the contract in question provided for different means of dispute resolution. Thus, once concluded, investment treaties containing open offers to investor-state arbitration open the door for foreign investors to take their claims out of the local legal system. Proponents of such mechanisms often describe them as safety valves that operate in the event that foreign investors may not be able to receive a fair hearing in a host government’s courts. In addition, investment treaty arbitration also insulates proceedings from extensive review by local court systems. Arbitrations under ICSID

Concerns about the potential for conducting protracted proceedings in a quasi-judicial context without taking full advantage of opportunities for procedural streamlining;

Concerns about confidentiality-related considerations versus the interest in transparency that is usually characteristic of public decision-making;

Concerns about the legitimacy of a private dispute resolution process as a venue for resolution of issues affecting public policy and government interests;

Concerns about costs (which can be similar to concerns about litigation); and

Concerns with respect to a party’s limited rights of appeal.

Where these concerns are successfully addressed, it may be possible to structure credible, efficient, and effective alternatives to regulatory agency adjudication through arbitration, thus possibly improving the overall quality of dispute resolution in the telecommunications sector. Disputes Involving Foreign Operators

The privatization and liberalization trends that have characterized telecommunications regulations in the past decade have introduced a steady flow of foreign investment into the telecommunications sectors of many countries. However, such processes also may give rise to disputes between investors of telecommunications companies and regulatory agencies or ministries responsible for regulatory reform. This section addresses two specific types of disputes resolution regimes directly related to foreign investment in the telecommunications sector, namely: (i) international investment disputes; and (ii) international trade disputes.

(a) Investment disputes

Investment disputes tend to arise when the process of regulatory reform negatively affects the value of foreign investors’ stakes in the sector. Among the examples of such regulatory changes are: (i) the termination of an incumbent operator’s monopoly; (ii) rate rebalancing; (iii) mandatory interconnection; (iv) the introduction of a new rate-setting structure; and (v) changes in the terms and conditions of concessions or licences. The legal basis on which investors may initiate a claim against the government varies from jurisdiction to jurisdiction. An investor may argue that a government’s actions constitute an unlawful seizure of property or diminish the value of their property rights. Furthermore, investors may claim that the government has not complied with existing legislation or its statutory obligations (e.g., in a rate-setting case, an investor may argue that the government did not take into account certain statutorily required criteria). Such a claim has been made in various cases recently instituted against the Government of Argentina due to price-freezes associated with the emergency economic measures taken in the wake of the 2001 financial crisis. Claims also may derive from an alleged breach of contract between the investor and the government. In such cases, failure to comply with contractual commitments to conduct regulation of the telecommunications sector in a certain way may serve as a basis for an investor’s compensation claims. These types of disputes may arise in the case of privatization of publicly-owned telecommunications companies, where it is not uncommon for contracts governing the sale of a government-owned stake in a telecommunications operator, to include an exclusivity period and a minimum rate of return, as well as to allow an increase in rates within a certain timeframe.

As an increasing number of countries have dropped foreign investment restrictions, sometimes in conjunction with commitments to open market access under the WTO GATS, it has become common for local operators, including incumbents, to be owned in whole or in part by foreign investors. Disputes arising in this context often become more complicated because they may raise issues of international law, the application of bilateral and multilateral treaties, conflicts between laws in different jurisdictions, and whether the laws of the parent company’s home jurisdiction apply to the dispute.

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rules, for example, are exempt from the supervision of local courts, with awards subject only to an internal annulment process. Meanwhile, arbitrations under other sets of rules may be subject to limited challenge in domestic courts. This is evidenced in a case instituted by France Telecom against Lebanon were appeals were brought before the Swiss courts. Such review will typically be circumscribed by laws designed for ordinary commercial arbitrations, which, as a result, may accord a higher degree of deference to the findings of the arbitral tribunal.

Furthermore, investment arbitration can be plagued by lack of consistency in the interpretation of the substantive provisions of investment treaties from one case to the next. Thus, tribunals can, and have, reached widely divergent conclusions in parallel cases. Governments can take steps during treaty drafting to minimize some of these problems, by including rules for the consolidation of related claims under the jurisdiction of a single tribunal, thus reducing the risk that parallel proceedings will lead to divergent rulings.

Hence, governments acceding to investment treaties should be aware that these agreements may serve to internationalize disputes that arise between regulators and foreign investors in sensitive sectors, including telecommunications. In such cases, foreign investors may bypass domestic legal systems in favour of international dispute resolution forums.

International investment disputes in the telecommunications sector

The number of international investment disputes has increased in the past years, including telecommunications disputes. Since 2004, 10 separate disputes between telecommunications sector participants and various States have been reviewed and concluded by the ICSID.

Three cases at ICSID have been brought against the Argentine Government based on claims that the foreign investors are entitled to compensation for losses derived from measures adopted during the 2001 financial crisis, mainly related to price freezes. For example, in the case of Telefónica S.A. v. Argentine Republic, investors are alleging that the emergency measures amounted to the expropriation of their investments, and are seeking monetary compensation for their damages. These cases evidence the risk, noted above, of similar disputes being resolved by separate tribunals operating in parallel, thus raising the prospect of a succession of different rulings.

The following Box 6-7 provides a short summary of certain telecommunications-related investment disputes before the ICSID.

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Box 6-7 Telecommunications-related Investment Disputes Before ICSID

- **Telefónica S.A. v. Argentine Republic**: Telefónica S.A., which provides basic telephone and long-distance service in Argentina, filed a claim alleging that the Argentine Government partially expropriated its investment following the imposition of emergency measures during the recent Argentine financial crisis. Telefónica S.A. asserts that a freeze in service tariffs imposed by the Argentine Government, coupled with the 70 percent currency devaluation, cost the company US$3.8 billion. The parties reached a settlement and discontinued the proceeding in September 2009.

- **Telenor Mobile Communications v. Hungarian Government**: The Norwegian firm Telenor Mobile Communications has registered a claim against the Hungarian Government in relation to Telenor's subsidiary Pannon GSM, which has a cellular telephone concession in the eastern European state. Telenor's ICSID claim was brought pursuant to the Norway-Hungary bilateral investment treaty and seeks to challenge regulatory rate-setting measures imposed on Pannon by the Hungarian Government. On September 13, 2006 the ICSID determined that it did not have jurisdiction over the matter and dismissed the case.

In addition, several other telecommunications-related investment disputes have been brought to arbitration outside the scope of ICSID. As of April 2004, at least four telecommunications-related claims had been conducted outside of ICSID, based upon provisions in bilateral investment treaties in force between the host and investor's countries. These cases include Ameritech v. Polish Government; Telekom Malaysia v. Government of Ghana; France Telecom v. Lebanon; and William Nagel v. Czech Republic. These proceedings involve claims of expropriation of investments, as in the cases against Lebanon and the Government of Ghana, as well as violations of contractual obligations related to the award of licenses (i.e., the cases against the Government of Poland and the Czech Republic).

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(c) Disputes related to international trade: WTO dispute settlement

International trade law is applicable, under certain situations, to disputes within a country’s telecommunications sector. The WTO’s GATS is the principal multilateral trade agreement affecting the provision of telecommunications services. In addition, a series of related documents contain specific commitments pertaining to the opening and regulation of telecommunications markets: (i) the Fourth Protocol to the GATS Agreement; (ii) the Schedules of Specific Commitments of Individual GATS Signatories; and (ii) the WTO Reference Paper, which was included in the commitments of most signatories.

In many cases, these obligations are applicable to telecommunications disputes arising in GATS signatory countries. An international trade dispute arises when one country adopts a trade policy measure or takes some action (e.g., interconnection rate regulation) that one or more WTO members consider to be in breach of pre-existing WTO agreements, or to be a failure to comply with validly acquired obligations. In such cases, WTO members have agreed to use the multilateral system of dispute settlement, rather than take unilateral action.

The following Figure 6-B is a diagram of the dispute resolution procedure before the WTO:
The main objective of WTO dispute resolution proceedings is to settle disputes, through consultation if possible. To date, only one telecommunications case has been before a WTO Dispute Settlement Body (DSB) for resolution, the U.S.-Mexico case. In that case, the United States argued that Mexico had failed to comply with its commitments and obligations under the GATS, specifically it had failed: (i) ensure that Telmex provided interconnection to U.S. cross-border basic telecommunications suppliers on reasonable rates, terms and conditions; (ii) ensure reasonable and non-discriminatory access to, and use of, public telecommunications networks and services for U.S. basic telecommunications suppliers; and (iii) provide national treatment to U.S.-owned commercial agencies. The panel’s report on “Mexico – Measures Affecting Telecommunications Services”, later adopted by the DSB on 1 June 2004, principally sided with the U.S. position. Nevertheless, following its adoption the parties notified the DSB that they had arrived at a mutually agreed solution to the conflict by which Mexico would, within a 13 month period: (i) adopt revised International Long Distance Rules eliminating the “uniform settlement rate” and “proportional return” systems in force at the time; and (ii) implement a regulation to allow the resale of international long distance public switched telecommunications service.

