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Question 8/1: Establishment of an independent regulatory body

STUDY GROUP 1

SOURCE: RAPPORTEUR FOR QUESTION 8/1

TITLE: FINAL REPORT ON QUESTION 8/1

1. Review of the Question

Objective: ITU-D Question 8/1 aims to identify guidelines or a menu of choices for countries to take into consideration when developing an independent regulatory body. Working within the context of the proposed outline for the report on Question 8/1 that was decided upon by Study Group1, the output produced here is intended to serve as a basis for a set of best practice guidelines for countries in transition to more liberalised telecommunications markets to establish their independent regulators.

In working towards this objective, the Study Group has built on the work already done during the first study period (1995-1998) for question 2/1 on “Telecommunications policies and their repercussions at the level of institutional, regulatory and operational aspects of services”. In addition, the Study Group has relied on contributions from its members, existing publications and reports from international organisations involved in telecommunications and development, such as the ITU and the World Bank, and the survey results undertaken by the ITU.

1.1 Setting the context for Question 8/1

Reform in the telecommunications sector is occurring at an unprecedented rate. Technological developments have created new opportunities for communication and the globalisation of the telecommunications market. Consistent with these developments, many countries began to examine their telecommunications sector.

Over the last decade, many countries have privatised state-owned telecommunications operators and have started to introduce liberalisation and competition in the industry. Many more other countries are preparing to engage in such reform in the near future.

Corresponding with the implementation of telecommunications market reforms, the number of national telecommunications regulators has increased substantially over the same period of time. From ITU surveys, only 12 countries in 1990 had national telecommunications regulators. This number grew to 101 by the end of 2000 and the trend is set to continue. The number of countries with separate telecommunication regulatory authorities is expected to climb to more than 120 by the end of 2001.

1.2 Definition of “independent regulatory authority”

In order to identify best practice guidelines for the establishment of an independent regulatory body, we have to understand first what is implied by that term.

At the barest minimum, a wide consensus has developed around the definition contained in the WTO Regulation Reference Paper¹. Under its framework, “The regulatory body is separate from, and not accountable to, any supplier of basic telecommunications services. The decisions of and the procedures used by regulators shall be impartial with respect to all market participants”.

Beyond this, it was understood from the WTO discussions behind the reference paper and from recent discussions within this present Study Group itself that a more detailed definition for a regulatory authority would be difficult to create. Such a definition would not be applicable in more than one country given the range of objectives in telecommunications regulation, national differences in legal and political systems, and the level of telecommunications industry development in the country. Instead, the study group adopted a working guideline from “The McKinsey Quarterly” to facilitate the process of developing and outlining the best practice guidelines.

After an extensive review of the telecommunications privatisation process, The McKinsey Quarterly, 1995ⁱⁱ noted: "Where a regulator exists, it is important to ensure clarity of jurisdiction and defined resolution mechanisms, adequate organizational competence and funding, and political

insulation. Independence derives more from this latter factor than from any formal definition, and manifests itself in regulators' power to dissent."

Within this context, we can examine some key aspects behind the formation of an independent regulatory authority.

1.2.1 Clarity of Jurisdiction and defined resolution mechanisms

Several issues on jurisdiction should be noted in the establishment of an independent regulator.

The issue of dispute resolution will be dealt with below under section 3.1.2.4.

1.2.1.1 Mandate of the Regulator

The mandate of a regulator should be clearly spelled out in national laws.

The vast majority of national telecommunications regulators have been established through enabling legislation of the country or, in rare cases, through executive decree, as in the case of COFETEL, the Mexican regulator.

Regardless of its origins, the law must specifically identify the regulatory authority and it must specify its mandate and authority.

1.2.1.2 Characterisation of the Regulator

A regulatory institution separate from interested commercial parties

The jurisdiction and mandate of an independent telecommunications regulatory body depends largely on its relationship with the other entities in the telecommunications sector, such as government Ministries, competition authorities and the telecommunications operators themselves. As a basic guide, a number of practices have been adopted to bring about the demarcation of responsibilities between the different entities in the telecommunications sector, in particular, the separation of the regulatory function from interested commercial parties:

- Full privatisation of the incumbent

Before the mid-1980s, most national telecommunications operators were government owned and controlled. By fully privatising the incumbent, the government divests itself of its commercial interests in the telecommunications market. The relevant government Ministry or agency would then be neutral when regulating the industry because it does not have a relationship with any specific market participant.

As long as the Ministry or agency has no direct commercial relationship with an operator, the Ministry or agency may be considered as an "independent regulator" under the WTO Regulation Reference Paper definition. For example, while Japan and Korea have adopted the reference paper as part of their WTO commitments, their Ministries continue to act as regulator.

Nevertheless, it has to be highlighted that in most cases worldwide the government remains as a major shareholder in the incumbent. As such, the sole measure of privatising the incumbent may be perceived as insufficient to ensure impartiality especially when conflicts of interest arise.

- Establishment of a regulatory institution separate from industry as well as from the government

A separate institutional body has an advantage in avoiding potential conflicts of interest that could occur where the shareholding of the incumbent remains within the hands of the government. Where the government controls the incumbent and the use of its revenues, it may protect the incumbent from competition in order to utilise the incumbent's revenue for other telecommunication policy goals. As such, in order to increase the perception of impartiality, a separate regulatory institutional body may be advised.

A large number of countries have adopted this practice. For example, the EU ONP Framework Directiveⁱⁱⁱ requires EU member countries to establish an independent regulator that is functionally and legally separated from all telecommunications organisations. To date, all EU members have established independent regulators that are not part of line ministries.

ITU Trends 2000-2001^{iv} indicates that the movement towards creating independent regulators is increasing with 17 countries having confirmed plans to set-up regulatory authorities separate from their ministries by end 2001. Additional countries including Iran, Israel, Kiribati, Laos and Oman have indicated they would do so in the near future.

- No sector specific regulatory body

Apart from the two alternatives discussed above, it is important to note the unique practice of New Zealand where no sector specific regulatory body exists since the liberalisation of their telecommunications market in 1989. The Ministry of Commerce advises the New Zealand government on establishing telecommunications regulation and the general competition authority, the Commerce Commission, is responsible for the supervision of the telecommunications market based on its Commerce act. Instead of sector specific regulation, the regulatory regime for telecommunications in New Zealand relies primarily on competition law to prevent anti-competitive behaviour.

It is important to note that this particular regulatory framework requires a highly developed legal environment with tradition of competition regulation. In general, the lack of sector specific regulation places a larger burden on the national court system to supervise telecommunications regulation than in other countries that have a separate regulatory body that promulgate detailed sector specific regulations.

