

SOUTHERN AFRICA TRANSPORT AND COMMUNICATIONS COMMISSION

**TELECOMMUNICATIONS
POLICIES
FOR
SADC**

SATCC-TU, June 1998

DECISION OF THE SATCC COMMITTEE OF MINISTERS

The Telecommunications Policies for SADC has been prepared in conjunction with the Model Telecommunications Bill for SADC in pursuance of the provisions of Article 10.2, Chapter 10 of the Protocol on Transport, Communications and Meteorology. The article requires SADC Member States to develop a common regional telecommunications policy in order to achieve the objective of developing national telecommunication networks for the provision of reliable and affordable telecommunications services.

The Policies and the Bill were developed through a number of meetings of experts and stakeholders and discussed and endorsed by the relevant SATCC structures. During their annual meeting held in Swaziland on 26 June 1998 the SATCC Committee of Ministers made the following decisions regarding the two documents:

- approved the Telecommunication Policies for SADC as a common policy guideline for adoption and implementation at national level;
- approved the Model Telecommunications Bill as a guideline in respect of national legislation for implementing the policies referred to above;
- urged Member States to expeditiously adopt and implement the Policies and the Model Telecommunications Bill in the interest of early regional integration and economic development;
- urged Member States to establish and submit to the SATCC-TU, by 31 December 1998, their respective time schedules for the national adoption and implementation of the Policies and Model Telecommunications Bill; and
- directed SATCC-TU to monitor the implementation of the Policies and Model Telecommunications Bill and to report to the Committee of Ministers.

PREAMBLE

The model policy on telecommunications for SADC provides Member States with guidelines to develop telecommunications in their respective countries. It is designed pursuant to the provisions of the SADC Protocol on Transport, Communications and Meteorology. Regional integration is achievable through the adoption and early implementation of common policies in the region. On this account, the model policy on telecommunications is a useful and persuasive instrument. Nevertheless, it is recognised that individual Member States have to decide on their own respective policies and on the timing for their implementation in accordance with their own circumstances.

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TELECOMMUNICATIONS POLICIES FOR SADC

INTRODUCTION

One of the central objectives of the Southern African Development Community (SADC) is to forge links among Member States to create a genuine and equitable regional integration and promote advancement of its citizens, thereby raising the quality and standard of life and, consequently, alleviating poverty. The enabling factors to achieve this goal, such as co-operation in infrastructure development, co-ordination of sectoral plans and programmes, promotion of investment and production, and the development of indigenous contents, are still being harnessed. In fact, telecommunications, which is one of the key infrastructures, has still to progress to the desirable standard.

A large scale and advanced telecommunications infrastructure in SADC, capable of delivering info-communications services, is recognised as a pre-requisite for economic growth. The availability of adequate communications links within both individual countries, the region and internationally is accepted by stakeholders as an essential instrument to facilitate intra-SADC and extra-SADC trade, leading to socio-economic development.

Furthermore, the third millennium, which is an information and knowledge-exchange driven millennium, raises the importance of reliable and advanced info-communications services as a key national and regional resource. However, it is acknowledged in the region and confirmed through various studies, including those of the International Telecommunications Union (ITU), that there is a serious inadequacy of info-communications capacity.

A number of initiatives have been undertaken by several institutions, including the ITU to address this critical problem. One valuable initiative is the African Green Paper that focuses entirely on the problems of telecommunications in Africa and offers a comprehensive policy guideline for countries in Africa to harmonise telecommunications sector policies as a strategy to develop telecommunications infrastructure and services.

In the same thrust, the SADC Protocol on Transport, Communications and Meteorology has prescribed the development of a harmonised regional policy with the provision of reliable, effective and affordable telecommunications services, as its central goal. The Protocol specifies actions that will have to be undertaken to transform the state of the national and regional telecommunications infrastructures from their present state of under-capacity to an integrated and advanced info-communications network.

The communications revolution, brought about by the rapid ongoing development of telecommunications technologies, services and applications, presents opportunities to leapfrog to this desirable high-capacity info-communications network to meet the basic and advanced service requirements of SADC. This revolution is pushed by rapid convergence of telecommunications, information technology and broadcasting technologies, services and markets.

The impact of all this is that all spheres of human activity are profoundly affected, causing an urgent need for the development of advanced national and regional networks that would create a regional information infrastructure within SADC. This infrastructure would enable SADC to effectively participate in the foreseen Global Information Society (GIS). There is, therefore, urgent need for speedy development of a coherent regional policy.

Regional policy on telecommunications becomes even more crucial in this period of globalisation of the world economy, where telecommunications is reckoned as both a tradable service and transport of info-communications services. In this context, the capability of individual countries to participate effectively in the delivery of services is likely to contribute to stronger regional co-operation, leading to two benefits.