Other telecommunications-related disputes between WTO Members have been under discussion and at least two cases have nearly come to the WTO but have been settled through purely bilateral channels, including: (i) a dispute between the United States and Japan on interconnection; and (ii) a dispute between the United States and the European Communities on standards for licensing mobile services.

Under WTO rules, individual service providers lack “standing” to seek remedies through the GATS dispute resolution procedures. As such, typically, the service provider’s country of origin puts pressure on another country’s government to comply with its GATS obligations. These mechanisms have the potential of turning what could initially be characterized as a domestic dispute (e.g., about licensing or interconnection) into an international trade law dispute.

6.6.2.4 PROCESS FOR RESOLVING CONSUMER COMPLAINTS: ACCOUNTABILITY FOR CONSUMERS

Regulatory accountability also involves regulators having appropriate procedures to channel consumer inquiries or claims, to educate consumers regarding their rights, and to protect consumers in case of market failures. In a majority of countries, regulators assume responsibility for handling consumer complaints. Disputes between service providers and consumers are also common and occur in every jurisdiction. These conflicts principally stem from the consumer’s lack of bargaining power or the lack of consumer choice among service providers. The main type of disputes arising between consumers and service providers derive from the following causes: (i) service charges; (ii) billing; (iii) payment of charges; (iv) “slamming”; (v) quality and terms of service; (vi) violation of privacy; and (vii) false or deceptive advertising.

To ensure effective resolution of consumer disputes, regulators are using a variety of mechanisms, ranging from requiring service providers and consumers to initially resolve disputes themselves (the case of the United States and Botswana); using ombudsmen type institutions (as the telecommunications industry Ombudsman in Australia); and even employing the broadcast media (as is the case of the Nigerian “Consumer Parliament” evidences). The particular mechanisms developed and instituted for consumer protection in each country may differ and require tailoring to the needs of the country depending on the country’s particular legal and institutional systems and culture. For instance, certain mechanisms, such as ombudsmen, tend to work best in countries with a long history of consumer activism.
Telecommunications regulators have implemented different methods to make themselves accessible to the public and to facilitate the handling of consumer complaints. Some countries have administrative offices outside the regulator, while others have utilized internal offices of consumer affairs. As telecommunications markets become more competitive, regulators continue to take a proactive role to protect consumer rights through consumer protection legislation, licence conditions, consumer education and information, and encouragement of industry self-regulation through industry codes. For example, many regulators have published consumer information fact sheets, guides and brochures on their websites. Most telecommunications legislation and related regulations contain provisions on quality of service standards, telecommunications fraud, number portability, carrier selection, and universal service. In many countries, consumers have more than one avenue to file complaints with the regulator so the regulator is better able to handle consumer concerns in a competitive market. Usually, consumers can file complaints in several ways: (i) in writing, (ii) by e-mail; (iii) by telephone, (iv) by fax, or (v) in person at the regulator’s offices, in consumer centers/call centers or in a Consumer Parliament (e.g., Nigeria). The procedures for filing complaints with the regulator are generally simple in order to facilitate their submission, and are published on the regulator’s website, in official publications and available at the regulator’s offices.

In some countries, such as Australia, Hong Kong (SAR) and Malaysia, the regulators place significant emphasis on industry self-regulation and on codes that are developed by industry and approved and registered with the regulator, covering issues such as billing, number portability, pricing information, and complaint handling by operators. Other regulators have also established consumer advisory committees and forums to provide the regulator with advice on consumer concerns, promote consumer input into policies and regulations and to ensure that the consumers’ interests are taken into account during the regulator’s decision-making process. In Australia, the regulator is required by legislation to establish a consumer forum. Australia has also created an independent Telecommunications Industry Ombudsman to investigate complaints about the provision of telephone or Internet services and to help parties settle disputes regarding such services.

In Canada, the Governor in Council issued Order requiring the CRTC to report to the Governor in Council on consumer complaints, which required the creation of an independent telecommunications consumer agency. Pursuant to the terms of the Order, telecommunications service providers are required to participate in and contribute to the financing of this independent agency. The Canadian regulator, the Canadian Radio-television and Telecommunications Commission (CRTC) was charged with approving the structure and mandate of such an agency. The CRTC subsequently gave provisional approval to the structure and mandate of the Commissioner for Complaints for Telecommunications Services (CCTS). The CCTS has been operating since the summer of 2007, although the CRTC has made a number of changes to its structure and mandate in order to ensure its effectiveness and its independence from the telecommunications industry.

Many regulators, particularly in developing and less competitive markets may not be able to rely on industry self-regulation and find it necessary to assume a larger role in consumer empowerment and protection. Some regulators, such as Anatel in Brazil and the Nigerian Communications Commission (NCC) have created innovative ways for addressing consumer complaints. The NCC has established a Consumer Affairs Bureau to serve as the industry watchdog for educating, informing, and protecting consumers. Additionally, the NCC has published a Consumer Bill of Rights recognizing the inalienable rights that every consumer should have, including: (i) the right to be informed; (ii) the right to safety; (iii) the right to choice; and (iv) the right to be heard. The NCC also instituted a Consumer Parliament, which brings all stakeholders, consumers, operators, and the regulator together and provides a live broadcast, public forum where the regulator can educate the public and consumers can ask questions and voice their grievances.
Some countries have specialized tribunals to assist consumers with adjudicating their claims against operators. In Peru, the Administrative Tribunal for the Settlement of Users Claims (TRASU) adjudicates claims filed by users of public telecommunications services. TRASU is part of OSIPTEL but is fully independent in its rulings and is the last administrative review for users’ claims. The six members of TRASU are elected by OSIPTEL’s Board of Directors based on a recommendation submitted by OSIPTEL’s Chairman, and are remunerated for their services. TRASU can be part of OSIPTEL’s staff, or professional experts. Its functions are to: (i) resolve claims and appeals submitted for its consideration; (ii) propose to OSIPTEL’s Managing Council the modification of the procedures to deal with users’ claims, and those related to violations and sanctions; (iii) approve the content of forms and other materials to be used, to allow the expeditious resolution of claims and appeals submitted for its consideration; and (iv) engage in other matters entrusted to it by OSIPTEL’s Managing Council. TRASU has jurisdiction over:

1. Revision of decisions concerning users claims issued by telecommunications operators;

2. Claims or appeals against decisions issued by the operators in connection with claims filed against the operator’s administrative procedures; and

3. Appeals against decisions related to quality of service problems.

Colombia has taken a different approach to consumer complaints. While one of the regulator’s functions is to provide information to customers regarding telecommunications services, the authority to adjudicate disputes between telecommunications operators and customers has been delegated to the Superintendencia de Servicios Publicos Domiciliarios (Superintendency of Domestic Public Services - SSPD). This is a multi-sectoral administrative body independent from the telecommunications regulator, created by the Colombian Constitution in 1991, to exercise the functions of supervision, inspection, and oversight of entities providing public services such as energy, gas, and telecommunications services. The SSPD receives appeals filed by users and subscribers after they have been filed directly with the telecommunications operator. The SSPD can impose sanctions on public service providers. The United Kingdom has adopted an interesting approach to handle consumer complaints concerning telecommunications services. In January 2003, the Office of the Telecommunications Ombudsman (Otelo) was established as a voluntary dispute resolution service, independent from the regulator Ofcom. Otelo reviews and seeks to resolve consumer complaints against companies that are members. Otelo’s current members cover more than 96 per cent of the fixed line telephone market, over 55 per cent of the mobile telephone market and 33 per cent of the ISP market. Otelo is composed of an Ombudsman, two senior managers, a board composed of seven members (five nominated by member companies and two appointed from the independent council members), and a Council whose main role is to appoint the Ombudsman and manage Otelo’s services. Otelo’s terms of reference detail the range of telecommunications services that are covered, and what Otelo can and cannot do. Otelo considers complaints against member companies where the complainant and the company have been unable to reach an agreement, and determine whether the member company must take any action for the consumer’s benefit.