Many countries also favour a sector specific regulator in order to avail themselves of a range of specific regulatory tools to develop a competitive environment and to prevent the incumbent from taking advantage of its position. Asymmetric regulation, that is imposing a burden and certain obligations on the incumbent, has been viewed as a necessary tool to help new entrants become competitive, which is often the role of the regulator.

1.2.2 Organisation of the Regulatory Authority

1.2.2.1 Structure and Form

Government Agency or Private Sector Body

Where countries have an independent regulator, the structure and form of the regulators vary widely. While most are established as statutory bodies or as government agencies, exceptions do exist. For example, in Austria, the regulator is a private sector non-profit limited liability company that is wholly owned by the state. Here the Ministry for Science and Technology exercises shareholder's rights on behalf of the government.

Single or Multiple entities

The vast majority of regulatory authorities exercise telecommunications regulation as a single body although occasionally regulatory authority of telecommunications is shared with the relevant Ministry or competition authority. It is however, interesting to note that Switzerland, through its contribution, has highlighted its unique regulatory structure. Here, two regulatory bodies, the Communications Commission (ComCom) and the federal Office for Communications (OFCOM) both exercise regulatory functions. ComCom is an independent regulatory body responsible for making fundamental decisions in telecommunications. It is assisted by OFCOM, who submits proposals to ComCom, prepares its files and implements its decisions. OFCOM carries out this task independently, subject to directives from ComCom.

Single Regulatory Head or Collegial Body

Presently, independent telecommunications authorities are predominantly structured either as a collegial body, such as a commission or a board, or as a body headed by a single regulator. To a large extent, the organisational structure of the regulator reflected the organisational structure of other government agencies in the country in question.

Nevertheless, the tendency to establish collegiate bodies began to emerge in 1997-1998 and, as indicated in the ITU Trends 2000-2001, collegial bodies head most of the newly established regulators. For example, collegial bodies lead the telecommunications authorities of Burkina Faso, Croatia, Mali, Mauritania and Turkey, all recently created in 1999-2000.

The advantages and disadvantages of the two structures have been explored in several publications. In summary, these include:

- Collegial bodies provide checks and balances due to the larger number of decision makers
- Collegial bodies may also be less susceptible to industry capture and influence due to the wider decision making base
- Single regulators may act in a more decisively and quickly
- Large collegial bodies may suffer from collective indecision or inconsistency of decision making

Nevertheless, due to the often similar supporting organisational frameworks the decision makers in the authorities rely on, the decision making between the two structures may differ only slightly.

1.2.2.2 Scope

Single or Multi-Sector Regulators

The overwhelming majority of countries as surveyed by the ITU regulate the telecommunications sector separately from the other sectors of the economy. With convergence (a topic that will be discussed later in the report), an increasingly large number of regulators have had their jurisdiction expanded to cover information technology and broadcasting. Beyond the area of convergence, there also exist a handful of regulators that have regulatory jurisdiction over industry sectors with similar characteristics such as energy, transportation, postal services and water. These include countries such as Bolivia, El Salvador, Jamaica and Panama.

The advantages and disadvantages of having a multi-sectoral approach to regulation have been explored exhaustively in the World Bank's "Telecommunications Regulation Handbook"^v.

1.2.3 Organisational Competence

1.2.3.1 Size of Regulatory Staff

Adequate staffing for market size and regulatory function

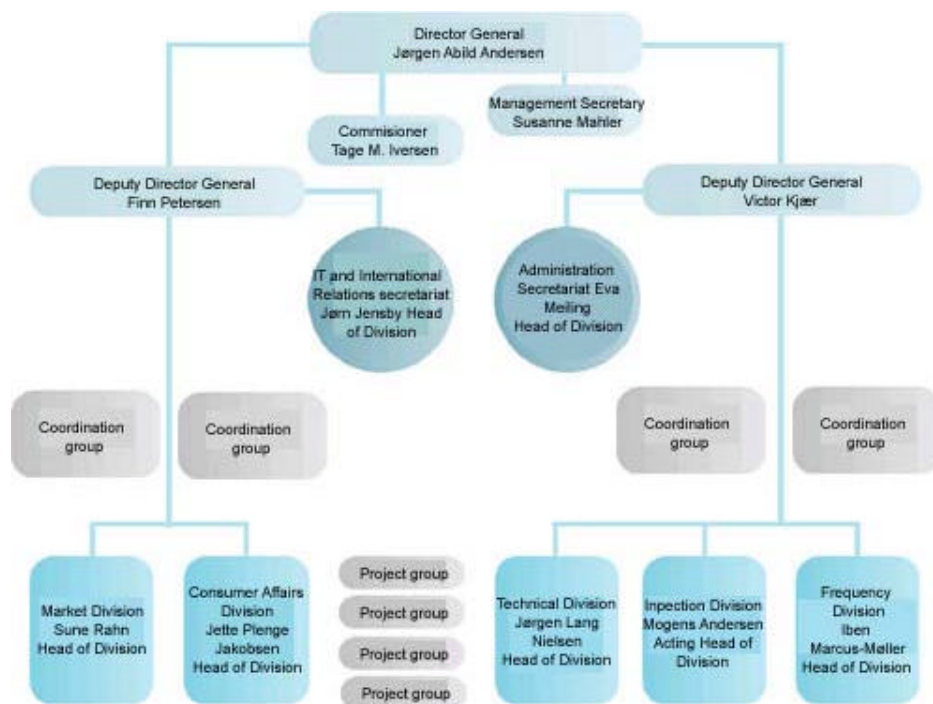
Where countries have an independent regulator, the size and composition of the independent regulators differ widely. To a large extent, the size of the regulator corresponds to the market size of the country in question and the regulator's level of responsibility. For example, the FCC in the United States, which has both policy and regulatory responsibilities, has more than 2000 employees whereas OFTEL in the United Kingdom, whose responsibilities extend only to regulation, has about 180 employees. The recently established authority in Burkina Faso has a staff of 50.

1.2.3.2 Organisation of Regulatory Staff

A flexible and adaptable organisation

The question of organisation is similarly subjective. In most cases, the institutional structure will depend on the workplace culture and tradition of a country. More often than not, staff will be divided along the lines of the functions the regulator undertakes and the priorities assigned to them. This will inevitably be a continuing process due to the rapidly changing telecommunications environment. Accordingly, regulatory organisations should not establish rigid hierarchies.

A number of regulatory organisations employ “project groups” or “task forces” to work on pressing regulatory issues of the day. Employees from the different sections of the regulatory organisation often staff these teams. For example, in 1998, the Danish National Telecom Agency underwent a reorganisation based on the recommendations of a budget analysis. Under this reorganisation, the administration of telecommunications regulation is undertaken by an organisation with a hierarchical line structure together with a number of developmental tasks to be solved a project organisation with lateral project groups. This is illustrated in the figure below.



1.2.3.3 Competence of Regulatory Staff

A highly skilled, multi-disciplinary regulatory staff

Due to the wide nature of telecommunications, with its technical, economic and social implications, telecommunications regulatory authorities require institutional capacities which need to be kept up to date through a set of multidisciplinary competencies. As described in the contribution of TEMIC, Canada, these competencies can be grouped into six broad categories:

- Technology/Engineering
- Economics
- Accounting/Finance

- Administrative Law
- Corporate Communications/Public Relations
- Management

An effort to recruit highly skilled professionals in these fields should be of primary importance. Frequently, telecommunications expertise lies within the private sector. In this respect, it may be necessary for the regulatory authority to recruit its employees from industry itself.

Recourse to outsourcing and external consultants when necessary

At times, the maintenance of a large staff payroll may be onerous on the finances of the regulatory authority. Some regulators, for example, have outsourced certain non-sensitive and technical regulatory functions to external parties to perform. Examples mainly involve the outsourcing of type approval testing and monitoring to external laboratories. For example, in Argentina a private contractor monitors compliance with radio spectrum rules.

External experts or consultants could also be engaged on an ad hoc basis to resolve one-off telecommunications issues that could otherwise consume too many resources from the day to day functioning of the authority. For example, regulatory authorities in Singapore and Hong Kong engaged private consultants for advise in establishing the framework for 3G-spectrum allocation.

1.2.4 Sources of Financing for the Regulatory Authority

Fees and Contributions, Government appropriation, or a mixture of both

Typically, regulators are funded in one of two ways: general government appropriations or fees and contributions, or a combination of both.

Traditionally, regulatory functions were funded out of general government budget appropriations, especially where a Ministry carries out the regulatory function.

Increasingly, countries are using fees as a major financial source for the regulator. In general, the fees comprise license fees, spectrum fees, and numbering fees. Some countries, such as Ireland, Luxembourg and Spain receive a levy from operators in relation to the operators' annual turnover.

There are also a wide range of countries that rely on both methods of funding, such as in Nigeria, Nepal and the United States. In most cases, government appropriation is made only when there is insufficient revenue from fees. For example, in Denmark, government appropriation accounted only for 4% of the regulator's budget in 2000 whereas in 1999, it accounted for 5%.

Some advantages have been highlighted in funding a regulator through fees and contributions instead of government appropriation. Notably, in developing economies, recourse to fees and contributions would reduce the financial burden on governments who may not be able to ensure a consistent budgetary amount.

As highlighted by the Bangladesh regulator in its contribution, it is nevertheless necessary to ensure that the regulatory cost burden passed on to the consumer is minimal when funding is obtained through fees. The regulator should ensure that the financial and budgetary aspect of regulation is made transparent to the public.

1.2.5 Degree of Independence

As discussed above under the definition of an independent telecommunications regulator, it was highlighted that what is most important is separation from the suppliers of basic telecommunications services and impartiality towards all market players.

Difficulties emerge when the question of independence from government is raised. Complete independence from government influence is virtually impossible. In almost all cases, governments

approve the budgets and appointments of the regulator as well as retain some form of oversight over the regulator.

Nevertheless, there are some compelling reasons for increasing the level of independence of the telecommunications authority from governments. Market confidence tends to be bolstered by a perception of impartiality in regulation. This in turn encourages the entry of new players into the market and the introduction of new telecommunications services. This is especially relevant where governments retain a substantial shareholding in the incumbent.

Several indicators could be used to assess the perceived degree of independence of the regulatory authority from the government:

1.2.5.1 Structural separation of the telecommunications authority from the Ministry

As mentioned above in section 1.2.2.1, the structural separation of the regulator from the Ministry increases the perception of regulatory independence.

1.2.5.2 Appointment of the head or commission of the regulatory authority

The method of appointment of the head of the regulatory body and his tenure may influence the perception of independence in the regulator. More often than not, however, the appointment of the regulatory head depends on the political and administrative tradition of the country in question. A wide range of practices has been observed among the various countries. Often, the responsibility for the appointment of the head is shared between the executive and legislative branches of government. For example, in Germany, the head of the regulatory institution is appointed at the executive level of government. He is nominated by the federal government on the advice of the Advisory Council to the regulator and subsequently appointed by the Federal President. On the other hand, in the United States, the FCC's commissioners are appointed by the President and subsequently confirmed by the senate.

It is nevertheless interesting to note that in its contribution to the study, Bangladesh has suggested that members of the regulatory body be appointed based on a national committee representative of the public opinion. Such a committee may comprise eminent persons of public recognition such as the Chief Justice, university vice-chancellors, chairmen of consumer groups etc. Nevertheless, the responsibility for the formal appointment of the regulatory head would still reside in the government.

Regardless of method of appointment, an effort should be made to ensure that the head of the regulatory body enjoys a guaranteed term of office, which is an essential element in promoting independence from the government entity making the appointment and from other political interests that may influence his office. Where a collegiate body heads the regulator, the members of that body are commonly appointed in staggered fixed terms.

1.2.5.3 Reporting and oversight

In practically all countries, there is a reporting requirement for the independent regulator, usually to the Ministry responsible for telecommunication policy. In fewer countries, such as the United States, South Africa and Germany, the regulator is required to report to the legislative body. In some countries, like Turkey, Denmark and Mexico, the regulator is only required to publish an annual report.

The question of independence becomes more obvious when considering the issue of who can overturn the decisions of the regulator. In many countries, the decision of the regulator cannot be overturned except through a court decision on appeal. Nevertheless, there are a substantial number of countries, such as Canada, Mexico, Singapore, who give the Minister or the cabinet the power to

overturn the decisions of the independent regulator either based on appeals or at their own discretion.

A small number of countries, like Denmark and Norway, have set up special appeals boards that can overturn the decisions of the regulator. Operators can file complaints against the regulator's decisions at these special boards.

2. Case Studies

In this contribution, a case-by-case approach has been avoided in favour of a subject-by-subject approach of collated case examples in order to facilitate easy reference. Often, general trends in telecommunications regulations can also be best illustrated through exceptions to the general rule. These will be highlighted where possible.

Nevertheless, there is always value in studying in-depth the regulatory models and structures found in some countries as often the most helpful advice and examples can be found in the details. At this present moment, the ITU BDT (Sector Reform Unit) is in the process of editing and publishing detailed case studies on telecommunications regulatory practices in Morocco, Singapore and Brazil. Compiled from information obtained on-site and through direct interviews, this undoubtedly will be an indispensable resource for the establishment of an independent telecommunications regulatory body.