With the development of the Internet, many countries are also in the process of drafting and adopting guidelines and regulations for protection
of consumers involved in online activities, such as data protection laws, cybercrime laws, and anti-spam laws. The approach to consumer protection in the ICT environment varies among countries, with some countries, such as the United States, adopting a more hands-off approach and others, such as the EU, adopting a stricter regulatory approach. Because of the variations in laws among countries, and the need to coordinate international efforts in handling the flow of Internet data and cyber-crimes, there is a movement to harmonize standards in ICT-related laws among countries.

**Consumer complaints against operators**

The majority of consumer complaints relate to the conduct of telecommunications operators and service providers. Regulators have created specific standards and filing requirements for telecommunications operators to protect consumer interests. Regulations often require companies to establish procedures to handle consumer complaints. In addition, in some instances, the regulations also include a requirement that the company have customer service personnel available 24 hours to handle consumer inquiries, and that any information concerning the procedures and the right to submit claims should be publicly available and located conspicuously at the company’s offices and/or on its website. Further, operators are sometimes required to create special forms designed to facilitate consumer claims, to keep registers of consumers’ claims, and to establish specific timeframes for resolving consumer complaints or applying specific rules, such as the positive administrative silence rule used in civil law countries.

Generally, primary responsibility for handling consumer complaints against telecommunications operators resides with the company providing the service, since the operator has all the relevant information concerning the service and therefore is better able to address the claims. The company's procedures dealing with the consumer complaint set the framework for the initial administrative review of the user’s claim, before intervention by the regulator. The regulator generally intervenes only after the consumer is unable to resolve the issue directly with the operator or service provider; or if the consumer complaint involves a breach of the telecommunications law and regulations or licence provisions. In Hong Kong, OFTA states clearly that its powers and functions regarding consumer complaints against an operator are limited to the conduct and practices of the operators regulated under the telecommunications laws and licence conditions, and OFTA does not have any power to adjudicate contractual disputes between individual consumers and operators. Contractual disputes between consumers and operators can often be resolved through dispute resolution mechanisms, as described in Section 7.4.1.

Additionally, depending on the nature of the complaint and whether the complaint is outside of the regulator’s scope of authority, consumers may seek recourse from the courts or other consumer organizations or agencies. In Ireland, for example, consumers can address complaints to the Small Claims Court, the European Consumer Center, Regtel (the independent regulator for content and promotion of premium rate telecommunications services), the Office of the Data Protection Commissioner, the Advertising Standards Authority for Ireland, and the Office of the Director of Consumer Affairs. The intervention of an attorney for consumer claims generally is not required because this would obligate the consumer to incur further expenses and discourage claims. The consumer, however, usually has discretion to use an attorney if desired.

### 6.6.2.5 ENFORCEMENT AUTHORITY

In order to ensure that parties to the regulator’s dispute resolution process abide by the decisions, the regulator must be given sufficient power to enforce its decisions. In addition, the regulator must have sufficient authority to enforce all provisions under the telecommunications law, regulations and other rules. The regulator should have the ability not only to enforce rules of general applicability, but also to issue directions and mandate operators to carry out or to stop a particular activity. The Telecommunications Regulatory Authority (TRA) of Bahrain provides a good example of the necessary tools that regulators must have to carry out their responsibilities. Among other rights, the TRA has the power to:

1. Issue regulations, orders and determinations as necessary to implement the provisions of the Telecommunications Law;
2. Monitor and enforce compliance with licence terms;
3. In coordination with the Radiocommunications Authority, monitor and enforce spectrum usage in accordance with the Telecommunications Law and to ensure efficient spectrum usage;
4. Encourage, regulate and facilitate adequate access, interconnection and interoperability of services, including enforcing sharing of facilities and property by operators;
5. Examine complaints and resolve disputes between licensees, subscribers, and other interested parties, as well as take any necessary and proportionate measures in relation to such matters.

Except in emergency cases, if a TRA enforcement action is expected to have a material impact on a particular telecommunications market, it must give affected parties an adequate opportunity to submit comments on the planned action. The regulator should also possess the proper authority enabling it to sanction operators. The sanction power consists of the ability of the regulator to establish a fault standard for violations as well as the level of fine applied due to the violation. Most regulators’ competencies include the ability to impose sanctions in order to enforce compliance with applicable laws, regulations, and licence conditions.

### 6.6.3 CORE RESPONSABILITIES

#### 6.6.3.1 LICENSING

In most countries, licensing is one of the primary functions of the regulator, although in certain countries, this responsibility falls under the jurisdiction of the sector ministry or is shared between the regulator and the ministry. Through licensing, governments often implement policies aimed at opening the market, providing services to underserved areas, modernizing telecommunications infrastructure, and supporting ICT policies. Licensing responsibilities generally include: preparation and publication of model licences; development of licence application guidelines and evaluation criteria; establishment of licence fees; and licence renewals. Recently, regulators have begun to re-examine their licensing practices as a result of increasing technology convergence and are moving towards unified or converged licensing models.
As more regulators examine the need to adopt new licensing regimes in light of increasing liberalization and technological developments, it is critical to take into account and review the impact of the proposed new licensing regimes on the existing licensees and, in particular, any exclusivity provisions that were previously granted to incumbent operators. Usually, incumbent operators are concerned with issues such as licence parity; therefore, regulators are often faced with the challenge of facilitating the market entry of new service providers while at the same time addressing the acquired rights of existing operators.

In addition, when establishing licence award processes in cases where a beauty contest (comparative evaluation) process is used to select and award the licence to the best applicant, regulators should formulate objective and transparent evaluation criteria. Not only will transparent evaluation criteria be more attractive to potential new entrants, but these will also minimize the potential for unsuccessful applicants to appeal the licence award.

### Practice Notes

- Facilitating Cooperation between Regulatory Agencies – Memorandums of Understanding and Cooperation Protocols

### Reference Documents

- Netherlands: Agreements between the Commission of the Independent Post and Telecommunications Authority (OPTA) and the Director General of the Netherlands Competition Authority (the NMa) on the method of cooperation in matters of mutual interest, 2004
- Nigeria: Memorandum of Understanding between the Consumer Protection Council and the Nigerian Communications Commission

#### 6.6.3.2 COMPETITION POLICY AND COMPETITIVE SAFEGUARDS

Liberalization and increased competition in telecommunications markets require active regulatory involvement to provide new entrants with a level playing field when attempting to compete against well-established incumbent operators. Incumbent operators usually have substantial advantages, such as a legacy ubiquitous network that is largely depreciated, a substantial customer base, and market power. New entrants require assurances that adequate regulatory protection will in place so that the incumbent operators will not be permitted to engage in anticompetitive behavior or abuse their dominant position. Accordingly, regulators are generally given the power to establish competition policy and address anticompetitive practices in the telecommunications market. Regulations developed in this regard generally include elements such as market definitions, definitions of thresholds for market power, and accounting separation.

(a) Jurisdiction and Mandate over Competition Matters

Many regulators have explicit mandates in the telecommunications law to deal with anticompetitive practices in their sector. Nevertheless, countries frequently also have a separate competition authority with statutory responsibility for competition matters, generally in consultation with a sector-specific regulator. One example where this approach has been followed is Peru.

Although there is an established competition bureau, Instituto Nacional de Defensa de la Competencia y de Protección de la Propiedad Intelectual (INDECOPI), the telecommunications regulator Organismo Supervisor de Inversión Privada en Telecomunicaciones (OSIPTEL) was given primary responsibility to regulate anticompetitive behavior in the telecommunications sector. OSIPTEL’s regulation states that “the rules of free competition are ancillary to regulations issued by OSIPTEL within its areas of competence. In cases of conflict, the rules issued by OSIPTEL shall prevail.”

(b) Mandate to Issue Regulations on Competitive Safeguards

A major responsibility of a regulator in a liberalized telecommunications market is to ensure that operators with market power or dominance do not abuse their position with respect to their customers and existing and potential competitors. In the telecommunications industry, a dominant operator has the ability to control the essential facilities involved in interconnection unless measures are in place to restrict the operator from doing so. For example, the power to deny or overprice interconnection and network facilities gives a dominant service provider unfair and potentially insurmountable advantages over its competitors. Thus, safeguards must be designed to define, deter, and punish anticompetitive activities while at the same time creating an enabling environment that will attract the investment needed to establish competing ventures.

As telecommunications markets continue to become more competitive, many ways exist in which dominant operators can engage in anticompetitive behavior (e.g., predatory pricing, cross-subsidization, price discrimination, discriminatory provisioning of network facilities, overpricing of essential facilities and other network elements and services provided to competitors, unfair trade practices, tie-in sales, and anticompetitive bundling). Regulators can anticipate many complaints from new entrants in this regard and it is extremely important that clearly defined rules are in place to deal effectively and transparently with such allegations.