2.1. Regulatory functions likely to be undertaken

Depending on the level of development of the country's telecommunications market, the priorities in terms of regulatory functions and objectives are likely to vary from country to country. Nevertheless, with telecommunications being regarded by all governments as an essential public service, the main objectives of telecommunications regulations are often very similar. Such objectives usually include:

- ensuring the efficient provision of telecommunications services
- ensuring good quality of service at reasonable prices
- encouraging the introduction of new telecommunications services
- promoting universal access to basic telecommunications services
- guaranteeing the best use of the country's limited resources such as radio spectrum and numbering

As evidenced by the number of countries liberalising their telecommunications markets over the past decade, the overwhelming trend is towards greater reliance on market forces and competition for the efficient provision of telecommunications services. In order to ensure that viable competition is established and the benefits of competition are fully realised, regulatory measures will have to be undertaken based on the level of development of the market. To a greater or lesser extent, the following regulatory functions will have to be assumed by the regulator:

- acting as a proxy competitor to the incumbent by preventing abuses of market power such as excessive pricing
- promoting the introduction of new entrants into the market by
 - instilling private sector confidence through the implementation of rational and transparent licensing processes
 - encouraging efficient inter-connection arrangements with the incumbent
 - encouraging the unbundling of the local PSTN network

- establishing effective and equitable funding for universal access
- creation of a favourable investment climate to promote investment in telecommunications infrastructure, services and networks
- protection of consumers and users rights and interests

A number of telecommunications regulators have embodied these objectives in their enabling legislation, their charter or mission statements and in the regulations and rules they promulgate. As an example, the mission and vision statement of the Danish Telecommunications Regulator, Telestyrelsen, can be found at Annex A-1. This can be compared against the statement of the government of Brazil in its General Telecommunications Law, of which relevant sections have been reproduced for reference at Annex A-2.

2.2. Brief Description of Enabling Legislation

A discussion of telecommunications legislation establishing independent telecommunications regulators can be found below at 3.1.2.2.

2.3. Regulatory Issues to Consider and the Role and Function of the Regulator

Instead of examining the substantive work to be undertaken by regulator, which is beyond the scope of this contribution, the section below will attempt to highlight the various permutations involved in the division of telecommunications regulatory responsibilities in the telecommunications sector. Apart from providing an overview of the potential roles and functions of the regulator, such an approach would assist in clarifying the role of the regulator vis-à-vis other related government bodies.

2.3.1. Universal Service and Universal Access

Not all countries have a universal service definition in their telecommunications laws. For example, telecommunications legislation in Botswana, New Zealand and Hungary do not address the issue of universal service provision.

However, in a majority of countries, a universal service definition is contained in the telecommunications laws of that country. More often than not, the relevant Government Ministry decides the extent of universal service necessary. The cost funding and allocation of the universal service obligation, however, is considered as a regulatory function in the majority of countries with such an obligation.

Globally, there are a number of ways universal service provision is implemented. In some countries such as the United Kingdom, Norway and Mexico, the incumbent bears the responsibility for universal service provision. In other countries such as France and Portugal, the responsibility is divided among the operators in the market, either on a basis of turnover or otherwise.

2.3.2 Licensing telecom services and setting license fees

Although the overseeing of licensing obligations is regarded as a regulatory function by all regulators, certain countries have adopted different practices as to which government agency issues the license. For example, the power to issue individual basic telecommunications licenses is still retained by the Ministry in Malaysia whereas in Singapore, this power has been devolved to the regulator. There appears to be no general rule to the division of responsibilities as examples fall evenly between countries with developed and developing telecommunications markets.

When it comes to the issuing of mobile licenses, further permutations on the division of responsibilities are encountered. In many countries, spectrum is considered a national asset and consequently, Ministries retain their power to issue licenses. This is the case in countries such as Canada and Spain. In other countries, both the Ministry and the Regulator may be involved in the

process. For example, the Ministry may decide on the number of mobile licenses to be issued while leaving the regulator to decide on whom the licenses should be issued to or the Ministry may issue the license in consultation with the regulator, as is done, for example, in Mexico.

Where license allocation is limited, often due to spectrum constraints, the allocation of licenses is generally determined through one or a mixture of four methods: auction, balloting, first come first served or comparative evaluation. Each method brings along with it particular advantages and disadvantages. All four methods have been practiced by Ministries and regulators in allocating licenses.

2.3.3 Tariffs/Price Regulation

In most countries, telecommunications regulators are responsible for price regulation in the telecommunications sector. Only in a few countries, such as Finland where telecommunications specific regulation does not exist, do other government bodies, such as the competitions authority, regulate telecommunications pricing.

Where there is telecommunications specific price regulation, the telecommunications regulator is most often solely in charge of its regulation. Exceptions however do exist. In the Czech Republic for example, the Ministry of Finance approves prices of domestic telecommunications services.

2.3.4 Interconnection

In general, interconnection rules are incorporated in the telecommunications law of a country. There are some countries, however, that have given this rulemaking power to the telecommunications regulator. For example, the Singaporean regulator, IDA, has recently published a Code of Practice on Competition in the Provision of Telecommunications Services that contains the interconnection regulatory framework.

Under most interconnection regulations, interconnection agreements between operators with little or no market power are regarded as commercial contracts where the regulator only intervenes in the case of a dispute. However, in interconnection agreements where one operator possess significant market power, as defined by the law or regulation, interconnection agreements are subject to automatic scrutiny by the regulator.

Regulatory scrutiny of the agreement, either through the establishment and mandatory adherence to a reference interconnection offer or through authorisation of the regulator, is undertaken in almost all countries by the regulatory authority. The area of disputes over interconnection agreements is also seen by most countries as a regulatory issue to be dealt with by the regulatory authority.

Nevertheless, there are some exceptions. In the case of Australia, the competition authority (ACCC) has exclusive authority on the access regime, and not the telecommunications regulator (ACA). Similarly in the Czech Republic, the Ministry of Finance is involved in dispute resolution proceedings where the dispute involves interconnection charges.

2.3.5 Frequency Allocation and Assignment

With the limited amount of spectrum available, countries will have to judiciously allocate bandwidth among both telecommunications and broadcasting services. The need to ensure the best use of national resources and the large amount of competing demands placed on spectrum often has led to Ministries taking a direct role in the planning or allocation of spectrum in many countries. There appears to be no specific trend in the division of responsibilities between Ministries and regulators. Ministries in some countries perform both planning and allocation of spectrum (eg. Japan) while in others they are performed solely by the regulator (eg. Portugal). Similarly, in some countries spectrum planning is done by the Ministry and spectrum allocation by the regulator (eg. United States) and in some other countries the opposite (eg. Italy).