Regulators have several tools to deal with competition issues. Competitive safeguards applied to dominant operators may be: 2

- Structural, by requiring the establishment of a fully separate subsidiary to draw a clear distinction between the provision of competitive and non-competitive services;
- Non-structural, such as accounting safeguards employing cost allocation rules for various services;
- Conduct compliance requirements and specific obligations; and
- Explicit pricing rules.

Finally, regulators must demonstrate their credibility from the outset when dealing with competition issues. This requires resources to thoroughly investigate cases brought forward by complainants as well as to initiate investigations in instances where the regulator determines
there is a need to do so. Furthermore, regulators also require strong enforcement powers in order to impose penalties and apply remedies in proven cases of anticompetitive behavior. Without these powers, the regulator cannot adequately ensure that sufficient incentives and protection exist for potential new entrants and thus the market will not be fully competitive.

6.6.3.3 TARIFF REGULATION

Regulators must establish effective and transparent tariffing regimes in order to contribute to the orderly evolution to competition in the telecommunications sector. As markets become more competitive, tariff regulation becomes a less important regulatory function. However, when tariffs are still being set by the regulator, they should be set formally through the issuance of rules and other regulatory instruments. Additionally, before the market is fully competitive, regulators usually apply different tariff regulations on non-dominant operators versus dominant operators. In order to ensure that fair competition can develop, non-dominant operators are generally subject to less onerous tariff regulations. Dominant operators, on the other hand, can be subject to ex ante tariffing regulation. For example, dominant operators may be required to submit their tariffs for regulatory approval, whereas non-dominant operators may be subject only to publication requirements.

A fundamental reason for tariff regulation is to prevent the abuse of dominance. There are two market situations in which tariffs are required to address dominance: non-competitive or monopoly markets and competitive markets. For service markets in which a dominant operator does not face effective competition, the regulatory concern is that prices will be set substantially above cost so that the operator earns a monopoly level of profit. In this circumstance, regulators have historically used “rate of return” regulation, which establishes the maximum return on capital invested, or increasingly, regulators have imposed a price cap regime (with or without consideration of the rate of return), which provides some level of incentives for operators to function efficiently and reduce costs. Price cap regulation involves the regulator creating “baskets” of services that are non-competitive. The composition of such baskets tends to vary by country to reflect individual market circumstances. Some examples of possible “baskets” of services include: basic services; basic and mobile services; basic local service; and local and access service.

For those markets in which a dominant operator faces competition, especially in the early stages of liberalization, the regulatory concern shifts to anticompetitive pricing tactics (e.g., predatory pricing and cross-subsidization) that are intended to weaken or damage new entrants. In this case, the concern is that retail prices for some services will be set below cost by a dominant carrier. Many regulators have explicit prohibitions regarding anticompetitive pricing, particularly predatory pricing.

For example, Singapore’s regulator, Infocomm Development Authority (IDA) requires dominant carriers to provide telecommunications service on terms and conditions that are just, reasonable and non-discriminatory and pursuant to filed tariffs. A dominant carrier may not abuse its market position by, for example, setting prices at levels that are so low so as to unreasonably restrict competition. The IDA utilizes a three-pronged test for predation, namely whether:

- The dominant carrier is selling service at a price below marginal cost;
- There is a likelihood that such price cutting will drive efficient rivals from the market or deter future efficient rivals from entering the market; and
- Entry barriers are so significant that, after driving rivals from the market or deterring entry, the dominant carrier could impose price increases that would be sufficient to recapture the full amount of the loss that it incurred during the period of price cutting.

After making a determination of dominance, all regulators should adopt consistent principles and procedures to ensure that prices are just and reasonable, which is often expressed as “cost-based” prices.

Implementation of such tariff-fixing processes and procedures also requires that the regulator establish or approve a cost accounting system and allocation regime so that all of a dominant operator’s costs that relate to regulated services are identifiable and consistent with the cost accounting system.

6.6.3.4 INTERCONNECTION

Regulators play a critical role in overseeing interconnection. In most cases, they must review relevant economic principles regarding interconnection pricing, analyse and propose interconnection costing approaches, develop common cost models to be utilized by all operators, and develop interconnection guidelines and regulations. Interconnection is often the most contentious regulatory issue given its fundamental impact on the overall operation of competing telecommunications networks. It is also one of the most important regulations to put in place before competition can be successfully introduced. To facilitate competition, regulators must ensure that the interconnection framework is clearly defined and that interconnection charges between networks are based on objective, economically sound, and solidly substantiated costs.

As with tariff regulation, before the market is fully competitive, interconnection regulation is generally applied asymmetrically on dominant versus non-dominant operators to ensure that non-dominant operators have access to interconnection services controlled by dominant operators. Generally, dominant operators are required to publish reference interconnection offers and interconnection agreements, which serve to inform and facilitate interconnection by new entrants and other non-dominant operators, and to discourage discriminatory behaviour by dominant operators in providing interconnection.

Investor concerns regarding interconnection regimes have grown steadily over the last five years due in large part, but not limited to, numerous problems encountered between mobile operators and fixed line service providers. In the early days of competition, regulators often have difficulty in establishing adequate interconnection guidelines for mobile-to-fixed and mobile-to-mobile calls. Many investors have suffered financially as a result and thus are more diligent about ensuring that the interconnection regime is economically sound and supported by a clear regulatory position.

In this era of convergence, regulators are facing new issues such as how to transition different rights of individual groups of licensees under a specific interconnection regime to a unified licensing regime. Finally, regulators are also facing the challenge of how to address the complexities
created by a multiplicity of operators utilizing a variety of technologies interconnecting among themselves. In the ITU-D study group question on interconnection, for example, the participants studied possible solutions to this issue, including the interconnection gateway exchange and interconnection billing clearing house.1

6.6.3.5 SPECTRUM MANAGEMENT

As a scarce resource that is becoming increasingly valuable as the number of mobile phone users and the range of bandwidth-hungry services and applications grow, spectrum management is an essential part of telecommunications policy and regulation. Spectrum management refers to a wide array of responsibilities, including spectrum allocation, methods of spectrum assignment, development of technical and service rules and enforcement of rules and licensing obligations, such as preventing harmful interference or coverage obligations. At the national level, spectrum management may be under the authority of the ICT regulator or a government ministry or responsibilities may be shared between the two. Whether the ICT regulator or a ministry is better for managing spectrum depends largely on each country’s particular circumstances. Regardless of the entities that manage the spectrum, it is important that the mechanisms for allocating and assigning spectrum are transparent, non-discriminatory, fair and provide effective accountability. Additionally, where spectrum management responsibilities are shared, it is important that there are clear measures in place to facilitate cooperation between the regulator and ministry. Spectrum management and the role of the regulator are further addressed in Module 5 on Radio Spectrum Management.

In Nigeria, for example, the Nigerian Communications Act of 2003 tasks the National Frequency Management (NFM) Council, a ministerial level body with developing Nigeria's positions at the ITU, as well as preparing bilateral and multi-lateral spectrum allocation treaties with other sovereign administrations.1 Notably, the NFM Council is responsible for preparing, updating and publishing the national frequency allocation table with the NCC’s advice. The NFM Council is comprised of members from various ministries, including ministries associated with communications, science and technology, aviation, transport and the national security agencies. In addition, the country's independent ICT regulator, the Nigerian Communications Commission (NCC), and the National Broadcasting Commission also have membership on the NFM Council. Although the NFM Council is responsible for spectrum allocation, the NCC has the “sole and exclusive power to manage and administer the frequency spectrum for the communications sector.” As part of this authority, the NCC is tasked with granting spectrum authorizations and regulating licensees’ use of spectrum. By clearly identifying the roles that the NCC and the NFM Council play in spectrum management, as well as providing the NCC a position on the Council, the Nigerian Communications Act helps to ensure that the bodies function in a cooperative and effective manner.

6.6.3.6 QUALITY OF SERVICE - REGULATORY ROLES AND RESPONSIBILITIES

Often, a regulator’s responsibility is to establish quality of service (QoS) guidelines or parameters, as well as the methods and procedures for monitoring operators' performance against these established parameters. The fundamental objective in establishing QoS targets and reporting is to ensure that the general public (i.e., the consumer) is served and, at the same time, that the operator is not impeded from carrying out day-to-day operating routines as a result of excessive reporting requirements. The level of regulatory intervention with respect to QoS is often dependent on the degree of competitiveness that is present in the market. Generally, the regulator takes a more hands-off the approach with respect to QoS monitoring and reporting requirements if a market is highly competitive. Nonetheless, the reporting and the report analysis process should not be too onerous for either the operator or the regulator irrespective of market conditions. In addition, it also should be developed in consultation between the operators and the regulator to establish realistic benchmarks and make the process manageable and useful in identifying areas where the consumer is receiving inadequate service levels.

Although different approaches have been adopted in various jurisdictions, the regulatory goal should be to ensure: (i) the delivery of acceptable service for the telecommunications user; and (ii) that consumers are aware of the variations in performance from various service providers/operators thereby allowing them to make an educated choice regarding their preferred service provider. QoS indicators are one of the most effective regulatory tools in this regard.

Ultimately, consumer should reap the benefits from the enforcement of QoS regulations. In certain instances, for example, operators opt to run the risk of incurring a penalty as opposed to investing to improve the QoS. In such cases, the imposition of monetary fines does not result in any direct benefit to consumers. On the other hand, consumers may benefit directly when the penalty for violating QoS standards is, for example, to provide consumers with services free of charge; to give the consumer retroactive rebates as compensation for the poor QoS; or to move them up to the top of a waiting list for the provision of services.

6.6.3.7 UNIVERSAL ACCESS/SERVICES

Although universal access/service (UAS) policies and the underlying institutional framework are often first set out in national legislation or ministry policies, the telecommunications regulatory authority is often tasked with carrying out the policies and implementing regulations and enforcing UAS obligations in licenses. As such, regulators should be empowered to address universal service1 and universal access issues.2 Many find that the regulatory authority should implement universal access/service policies. For example, the West African Telecommunications Regulators Assembly (WATRA) set out Guidelines on Universal Access/Service in 2005, which provided that: “National Regulatory Authority’s (NRAs) must be established and capacitated to play a key role in implementing universal access policies first through addressing the market efficiency gap (letting the market deliver universal access/service), and second through the true access gap.”3 The 2005 WATRA Guidelines further stated that NRAs should be responsible for implementing UAS policies directed towards assuring the best quality reliable services at the most affordable prices that meet the needs of consumers.

Despite a preference for implementation of UAS policies by the regulatory authority, in a number of countries, the ministry responsible for communications is tasked with carrying out policy relating to universal access or service, which is the case in Colombia, Guatemala and India.4 The advantage of such an approach is that the entity that defines policy also carries it out. However, a problem may arise from this framework where UAS policies are funded through a specific Universal Service Fund (USF), which is often made from industry contributions in which government is not perceived as being far enough removed to be an independent administrator of the finances. This issue is more likely to arise where government still has any ownership interest in the industry.
Where USF is used to achieve universal service, it is important to ensure that the funds are administered and awarded on a transparent, non-discriminatory and timely basis. In Taiwan, for example, the Directorate General of Telecommunications (DGT), a division of the Ministry of Transportation and Communication (MOTC), administers and manages the Universal Service Fund. The DGT oversees the affairs of the fund through the Universal Service Fund Administrative Committee, composed of seven to eleven members from agencies, academia, and sector experts. The Director General of the DGT is the chairman of the committee, and other members of the committee are selected by the DGT. The main functions of the committee include: assessment of the annual implementation plans and subsidy applications for universal service; assessment of the revenues as reported by contributing parties; auditing and calculation of the contribution proportion and amount to be made by contributing parties towards universal service charges; auditing and assessment of the Telecommunications Universal Service Fund; evaluation of the universal service regime; and other matters related to universal service in Taiwan.5

Similarly, in Chile, the Telecommunications Development Fund (FDT) is managed by the Telecommunications Development Council, a group composed of three ministers (including the Minister of Transportation and Telecommunications who acts as Chairman of the Council) and three telecommunications experts representing different regions of the country. However, unlike Taiwan, the Council is supported by the regulator, SUBTEL, and the Council’s members include a broader group of government representatives. Each year, the Council is responsible for: (i) determining the criteria SUBTEL will consider when evaluating projects; (ii) carrying out the annual agenda of projects to be tendered and those being subsidized, as well as establishing their priorities and the subsidies necessary for their execution; and (iii) determining, through public tenders, the disbursement of funds for subsidies for projects to be carried out. The Council can request necessary information from regional, provincial or community authorities. Once a project is selected, the Council forwards all relevant information to SUBTEL for the regulator to issue the pertinent authorizations. The Council also is responsible for preparing and distributing the FDT’s annual report that allows for periodic assessments of the fund.6

6.6.4 NON-CORE RESPONSIBILITIES

In addition to their core responsibilities, ICT regulators are increasingly expanding their roles in areas not directly related to telecommunications (i.e., “non-core” responsibilities). These include areas where ICT regulators have long played a role, such as consumer protection, as well as new areas, such as cyber security and climate change. ICT regulators are particularly positioned to impact these other areas due to the impact of technological convergence on every aspect of society and sector of the economy.

6.6.4.1 CYBERSECURITY

Cybersecurity, which requires protecting network infrastructure, as well as individuals' data privacy, pose substantial technical and legal challenges to law enforcement.1 First, increasing use of and reliance on ICTs means that even temporary service disruptions can cause significant economic losses. Secondly, with billions of Internet users worldwide, the number of potential targets for cybercrime makes it difficult to identify and track cybercriminals. Third, cybercrimes are often committed across national boundaries in which the offender is in one country while the victim is in another and the means for committing the crime may be in a third country. Without effective international cooperation, it is likely to be difficult—if not impossible—to locate, arrest and prosecute cross-border cybercriminals.

Due to the law enforcement and transnational components of cybersecurity, ICT regulators have not taken the lead on drafting and implementing cybersecurity regulations. Instead, these issues are typically addressed in national legislation, as well as through international and regional initiatives seeking to harmonize the legal frameworks of various countries. For example, the Group of Eight (G8) adopted Ten Principles to combat cybercrimes, which included commitments to 1) ensure that there would be no safe havens for cyber criminals anywhere in the world and 2) implement a coordinated international legal framework capable of investigating and prosecuting cybercrimes regardless of where the harm has occurred.2 As described in Section 4.4.4, the Council of Europe’s Convention on Cybercrime also sets out specific measures to be implemented by Member States to ensure that domestic laws regarding confidentiality, integrity and availability of computer data and systems, such as illegal access or interception, were consistent. Additional regional commitments to the prevention and prosecution of cyber crimes have been implemented through the Asian Pacific Economic Cooperation (APEC), Organization of American States (OAS), Association of South East Asian Nations (ASEAN), the Arab League and the African Union.

However, ICT regulators are in a position to leverage certain core competencies within the ICT sector to make significantly contribute to cybersecurity, particularly with respect to facilitating the mobilization of various stakeholders and coordinating the efforts of these stakeholders in the fight against cybercrime.3 Additionally, ICT regulators can use their expertise to participate in developing or reviewing national legislation and policies related to data protection, data transmission, spam, and the responsibilities of ISPs and other Internet intermediaries. Particularly in developing countries with limited or no legislation to specifically address cybercrime, the ICT regulator is playing an advisory role to help draft effective legislation. For example, the Ugandan Communications Commission was a member of the multi-stakeholder National Task Force established in 2003 to draft cybercrime legislation.4 This draft legislation is now part of a regional initiative called the East African Countries’ Task Force on Cyber Laws seeking to develop and harmonize cybercrime laws throughout the region. In Zambia, as a member of the National Working Group on Cybersecurity, the Zambia Information and Communications Technology Authority (ZICTA) has also played an advisory role in drafting the country’s cybersecurity legislation.5

Some countries are exploring the possibility of expanding the ICT regulator’s role beyond that of an advisor to assisting with the enforcement of cybercrimes, particularly regarding copyright infringement and spam. For example, the United Kingdom passed a digital piracy law in 2010, called the Digital Economy Act (DEA), which places most of the implementation and enforcement powers with the ICT regulator, Ofcom, rather than with a law enforcement agency.6 The DEA details a three-stage notification process for informing subscribers of copyright infringements and requires ISPs to provide infringing subscribers’ IP addresses to the relevant copyright holders. Ofcom’s powers include deciding upon the appropriate enforcement action against any person found to have breached the code, including imposition and collection of a financial penalty up to £250,000.

6.6.4.2 ICTS AND CLIMATE CHANGE

Countries at all stages of development face environmental problems related to climate change, pollution, energy and decreases in biodiversity. ICTs can improve environmental performance and address climate change across the economy, particularly in energy, construction and
transportation sectors and can also improve water management techniques, protect biodiversity and reduce pollution. Despite these benefits, ICTs are also a contributor to global emissions, an impact that will continue to grow with the rise of broadband-enabled devices using "always on" connections and increased processing capabilities that require greater amounts of energy in order to power these devices. Countries are examining new approaches to ICT policies and regulation in order to capture the benefits of ICTs on the environment, while minimizing their negative effects. Drawing on their expertise, ICT regulators may assist in developing policies to meet this objective.