As mentioned above under the topic of licensing, many countries regard spectrum allocation as a policy issue. Where this occurs, Ministries usually perform spectrum allocation through the issuing of licenses.

2.3.6 Numbering

Due to the importance of equal access to numbers in a competitive regime, the formulation of a numbering plan has to be insulated from the commercial interests of the operators. As such, in most of the countries, the independent regulator has the authority in number planning and allocation.

Nevertheless, numbering is seen by a number of countries as a national resource, similar to spectrum, and consequently Ministries are involved in number planning. For example, in the Netherlands and in Spain, number planning is done by the Ministry and number allocation by the regulator.

2.3.7 Standards/Type Approval

In almost all countries, standards conformity and type approval of terminal equipment attached to telecommunications networks is administered and enforced by the regulatory body. In most of these countries, the administering of testing and certification programmes for such equipment is done under the authority of the regulatory body.

Recently, however, the EU has decided to abandon this previous approach to the regulation of terminal equipment in favour of industry self-reporting. The 1999 EU Directive on Radio and Telecommunication Terminal Equipment requires only manufacturers' declarations of conformity with essential requirements.

The adoption of this deregulatory measure may permit new technologies to be introduced more rapidly into markets; however, it may not be applicable in developing countries where frequency spectrum monitoring is inadequate.

2.3.8 Quality of Service

As competition develops in the telecommunications market, consumers can choose the operator from which they will purchase telecommunications services. Quality and price are the two primary factors consumers rely on to make such a choice. However, unlike price, it is difficult for consumers to compare the service quality of different operators.

In order to assist the consumer in making this comparison, many telecommunications regulators monitor the quality of telecommunications services. There are, however, differences among the regulators as to what service quality indicators are published and as to the method of obtaining this information.

The most common indicators published include the percentage of fixed-line installation commitments met by operators, the average interval for a user to receive a connection to the network and the number of dropped mobile calls, etc.

Regulators obtain information on quality either from operators' reports, surveys or a combination of the two methods. For example, in Korea, the regulator surveys the quality of fixed and mobile services and publishes the results of the survey.

2.3.9 Converged Services

The regulation of broadcasting, the Internet and content in general is discussed below under the topic of convergence.

2.3.10 Promotion and Development of Industry

Aside from the promotion of the telecommunications industry through the fostering of competition, few regulators engage in the direct promotional and developmental activities such as investing seed money in key growth areas and training telecommunications professionals. Budgetary constraints and limited resources often prevent the regulatory authority from engaging in activities such as these. Furthermore, in most countries other governmental agencies exist for the promotion of local industry and manpower in general.

More importantly, the engagement of the regulator in direct promotional activities, such as seed investments or investment attraction, may call into question the independence of the regulator in regulating entities in which it has invested in.

2.3.11 Mergers and Acquisitions

Practices among countries differ widely. Responsibility for the review and approval of mergers between telecommunications companies are usually given to Ministries, competition authorities, telecommunications regulator or a combination of the three.

In countries like Korea and Poland, the responsibility is given to the Ministry. In Australia and Mexico, it is given to the competition authority while in Singapore and the Czech Republic, it is given to the telecommunications regulator. In the United States, Japan and Germany, both the telecommunications regulator and the competition authority exercise responsibility over mergers.

3. The Challenges for (New) Regulators: Setting Priorities

3.1. Present challenges

Regulators today are faced with an increasing number of challenges that have accompanied the remarkable changes in telecommunications and information technology. In many cases, regulatory objectives and functions will remain the same, however, with the increasing role telecommunications plays in the new economy, regulators will increasingly be required to look at the larger implications of the regulatory actions.

3.1.1. Impact of Convergence

The rapid development of digital technology has blurred boundaries between different communications services such as voice telephony, Internet access and broadcasting. Traditionally, these services were provided over different networks and platforms. However, the rapid technological advancement of digital technology has led to the increasing possibility of delivering all communications services over the same networks. A prime example of this can be found in the development of Internet Protocol, which can carry a whole range of communications services including voice telephony, video-conferencing and webcasting.

The convergence of these technologies and services has increasingly affected the nature of the telecommunications industry itself. It is increasingly difficult to categorise the services provided by individual operators of such networks and even more difficult to identify which category their infrastructure belongs to.

This blurring of the distinction in communications infrastructure and services presents a substantial challenge to the traditional vertically segmented approach governments have taken to regulation. In many countries acute regulatory distinctions between the different communications services exist. Internet services, telecommunications and broadcasting are regulated separately from each other.

Although workable, the continued maintenance of regulatory distinctions between the different communications sectors does pose some difficulties to the regulator. As highlighted in various studies and papers on the horizontal regulatory model^{vi}, a converged regulator would be in a better

position to address the needs of all communications services considering their inter-related nature and overlaps. Artificial regulatory distinctions drawn between such services could lead to the stifling of a market that no longer develops along traditionally separate segments. Fragmented regulation runs the risk of restricting industry from taking full advantage of technological innovation and business opportunities and preventing consumers from enjoying better services.

In recent years, there have been significant regulatory developments in both developed and developing countries concerning convergence. In many cases, converged regulatory bodies were formed from the merger of roles of two or more previously distinct entities. For example, in the case of Malaysia, the telecommunications industry was previously regulated by the Telecommunications Department (Jabatan Telekomunikasi Malaysia), while the broadcasting industry was regulated by the Ministry of Information (Kementerian Penerangan). In April 1999, the regulation of the telecommunications and broadcasting industry, in addition to the IT industry, was taken over by the Communications and Multimedia Commission. Similarly, in the case of South Africa, the Independent Broadcasting Authority (IBA) and the South African Telecommunications Regulatory Authority (SATRA) were merged in July 2000 to form the Independent Communications Authority of South Africa (ICASA).

Nevertheless, institutional changes reflecting the convergence between telecommunications and broadcasting have been limited. The sensitive role played by media and content policy in some countries has made it delicate to merge broadcasting and telecommunications regulatory institutions. There has been, however, increasingly strong support given to making a distinction between media or information content as independent of the technology and means by which it is transmitted. For example, in its move towards the establishment of a converged regulator, Singapore upheld this distinction by merging the former telecommunications (the Telecommunications Authority of Singapore) with the national IT promoter and regulator (the National Computer Board) to form the Infocommunications Development Authority of Singapore, which now regulates information services and transmission generally. The broadcasting regulator (the Singapore Broadcasting Authority) was not included in the merger.

It is generally acknowledged by studies and reports that a review of current institutional structures and procedures is a pressing requirement for countries in order to assess whether existing or proposed regulatory structures are suitable to a converging communications environment. At the very least, there is a need to ensure closer co-operation between the related regulatory institutions in order to avoid regulatory distortion in the converged marketplace.