Except for electromagnetic field (EMF) and radiofrequency field (RF) emissions from broadcasting and mobile communications towers or from handheld mobile devices, ICT regulators have not traditionally been involved in environmental policies. However, the growth of "green ICT" initiatives may prompt new levels of cooperation between the ICT and environmental regulators in order to accomplish ambitious cross-sector goals. For example, Egypt is implementing its Green ICT Strategy jointly through a Memorandum of Understanding (MoU) signed in February 2010 by both the Ministry of Communications and Information Technology (MCIT) and the Ministry of Environmental Affairs (MEA). The framework of the MoU between the MCIT and the MEA aims at achieving several goals, including:

- Raising community awareness about green ICT challenges and opportunities,
- Setting national policies for green ICTs,
- Adopting a multi-stakeholder approach to address how to use ICTs to reduce environmental impacts;
- Reducing the adverse environmental effects resulting from the expansion in the use of ICT; and
- Supporting the use of ICTs as an effective tool to reduce GHG emissions resulting from other sectors.

Other countries have begun cross-sector coordination efforts in order to take a more holistic approach to meeting environmental and ICT policy objectives. In Singapore, for example, multiple agencies have begun to collaborate more frequently on new cross-sector initiatives. In November 2009, the Singapore Government announced the launch of the pilot project “Intelligent Energy System” (IES) that tests a range of smart grid technologies. The IES project requires the cooperation of several agencies, including the ICT regulator and the various regulators in charge of energy, the environment; economic development; science and technology research; and housing and development. More recently, the Singapore Government established the Energy Efficiency Programme Office (E2PO), which is a multi-agency committee led by the National Environment Agency (NEA) and the Energy Market Authority (EMA) and includes Singapore's ICT regulator, the Infocomm Development Authority (IDA). The goals of the E2PO include promoting the adoption of energy efficient technologies and developing local knowledge expertise in energy management, as well as supporting research and development in green ICTs.

Since cross-sector initiatives to promote green ICTs are relatively novel, it is unclear whether they represent a new type of policy implementation. There is great potential to capture the high-level expertise from multiple agencies; however, these collaborative efforts may also result in new challenges, such as jurisdictional conflicts or funding issues. As ICTs continue to become an integral part of climate change challenges and solutions, policymakers will be increasingly presented with the opportunity to involve regulators of the ICT, environment and energy sectors in collaborative projects that can help to guide high-level legislation as well as sector-specific regulation in order to fully harness the potential benefits and efficiencies that ICTs can bring to society.

6.6.4.3 ICTS AND FINANCIAL SERVICES

6.6.5 DECISION-MAKING PROCESS AND CONSTITUTIONAL FRAMEWORK

Since regulations should be developed in an open and transparent fashion, with appropriate and well publicized procedures for effective and timely inputs from interested stakeholders, including domestic and foreign businesses, public interest groups and consumers, a public consultation helps to improve the quality of rules and programs, as well as improves compliance. Holding public consultations are not required in all countries, but most regulators have adopted some form of consultation process (Figure 6-C), e.g., before adopting policies, creating regulations or issuing licences. See, for example, the consultation procedures for Hong Kong (SAR), St. Vincent and the Grenadines, and the United Kingdom (in the online practice notes), which are illustrative of the public consultation procedures adopted by regulators in many countries.
In some cases, public consultations are not undertaken due to lack of resources or other immediate constraints that make it difficult to hold them. In Botswana, for example, when the Telecommunications Regulations were promulgated in 1997, the regulator did not include public consultations because it did not have sufficient staff resources to conduct consultations and it had a tight timetable. In subsequent years, however, the regulator added extra staff and developed more expertise, so that in 2000, the Botswana Telecommunications Authority (BTA) prepared its first consultation document on telecommunications services pricing.

Other countries mandate public consultations in certain occasions. In Bahrain, the Telecommunications Law requires that, except in emergency cases, the Telecommunications Regulatory Authority (TRA) must provide interested parties the opportunity to present their opinions within a reasonable period on measures having a material effect on the telecommunications market. Procedurally, the TRA issues a bylaw regarding such consultations ensuring that the public is informed from a single information source of the ongoing consultations, excluding confidential information.

The EU Framework Directive mandates national regulatory authorities of member states to publish their consultation procedures and the subsequent results when they intend to take measures in accordance with the Directive or other directives that have significant impact on the relevant market. This is intended to ensure that interested parties are given the opportunity to comment on the draft measure within a reasonable period.

Where the requirements for holding public consultations are mandatory, the legislation typically specifies the particular instances when public consultations are compulsory and must be held by the regulator. For example, in Portugal, the Electronic Communications Law specifies that the regulator, the Autoridade Nacional de Comunicações (ICP-ANACOM), has discretion to determine matters that are subject to formal written public consultations, except for the following:

- Change in the conditions, rights and procedures applicable to the exercise of the activity;
- Limitations on the rights to use frequency;
- Allocation of rights to use numbers that are exceptionally valuable through competitive or comparative selection procedures;
- Definition of quality of service parameters;
- Release from the obligation to offer additional resources;
- Definition of portability regulations;
- Definition of the relevant markets for products and services, determination of a relevant market as being effectively competitive or not, identification of companies with significant market power in the relevant markets, and the imposition, maintenance, change or elimination of obligations by companies with or without significant market power;
- Definition of carrier selection and pre-selection regulations;
- Definition of obligation pertaining to the universal service providers applicable to the offer of public telephones;
- Definition of the terms and conditions of the service offers specifically for people with disabilities;
- Definition of the performance objectives applicable to universal service obligations.

Although public consultation procedures can vary from country to country, minimum procedural safeguards are generally instituted to make sure that there is maximum participation in the decision-making process, such as: issuing public notice of consultations; allowing for a proper comment and reply comment period; and publishing the consultation results and final decisions.

Practice Notes

Box 6-4: OECD Guidelines on Dealing with Conflict of Interest Situations [6.5]
Case Study: Conflict of Interest Regulations in Bahrain [6.5]

Reference Documents

- Hong Kong Civil Servants’ Guide to Good Practices

6.6.5.1 NATURAL JUSTICE/PROCEDURAL FAIRNESS

Aside from the substance of the decision that a regulator ultimately reaches, it is important that stakeholders are confident that the process used to reach that decision was fair. As such, procedural fairness (also referred to as natural justice) is concerned with the procedures used by a decision maker, rather than the actual outcome reached, although it is also understood that a decision maker following a clear, objective set of procedures is more likely to reach a fair and correct decision. To ensure procedural fairness, several elements are necessary:

- A competent, independent and impartial regulatory authority oversees the process and makes the ultimate decision;
- The regulatory authority exercises its authority within the scope permitted by its legal powers;
- Clear, published rules of procedure are available and consistently applied;
- Proceedings are open to the public, except where confidentiality is necessary to protect proprietary information or other confidential information;
- All parties are treated in a non-discriminatory manner; and
- The decision-making body uses evidence and arguments presented during the proceedings to justify its ultimate decision.
Procedural fairness provides the foundation of the public consultation process by offering authorities a better understanding of the facts and helping to improve the quality of evidence and reasoning on which the agency bases its enforcement actions and decisions. For parties to the decision, procedural fairness bolsters confidence and belief in a fair legal system and in those applying the law.

6.6.5.2 TRANSPARENCY

The principles of good regulatory decision-making are universal: (a) transparency; (b) objectivity; (c) professionalism; (d) efficiency; and (e) independence. Although all of these principles are necessary for successful regulation, transparency is particularly critical, as it provides accountability and legitimacy to regulatory decisions. In the context of telecommunications regulation, transparency refers to the openness of the process of exercising regulatory power, which, in turn, ensures the fairness, accountability and credibility of the results. Box 6-9 below provides a summary of the benefits of transparent regulation.

**Box 6-9 Benefits of Transparent Regulation**


1. **Efficiency and Effectiveness** - Open processes enhance consensus and create confidence in the regulator. Increased public participation promotes diverse ideas in decision-making and increases support for rules and policies, making implementation easier. In addition, transparency can lead to greater efficiency by ensuring that duplication of functions is avoided.

2. **Certainty and Reliability** - Regulatory credibility and legitimacy builds stability, essential for attracting investment. This is particularly important in newly liberalized markets, where potential entrants need to trust that their investments are protected from arbitrary action and that further commercial development will not be thwarted by sudden changes to “the rules of the game.”

3. **Accountability and Independence** - Openness promotes accountability and legitimacy, reinforcing regulatory independence and reducing political and industry interference. Stakeholders will have confidence that their views will be heard, without bias, by the regulator. Where regulatory actions are exposed to public view, regulators are more likely to engage in careful and reflective decision-making.

4. **Continuity** - A stable set of rules governing transparency will transcend political changes and outlast political appointments, ensuring a continuous regulatory record regardless of who is in charge of the regulatory agency or which political party is in office.

6.6.5.3 AVOIDING PERCEPTIONS OF BIAS

Regulators should ensure that there is a consistent policy in place addressing its role and functions in the decision-making process in order to provide greater confidence that its decisions are made on an objective, impartial and consistent basis, and avoid the risks of conflict of interest, bias or improper influence. The rule against bias is a principle of procedural fairness that requires the decision maker to not have an interest in the matter being decided, as well as to decide the issue in a fair and equitable manner, taking into account only the merits of the matter, and respecting the rights of affected citizens.

In addition, decision makers should avoid the appearance of any bias or interest in the outcome. As such, both actual and apparent bias should be avoided. In Australia, for example, the test of whether actual or apparent bias exists is “whether a fair-minded observer might reasonably apprehend that the decision-maker might not bring an impartial mind to the resolution of the question.” Overall, avoiding the perception of bias is necessary to instill confidence in the process, as well as in the regulatory authority itself.

6.6.6 OVERVIEW OF THE PUBLIC CONSULTATION PROCESS

Public consultations can take different forms depending on: the nature of the issue being consulted; the number of people that could be affected by the decision; the impact on the market; and whether a formal written consultation process is mandated by legislation. Public consultations can range from informal meetings to more formalized and structured written consultations. Some of the forms of public consultations used by regulators are:

- Formal invitations for written submissions;
- Individual meetings with one or more interested parties;
- Meetings, seminars, and workshops with representative groups and other interested parties;
- Issuing draft documents containing the preliminary view of the regulator and soliciting comments from the public at large before taking a final decision;
- Public hearings;
- Surveys;
- Consultation with independent advisers; and
- Discussions and consultation with regulatory professionals and regulatory institutions in other jurisdictions.

- The discussion time lasts a maximum of two hours.
- Participants must register before entering the meeting, providing their company name or the institution that they are representing.
- The participants speak according to the order on the registration list. Each participant has a maximum of three minutes to speak. In
The general public consultation process is based on a three-stage process, which can incorporate both informal and formal procedures depending on the nature of the proceeding. In the first stage, an issue is identified and the regulator issues a formal consultation document soliciting public comment. This is followed by a comment period in the second stage. In addition to the receipt of written comments, the regulator may use the comment period to engage in informal consultations as well, such as public hearings, to gather additional information or clarify information that it receives. In the last stage, the regulator makes a decision based on public policy and the information received.

1. Public Notice of Consultations

In the first stage, the regulator issues a formal consultation paper after identifying and formulating an issue. The decision-making process is typically initiated by either the regulator or by an interested person requesting a formal consultation. For example, in the United States, the Federal Communications Commission (FCC) allows interested members of the public to file a Petition for Rulemaking requesting the FCC to amend an existing rule or to develop a new rule. The regulator can use this initial stage to conduct informal consultations on more complex issues to help it formulate the issue for the finalized consultation document. For example, in Hong Kong (SAR), prior to the OFTA consultation proceeding on the Interconnection and Related Competition Issues, OFTA provided written notice to all local fixed network operators informing them of its intent to initiate the review and inviting them to raise additional issues related to interconnection so that they could all be resolved in a single proceeding. After reviewing the responses received did OFTA issue a formal consultation paper outlining the specific issues and its own preliminary views on the issues. In the United Kingdom, Ofcom may hold informal talks with individuals and organizations before announcing a formal consultation. If Ofcom does not have enough time for the informal talks, it may hold an open meeting to explain its proposal and gather comments before announcing the consultation.

Publication of the Consultation Notice

Today, most regulators post consultation documents on their websites, in addition to publishing them in a government gazette or other official publication, or disseminating the documents through other forms of media such as newspapers, television or radio. In South Africa, the Telecommunications Act requires a three-month notice of the proposed adoption of a regulation, which must be published in the national Gazette. In Bahrain, the TRA publishes public consultation documents on its website, and may use other means to keep the
public informed of ongoing consultations, including publication in the national or international media and/or sending individual notices to potentially interested parties. Some regulators, such as the Canadian Radio-television and Telecommunications Commission (CRTC), also maintain a mailing list of individuals who wish to be contacted when certain activities occur, such as when licence applications are filed. The regulator will inform those on the mailing list where they can inspect the filings and submit comments. Box 6–11 provides an example from the CRTC illustrating the different methods that regulators use to inform stakeholders regarding public consultation proceedings.

The different ways that one can find out about CRTC public proceedings are:

1. Official CRTC announcement – These are available from any CRTC office and the CRTC website. Official announcements about broadcasting applications or issues also appear in the Canada Gazette.
2. Information sheets – The CRTC sends these to target groups and, in rural communities, ensures they are posted in rural post offices.
3. Newspaper advertisements – In affected communities, the CRTC places advertisements in newspapers of general circulation as well as community papers.
4. Public Service Announcements – These are made on the cable community channel serving the affected area.
5. Billing Inserts – These allow telephone companies to inform subscribers about CRTC public processes that involve them.
6. Tariff Notices – These are filed by telephone companies and are available from any CRTC office and the CRTC website.

At a minimum, the public consultation document should contain the following information: (a) purpose of the consultation and substance of the proposed decision or description of the subjects and issues involved; (b) consultation timeframe and deadline for submitting comments; (c) contact name and details of how and where to submit comments; (d) reference to the authority under which the consultation matter is proposed; and (e) information on the regulator’s next steps following the consultation and/or where and how to obtain further information.

For example, in the United States, the FCC is required to provide the following information in a Notice of Proposed Rulemaking (NPRM): (a) statement of the time, nature, and place of any public rulemaking proceeding to be held; (b) reference to the authority under which the issuance, amendment or repeal of a rule is proposed; (c) either the terms or substance of proposed rule or a description of subjects and issues involved; (d) docket number assigned to the proceeding; and (e) statement of the time for filing comments and replies. The FCC requirements are typical of the contents of a consultation document issued by regulators worldwide.

2. Consultation Period

In the second stage, interested parties submit comments on the issue under consultation. The regulator’s goal is to gather as much relevant information as possible so that it can make an informed decision, taking into account the information provided by interested parties. To make the consultation more efficient, the regulator should establish a schedule for submissions of comments in the consultation document. Timeframes for submission of comments can vary depending on the complexity or urgency of the issue, and the overall effect of the proposal on the market. For instance, in Bahrain, parties are allowed at least 28 days from the date of publication of the consultation to submit comments. In Portugal, the comment period cannot be less than 20 days. In the United Kingdom, 10 weeks are usually allowed for responses on more complex issues and five weeks for shorter consultations. If Ofcom conducts shorter consultations, it will issue an explanation (e.g., the issue or community involved is small or only affects a particular group, the proposal is a limited amendment to existing policy, an issue requires urgent review, or it is the second consultation on the same issue.)

When deciding how long a consultation period should last, regulators should balance the need to deal with an issue as quickly as possible with the need to allow enough time for the public to prepare and their responses. If the consultation period is too short, the public may not have enough time to prepare their submissions. On the other hand, if the consultation period is too long, the relevant market may have changed significantly from the time the issue under consultation was identified.

Some regulators, such as the TRA in Bahrain, will not accept unsolicited comments. They will only accept comments in response to a notice of consultation. In the absence of a notice of consultation, however, interested parties may submit comments where such party can show that the particular measure that forms the subject matter of the comments will have a material effect on a particular telecommunications market. In addition to initial comments, some regulators, such as the FCC in the United States and the NTRC in St. Vincent and the Grenadines, specifically allow for reply comments while other regulators, such as the TRA in Bahrain usually only invite a single round of comments per consultation. The benefits of allowing replies to comments are that it allows interested parties to challenge the comments made by others, and also provides the regulator with additional information regarding the issue under consultation.

Submission of Comments

The goal of the consultation process is to gather as much information as possible; therefore, the regulator should make it easy for the public to submit their comments. Most regulators encourage the use of the Internet for electronic submissions, as well as submissions in writing by fax and standard mail. Some regulators specify the particular format for written submissions.