3.1.2. Establishing a Regulatory Environment which is fair, Open and Market Oriented

In achieving the regulatory objectives set out for the regulatory authority, some basic groundwork must be laid for the regulatory authority to carry out its mandate. In most countries, the policy and regulatory environment is laid out by the relevant sector Ministry and in some cases, certain aspects of telecommunications policy is sometimes set by the regulators themselves, such as in the case of the FCC of the United States.

Regardless of this distinction, the following basics still apply:

3.1.2.1. Developing Policies and Regulatory Rules which promote efficiency, cost effectiveness and universal access

Although good regulation is essential to translate policy into reality, governments must first identify and prioritise their policy objectives. In turn, these policy objectives will have to be translated into policies and regulatory rules that the regulator can implement. As such, a link between the major policy objectives and the necessary policies and regulatory rules must be drawn.

An illustration of linkages between the necessary policy and regulatory rules that have to be introduced in order to bring about policy objectives of universal access, increased investment in the telecommunications sector, increased market confidence, etc, can be found in the World Bank's Telecommunications Regulation Handbook^{vii}.

3.1.2.2. Necessary legislation and legal framework

In order to facilitate the regulation of telecommunications, the government has a responsibility to establish the legal framework in which the telecommunications regulatory authority will operate. This is done in a number of ways. As mentioned above, the most common method of establishing a regulatory framework is through the legislation of a country, normally through a Telecommunications Act. In most cases, like the SADC Model Telecommunications Bill^{viii}, the Act provides for the following areas:

- Establishment of the Telecommunications Authority
 - eg. members of the authority, appointment procedures of the head of the authority, removal from office, budget of the authority, reporting requirements, etc.
- General Powers and Duties of the Telecommunications Authority
 - eg. issuing of licenses, management of frequency spectrum, approval of terminal equipment, etc.
- Power of the Authority to issue telecommunications directives and codes of practices
- Prescription of Offences and Penalties related to telecommunications
- Enforcement powers and procedures of the Telecommunications Authority

Occasionally, the process for privatisation or restructuring of the state owned incumbent operator might also be included in a telecommunications act. The SADC Model Telecommunications Bill provides for such a process.

In many countries, the general powers given to regulatory authorities extend to the issuing of practice directions and code of practices. Through these instruments, authorities usually prescribe regulations for specific areas of telecommunications that may be left open by the legislation. For example, the interconnection framework in Singapore is entirely contained in a Code of Practise issued by the regulator^{ix}.

In some cases, higher regulatory principles can be found in the Constitution of the country itself. For example, in Germany the idea of regulatory independence stems from its Constitution^x.

3.1.2.3. Subsidiarity and Deregulation

It is acknowledged by most countries that the extent of regulation should be geared to the state of development in a market. As discussed above under regulatory objectives, as competition is introduced, there is a need for the regulator to act as a proxy for competition to the incumbent in order to ensure a reliable supply of telecommunications services at reliable prices. Furthermore, at the onset, the regulator will need to act more proactively to dismantle barriers to competition and open up the market. However, as competition increases, the need for the regulator to act as a competitor and as a market reformer decreases. As such, in order to minimise market distortion through regulation or to avoid the unnecessary dedication of resources to redundant rule making, regulatory intervention has to be similarly reduced.

Many developed countries, such as Germany and the United States have embodied this process as a principle of subsidiarity, where regulatory intervention is limited only to what is necessary to achieve regulatory objectives.

Although deregulation may not be applicable for most developing countries at this time, provisions should nevertheless be made for the possible eventuality of deregulation. For example, in the United Kingdom, OFTEL has been given the authority to implement self-regulation in areas it sees fit. At present, self-regulation is used in a number of areas including premium rate services, Internet content and certain aspects of pricing policy.

Nevertheless, in all cases, regardless of the state of market development, it has been accepted as sound practice that regulatory measures be preceded by an analysis of their effects and an assessment of possible alternatives.

3.1.2.4. Dispute resolution

As part of its regulatory role, the independent regulatory body would be required to resolve intermittent disputes between the industry players it regulates. In some cases, such as in Interconnection, the requirement to establish an independent dispute resolution mechanism has been encapsulated in the WTO Regulation Reference Paper. The paper requires recourse to an independent domestic body, which may be the regulatory or another body, to resolve interconnection disputes within a reasonable time.

3.2. The Regulatory Decision Making Process

There are several acknowledged principles of regulatory decision making that have been reflected in the laws and regulations of many countries. Aside from the promotion of public trust and confidence in the decisions of the regulator, these regulatory principles or guidelines provide a necessary context in which the regulator applies the rules set out, promoting in turn predictability, clarity and consistency in the decision making process.

Many regulators have their decision-making statements of principle laid out in legislation and occasionally, in specific practice directions. For example, in its recently enacted Code of Practice for Competition in the Provision of Telecommunications Services, the Singaporean regulator has included in the code's introduction the set of regulatory principles that it would follow in applying the code. Examples of these principles include regulatory review, open and reasoned decision-making, avoidance of unnecessary delay, non-discrimination and opportunity for review of decisions.

Generally, a number of indicators can be used to measure adherence to the decision-making principles set out. Some examples that have been employed are listed below.

3.2.1. Transparency

In general, regulators have relied on the publication of papers or studies on proposed rules or other major decisions. Until recently, however, the dissemination of such information has been restricted in scope due to limited delivery, usually for example through the direct distribution of printed material.

With the growing popularity of the Internet, most regulators have increased their reach through the publication of the public notices and consultation documents on their website. Furthermore, bolstered by the ease of accessing other relevant information found on the website, regulators are now better able to convey information on the proposed decision to all interested parties. A wide range of countries such as Hong Kong, Brazil, the Netherlands, South Africa and Jordan has used this approach.

3.2.2 Timely implementation of decisions

Frequently, time is of the essence in regulatory decision-making. Apart from the potential economic loss to industry, delays or vague deadlines also serve to undermine the effectiveness of the regulatory framework by introducing uncertainty.

In order to avoid such pitfalls, the majority of regulators have established and published clear schedules and timelines for decisions. For example, although the duration varies from country to country, almost all regulators have included a timeframe for the issuing of telecommunications licences. Similarly, timeframes to resolve or respond to industry or consumer complaints have also been established.

3.2.3 Feedback and Monitoring mechanisms

In order to establish effective decision making, there has to be a process where previous decisions are monitored and reviewed to ensure that it has brought about its intended effect. This process would also allow continued improvements to be made and changes introduced if necessary.