Publication and Confidentiality of Information
To maintain transparency throughout the consultation process, regulators should publish comments so that they are publicly accessible either online or at the regulator’s office. This assures the public that their submissions have been received and allows them to view the comments of other parties. It also facilitates “buy-in” or “consensus building” within the industry, thereby facilitating compliance with the proposed rule. In Brazil, Anatel’s consultation documents and related public comments are available on the regulator’s website, where it maintains a virtual library of all of its regulatory proceedings.

Regulators, however, need to maintain a just balance between the requirement for a transparent public record and the need to respect confidential information from parties. Most regulators will publish public comments received in a consultation process, or summaries of such comments on their websites, omitting any confidential information. Recognizing that companies may be reluctant to submit information considered commercially confidential, most regulators, including Singapore and Bahrain, have implemented regulations regarding treatment of confidential information. Usually, regulators will require persons requesting confidential treatment of information to submit an abridged version to be circulated publicly. In some cases, such as the NTRC in St. Vincent and the Grenadines, the regulator will allow for anonymous respondents, provided that such persons employ the services of a lawyer to respond on their behalf.

Many regulators also have rules regarding ex parte (private) communications during a pending proceeding. Regulators should maintain transparency and fairness in the regulatory proceedings by giving equal access to all stakeholders and preventing any one single person from having an advantage in influencing the regulator’s decision through secret or private contacts. Ex parte rules can ensure transparency in the decision-making process by requiring all communication made by the public to the regulator to be published and accessible to other stakeholders, and ensuring that all stakeholders are informed whenever one party has an undisclosed meeting with the regulator. Regulators also may exempt certain communication from ex parte rules, such as inquiries about the status of a decision (as opposed to arguments for or against a certain action or decision), inquiries about procedural rules (so long as the rules are not themselves the subject of the proceeding) and statements that are inadvertently or casually made about a pending issue.

**Public Hearings**

During the consultation period, the regulator has the flexibility to use other informal means of gathering additional information or clarifying the information it receives, such as seminars and workshops, visits by or to representative groups and interested parties, Internet discussions, surveys, and public hearings. A common informal consultation procedure is the public hearing, which is open to all interested parties so that they may express their views in person. The CRTC in Canada generally relies on the public hearing process when dealing with applications for new broadcasting licences and when considering a major policy issue or amendment to its regulations.

Before holding a public hearing, the regulator should make the details of such meetings publicly available on their website or published in a newspaper, or announced on television or radio. In addition, in order to enhance transparency in the consultation procedure, if possible, public hearings should be recorded and transcribed so that they are publicly available. Brazil’s regulator, Anatel, and the FCC in the United States both post the agendas, schedules and subsequent minutes of public hearings on their websites. The FCC also “webcasts” its hearings and meetings on the Internet. On the other hand, the Telecommunications Authority of Turkey does not usually keep the minutes of the public hearings because “it causes a formal mood preventing a sincere and efficient discussion.”

In Peru, OSIPTEL organizes public hearings before adopting normative and regulatory decisions. The procedure for public hearings is summarized as follows:

3. **Publication of Final Decision**

After the conclusion of the consultation period, the regulator should publish a final decision. It is important that a final decision is issued within a reasonable period of time upon conclusion of the consultation period to ensure credibility and effectiveness of the decision-making process. An important measure of a truly transparent decision-making process is the publication of the regulator’s justification for its decision, as well as a summary and response to the comments and reply comments received during the consultation proceeding. This demonstrates to the public that the regulator has taken into account the input received during the public consultation process. For example, in the United Kingdom, Ofcom will provide reasons for its decisions and give an account of how the view of the interested parties shaped their decisions. Furthermore, requiring that the regulator provide reasons for their decisions forces them to engage in rational decision-making, gives parties the ability to analyse the decision and decide whether there may be grounds for review or appeal, and ensures the legitimacy and accountability of the regulator.

Today, many regulators post their regulatory instruments on their websites, as well as in the official government publication or gazette. For example, in Brazil, laws, decrees, decisions, regulations and other regulatory instruments related to Anatel’s competencies are published in the Official Gazette and posted on its website. In Venezuela, the telecommunications law mandates that the regulator establish and maintain a register of all administrative acts. Additionally, in various countries regulatory decisions are made public in national newspapers, television or radio and through postal mailings or e-mails to parties affected by the decision. Publishing decisions online also makes it easier for regulators to publish all comments, reply comments and documentation supporting commenters’ positions, which further improves transparency and credibility of the decision-making process.
As regulators institute public consultations, the following questions can serve as a quick reference for regulators to consider in assessing whether the most appropriate and effective mode of consultation has been adopted. Some of the questions to consider are:

- What resources are available for the consultation?
- Given the regulator’s financial and human resources, what form of consultation should be used to achieve the desired outcome? (e.g., formal published documents and written responses, individual meetings between interested parties and the regulator, public hearings, working groups of representatives of service providers and/or consumers to address particular questions, internet discussions on the regulator’s website etc.)
- Has sufficient and adequate time been allocated for the public consultation process?
- Is the consultation presented in a language/mode that the targeted stakeholders can readily understand and respond to?
- Does the consultation cover all the issues and questions that need to be addressed for the regulator to make an informed decision?
- Has the consultation been published in the relevant media so that it reaches the widest audience and ensures that all interested parties have access to the consultation?
- Does the consultation provide clear directions regarding submission of comments?
- Does the consultation provide for transparency? (e.g., publication of the consultation document, comments received, and the regulator’s final decision with reasoning)
- Has the regulator provided for treatment of submissions that contain confidential information?
- Has the regulator been providing adequate information to the media regarding its activities? (i.e., are stakeholders aware of its activities?)

Online Public Consultations

One of the many benefits of increased Internet availability and use is that it allows regulators to conduct public consultations online, which allows for greater civic participation in the decision-making process. In response to the growing number of countries offering online public consultations, the OECD has published some basic guidelines for regulators to follow, as shown in the Box below.
Managing media relations is an important aspect of being a transparent regulator and ensuring that the public is informed about the regulator’s activities. Although the development of information and communications technology has made the Internet the prevalent means by which regulators interact with the public, the Internet may not be easily accessible in some developing countries. Therefore, regulators still need to rely on broadcasting and print media, such as newspapers, television and radio to ensure that the public has access to important information.
Other means of disseminating information include holding press conferences, issuing press releases, industry briefings, holding seminars and workshops or submitting articles and advertisements directly to trade magazines and newspapers. Some regulators also maintain a press office to manage relations with the media, and ensure that the media reporting of the regulator’s activities is accurate.

In Brazil, Anatel has instituted various mechanisms to foster public outreach in addition to publication of its decisions in the Official Gazette and posting on its website. Anatel has created “citizen rooms” throughout the country, which are public spaces equipped with computers, printers, faxes, telephones, scanners, televisions and VCRs that provide a means for the public to interact with Anatel and for Anatel to provide information relating to its activities to the general public. Anyone can conduct online searches of Anatel’s regulations and decisions in the citizen rooms, which are also staffed with attendants to answer questions. In addition, Anatel conducts institutional campaigns periodically to inform the general public in specific cases when the society as a whole needs to be made aware of matters of interest to the broader community. In 1999, for example, Anatel sponsored a campaign to educate the public regarding the implementation of new procedures for domestic and international long distance phone calls. As part of the campaign, the Postal Service distributed thousands of brochures explaining the new procedures throughout the country. To complement this, Anatel’s chairman and members of the Board of Directors also granted numerous interviews on the subject.

In Romania, the National Regulatory Authority for Communications (ANRC) relies on the media to communicate with the industry. It has accredited 74 journalists as of 2003, and has dedicated time to educate them regarding its activities. Shortly after its establishment, the ANRC organized a seminar in December 2002 to familiarize journalists with ANRC’s specific attributions and competencies. The ANRC held another seminar in October 2003 after the liberalization of the market in the beginning of 2003 to answer specific questions from journalists regarding the liberalization process and the new regulatory framework.

Use of the media is particularly important for regulators that do not have the staff, resources, or legislative mandate to conduct public decision-making procedures. In Botswana, for example, no rules govern due process or transparency in decision-making, such as public consultation procedures or the publication of decisions in an official gazette. However, in an effort to increase transparency, the Botswana Telecommunications Authority (BTA) has used the media to publicize some of its decisions, such as holding a press conference to announce its mobile licence awards and publishing its leased capacity decision and justifications for it in major Botswana newspapers. As the BTA has increased its staff, it has issued more press releases and conducted more public consultations, which are also posted on the regulator’s website.