Regulators rely on several ways to do so. A number of countries have explicitly provided for automatic reviews of regulatory decisions either through legislation or occasionally, through the terms of the regulatory practice directions itself. For example, as provided in its Telecommunications Code of Competition itself, Singapore's regulator will have to review the Code once every three years with the opportunity for public comment.

In addition, established regulators have also relied on continued feedback from the private sector and the public through various channels that have been set-up. Examples include forums such as websites, feedback sessions and workshops can be used to facilitate the feedback process.

3.2.4 Private sector participation and public involvement

The desirability of encouraging public and private sector participation is closely related to the principle of transparency above. Beyond that, public and private sector participation in the decision making process allows an opportunity for those who will be effected the most from the decision to assist in its formulation. A large number of regulators such as Argentina and Denmark expressly subscribe to this principle in their regulatory processes.

As discussed above, the same web-based public processes that have been put in place for transparency can be used to gather responses from industry and the public.

Nevertheless, regulators should make an extra effort to gather information and feedback from all major market participants when making a decision on complex matters. Frequently, their input in respect to their technical and financial data and their detailed position on proposed decisions will highlight factors in the decision that the regulator may otherwise be unaware of. The Danish regulator, for example, holds round-table meetings with special interest groups in order to generate proactive participation and discussions, thereby benefiting from the experience of all parties.

It is interesting to note that apart from industry and public consultation, many regulators also rely on information and experiences of other telecommunications regulators in similar markets for purposes of orientation. Germany, for example, has provided for such a measure in the area of telecommunication rates regulation^{x1}.

4. International and Regional Initiatives

4.1. Role of Regulators Associations

Telecommunications regulation and reform is a subject of study and discussion for a large number of international organisations, groups and forums. The large majority of organisations deal with telecommunications as one of the means of achieving larger objectives. For example, the World Bank pursues telecommunications regulatory reform as part of its larger development agenda, that of poverty-reduction.

There are, however, a significant number of international groupings and forums that deal with telecommunications regulation as their prime focus. These groupings are usually regional in nature, set-up with the objective of information sharing and co-ordination as a primary focus. The World

Bank's Telecommunications Handbook provides a useful description of the major organisations interested in telecommunications regulation^{xii}.

4.2. Training programmes for regulators

With the increasing importance of telecommunications in the new economy, and the role regulation plays in developing the telecommunications industry, a large number of facilities for training have been set-up to facilitate effective telecommunications regulation. Telecommunications regulatory training can be found from a multitude of sources, from large workshops organised by ITU to small classroom sessions conducted by national telecommunications regulators. The list at Annex B attempts to list some resources where telecommunications regulatory training and instruction can be found.

5. Conclusion

This contribution is designed to act as a point of departure for further work in the area. It has attempted to consolidate the practices and principles of the established independent telecommunications bodies already in existence in order to distil the basic considerations and choices available in creating or strengthening such bodies. Although far from being exhaustive, members from the study group are urged to identify from this menu the key considerations and choices vital to the creation of a potential strategy for governments to set-up and strengthen regulators.

The Mission and Vision of the Danish National Telecom Agency

(taken from Status Report '99, National Telecom Agency, Denmark, September 1999)

The National Telecom Agency's mission and vision

The many new responsibilities assigned to the National Telecom Agency as an element in the liberalization, have also led to new mission and vision statements for the Agency's future work.

The mission statement indicates the overall goal of the National Telecom Agency's activities.

The mission of the National Telecom Agency:

The National Telecom Agency, in its role as Denmark's national regulatory authority, is to work actively to ensure that private citizens and public organizations have wide and varied access to high-quality telecommunications products and services at competitive prices.

The Agency's vision statement provides a more concrete description of the actions required to achieve the Agency's overall objectives. The purpose of the vision statement is to define the Agency's main focus areas and the direction of the Agency's activities in a long-term perspective.

The National Telecom Agency's vision, as expressed in the following, represents a natural extension of the scope of the individual laws in the telecommunications sector, which to a great extent aim to regulate competition and consumer rights or to ensure efficient use of resources.

The National Telecom Agency's vision:

Within the framework of the law, the National Telecom Agency is to work actively to:

- Promote competition between the providers of telecommunications networks and services
- Ensure the necessary protection of consumer rights and establish a safe framework for providing and utilizing telecommunications products
- Ensure optimal utilization of limited resources
- Provide professional consultancy to the Minister for Research and Information Technology concerning telecommunications legislation, including information on market-related and technological developments in the telecommunications sector, and distribute information concerning telecommunications legislation and other relevant conditions to telecommunications users and other parties

Competent and motivated employees are a condition of the National Telecom Agency being able to live up to its role as an effective, independent supervisory authority in the field of telecommunications. To be able to attract, develop and keep competent employees is, therefore, of prime importance to the National Telecom Agency. This is mainly to be achieved by results oriented management and active staff policy.

The National Telecom Agency's vision:

The National Telecom Agency should continually strive to be an attractive workplace. In addition, the Agency will utilize performance management and dynamic personnel policies to attract, motivate and keep competent employees.

The chief part of the National Telecom Agency's activities are financed by the telecommunications sector - primarily through fees for numbers and frequencies. The National Telecom Agency must therefore ensure at all times that a reasonable balance is maintained between the extent and content of the Agency's efforts and the compensation it receives from the operators and providers in the marketplace. Consequently the National Telecom Agency must currently be able to document a high productivity and quality level.

The National Telecom Agency's vision:

The National Telecom Agency will maintain a constant focus on improving its daily operations. A high level of productivity and quality should be demonstrated and documented on an ongoing basis.

**Excerpts from the General Telecommunications Law (Law no. 9472),
Federal Republic of Brazil**

Fundamental Principles

Article 1

It is the responsibility of the Union, through its regulatory organ and under the government policies set forth by the Executive and Legislative Powers, to organize the exploitation of telecommunication services.

Sole Paragraph. The organization includes the regulation of the performance, commercialization and use of services, and the implementation and operation of telecommunication networks, as well as the use of orbit resources and radio-frequency spectrums.

Article 2

The Government shall :

I- provide access to telecommunication services, at reasonable tariffs and prices, and under adequate conditions to the entire population;

II - stimulate the expansion of telecommunication network and service utilization for services of public interest in order to benefit the Brazilian population.

III - adopt measures that foster competition and diversity of services, that increase the supply and that provide standards of quality compatible with user requirements;

IV - strengthen the regulatory role of the State;

V - create investment opportunities and stimulate technological and industrial development, under a competitive scenario;

VI - provide conditions so that the industry development is in consonance with the social development goals of the country.

Article 3

The user of telecommunication services has the right:

I - of access to telecommunications services, with standards of quality and regularity adequate to its inherent nature, anywhere within the National Territory;

II - to freedom of choice relative to his/her service provider;

III - of non discrimination as to the access and utilization conditions of the service;

IV - to the adequate information regarding the conditions for rendering services, the respective tariffs and prices;

V - to the inviolability and to the secrecy of his/her communication, except under constitutional hypotheses and conditions legally provided for under such instances;

VI - to the non-disclosure of his/her access code, upon request;

VII - to the non-suspension of the service rendered under the public system, except due to debit directly related to the utilization of the service or non-fulfillment of contract provisions;

VIII - to the prior knowledge of the suspension clauses of the service;

- IX - to petition the regulatory organ and consumer protection agencies against the service provider;
- X - to obtain responses from the service provider regarding complaints;
- XI - to petition the regulatory organ and consumer protection agencies against the service provider;
- XII - to indemnification on damages arising from violation of his/her rights.

Article 4

The user of telecommunications services has the obligation to:

- I - Adequately utilize telecommunications services, equipment and networks;
- II - Respect public property and those oriented towards the use of the public in general;
- III - Communicate authorities any irregularities and illegal acts committed by telecommunications service providers.

Article 5

In the economic relationships within the telecommunications industry, the following constitutional principles shall be observed: national sovereignty, social role of property, free initiative, free competition, consumer protection, reduction of regional and social disparities, restraint of economic power abuse, and continuity of service rendered under the public system.

Article 6

The telecommunication services shall be organized based on the principle of free, ample and fair competition among all providers, having the Government to act towards promoting them, as well as to correct the effects of imperfect competition and to repress violations against economic order.

List of organizations of telecommunication regulatory training and instructions

Name of Organisation	Short Description
<p>Asia Pacific Economic Co-operation Telecommunications Working Group (APEC Tel)</p> <p>http://www.apectelwg.org</p>	<p>The APEC Telecommunications Working Group (TEL) was formed in 1990 under the aegis of APEC. TEL was charged to address human resource development; technology transfer and regional cooperation; opportunities for on-site visits, observerships and fellowships; and telecommunications standardization.</p> <p>It currently funds projects dealing with telecommunications training as well as regulatory reform, such as the Australian Regulatory Structures Project. It also publishes useful guides on its website such as the Development and Financial Resources Catalogue and Spectrum Policy and Management Database which can be found on their website.</p>
<p>Commonwealth Telecommunications Office (CTO)</p> <p>http://www.cto.int</p>	<p>The CTO organises periodic workshops and seminars for Commonwealth members in the various regions. Examples of topics include interconnection and rural access.</p>
<p>European Telecommunications Office (ETO)</p> <p>http://www.eto.dk</p>	<p>ETO occasionally organises short courses and workshops for European regulators on a number of subject matters such as numbering and licensing.</p>
<p>International Telecommunications Union (ITU)</p> <p>http://www.itu.int</p>	<p>The ITU provides a number of resources and training opportunities regarding regulatory reform. Of particular interest is the ITU Centres of Excellence project that provides manpower development tools in the regions.</p> <p>The Asia-Pacific COE website can be found at http://www.e-illumine.net/itu/itu-index.html This website provides a virtual learning centre which includes an online accessible policy and regulation course.</p>

Name of Organisation	Short Description
Partnership for Information and Communication Technologies in Africa (PICTA) http://www.bellanet.org/partners/picta/	PICTA is an informal group of donors and executing agencies committed to improving information exchange and collaboration around ICT activities in Africa. Their activities include occasional training courses at the regulator level.
Telecommunications Executive Management Institute of Canada (TEMIC) http://www.temic.ca	TEMIC is a non-profit organization based in Montreal, Canada. It has the mandate of assisting developing countries in expanding their telecommunications sector by improving the managerial abilities of senior telecommunications managers. It holds management seminars at various locations across Canada in order to allow participants to acquire firsthand knowledge on the latest management techniques and technologies available in Canadian telecommunications.
Telecommunications Regulators Association of Southern Africa (TRASA) http://www.trasa.org	TRASA was formed in April 22, 1998 as an organisation representing the region's regulators. It aims to bridge the gap between the formulation and creation of regional legislation and policies by supporting effective implementation at the national level. To this end, it periodically organises seminars and workshops for its members in the area of telecommunications policy and regulation.
United States Telecommunications Training Institute (USTTI) http://ustti.org	The United States Telecommunications Training Institute (USTTI) is a non-profit joint venture between U.S. telecommunications, broadcast and IT industries and officials from the Federal Government. It aims to share the United States' telecommunications, technological, and managerial advances on a global basis by providing an array of tuition-free telecommunications, broadcast and IT training courses for talented professionals from developing countries.

Name of Organisation	Short Description
University of Westminster http://www.wmin.ac.uk	Based in London, the University, through its School of Communications and Creative Industries conducts a one-year full-time or two-year part time postgraduate course (MA) in Communication Policy. The course is designed to give students a broad introduction to policy and regulation in the media and telecommunications sectors. It draws on experience from the European Union, the UK, the USA, the Asia-Pacific and developing countries.
World Trade Organisation (WTO) http://www.wto.int	The WTO organises regular trade related courses throughout the year. A number of these courses involve telecommunications regulation pertaining to telecommunications trade policy.

NB: This list is not meant to be exhaustive nor does it constitute an endorsement of the courses, seminars, workshops, forums or other activities organised, promoted or managed by these entities. The list serves only as an example of some of the training resources available for regulators today.

ⁱ Annex to the Forth Protocol to the GATS Agreement, the “Agreement on Basic Telecommunications” negotiated under the auspices of the World Trade Organisation (WTO) in February 1997, which came into effect on 1 January 1998.

ⁱⁱ Scott Beardsley and Michael Patsalos-Fox, Getting Telecoms Privatisation Right, The McKinsey Quarterly, 1995 Number 1, pp. 3- 26

ⁱⁱⁱ Open Network Provision Framework Directive (90/387/EC)

^{iv} ITU, “Trends in Telecommunication Reform 2000-2001” – 3rd Edition

^v Hank Intven, “Telecommunications Regulation Handbook”, 2000, Infodev and McCarthy Tetrault, pp. 1-9 to 1-10.

^{vi} European Union “Green Paper on the Convergence of Telecommunications, Media and Information Technology Sectors”, December 1997; OECD, “TISP Working Party’s Roundtable on Convergence”.

^{vii} Infra “v”, p.1-4.

^{viii} Southern African Development Community Model Telecommunications Bill, 1998

^{ix} Code of Practice for Competition in the Provision of Telecommunication Services, 1999

^x Article 87 ff of the German Constitution

^{xi} Section 3 of the German Telecommunications Rates Regulation Ordinance

^{xii} Infra “v”, p.1-14