Firstly, a group of countries could combine their strengths, on one hand, to resist competitive threats and, on the other hand, to take advantage of the opportunities that emerge in the global market, such as the transport of international telecommunications or information traffic. Secondly, the group presents a larger market to private investors who could find an opportunity to achieve standardisation and economies of scale, factors that may be decisive in investment decisions.

In this challenging environment, the role of labour takes prominence as a key factor of competitiveness. In this regard, human resources should be accorded greater recognition through establishment of an employee consultative process on matters affecting them by changes taking place in the industry. In the end, the interest of society must be taken into account in any decision affecting the development of the telecommunications industry.

PART 1

PROBLEMS AND OBJECTIVES

1.1 PROBLEM STATEMENT

The effort of SADC toward regional integration, in the light of fundamental changes in telecommunications technology and global market processes, is to pursue the economic betterment of its population.

To do so, one of the key enabling factors is an adequate and efficient info-communications infrastructure. A number of studies have shown the relationship between telecommunications and economic growth. Economic studies for the ITU, for instance, indicate that each line added in Africa contributes approximately US \$ 4500 to Gross National Product (GNP).

Furthermore, statistics on telecommunications development show the large disparity between the network capacity in Africa and the rest of the world. In fact, the network capacity per 100 inhabitants (telephone density) in Africa is the lowest, compared to other regions, in the world. Furthermore, Africa accounts for only 1.8 percent of total telephones (January, 1996) and 0.6 percent of Internet host computers (January, 1997) in the world. This undesirable situation is due to inadequate investment, low priority given to telecommunications and inappropriate institutional arrangement.

The prevailing level of investment has been insufficient to satisfy demand and the list of officially recorded customers waiting for telephone service is consequently long. The scaling-up and modernisation of telecommunications infrastructure, to meet current and future demand for national, regional and global info-communications services, require major capital injection, far above current trends. Unfortunately, domestic, bilateral and multilateral investment in telecommunications has been either not forthcoming or grossly inadequate and, in many cases, declining.

From a government's budget perspective, sectors, like housing, education and health, usually consume a larger proportion of any government's budget and demand for funds from telecommunications is consequently relegated to lower priority. The attitude adopted is that telecommunications enterprises are in a position to raise funds from their own operation and from external sources. However, at the same time, the enterprises are not entirely free to use their earnings as they would wish and cannot get access to external sources without guarantee from government. Consequently, the enterprises have had generally to rely entirely on government for their expansion and operation with the result that they are out of phase with market evolution.

1.2 POLICY OBJECTIVES

For the timely provision of reliable, effective, adequate and sustainable basic and advanced telecommunications services, oriented to meet the developmental needs of the region, a new policy framework seeks to achieve the following objectives:-

1.2.1 Affordable, Efficient and High Quality Services

To ensure affordable, efficient and high quality services by achieving universal service with regard to telecommunications services and universal access with regard to advanced information services in the region; and to enhance regional service inter-connectivity in response to the diverse needs of commerce and industry, and in support of general social and economic growth.

1.2.2. Influencing Global Trends and be Active in GIS

To effectively co-ordinate participation in regional and international telecommunications fora so as to influence global trends and take advantage of rapid progress in the convergence of telecommunications, information and broadcasting technologies and services, and play a prominent role in the Global Information Society (GIS).

1.2.3 Building a Competitive Regional Telecommunications Sector

To build a regional info-communications industry that is globally competitive by expanding and strengthening of government's capacity to provide predictable strategic development policy framework; developing regulatory and investor-friendly legislation for attracting local and foreign investors; promoting the integrity and viability of public telecommunications services; and monitoring compliance with such policy and legislation.

1.2.4. Creating an Environment for Sustainable Info-Communications Development

To create an attractive and dynamic business environment for sustainable industry development through economic and institutional restructuring of the industry, including capital investment options; promotion of a fair competitive and stable environment; development of local manufacturing facilities; encouragement of indigenous participation; enhancement of capacity and capability of service providers; promotion of local content; and provision of network access on reasonable and non-discriminatory terms and conditions.

1.2.5 Creating Partnerships

To facilitate partnerships, including sub-regional partnerships, between public and private sectors, consisting of both local and foreign institutions.

1.2.6 Code of Conduct and Business Practices

To create a regulatory and business environment that facilitates the strengthening of both business practices and code of conduct for the sector.

1.2.7 Gender and Telecommunications Development

To facilitate the employment of women in the telecommunications field, on an equitable basis, at senior levels of responsibility in the telecommunications administrations, including government and regulatory bodies, inter-governmental organisations and the private sector; and to put in place policies and practices to ensure that recruitment, employment, training and advancement of women and men are undertaken on a fair and equitable basis.

PART 2

STRATEGIES FOR ACHIEVING POLICY OBJECTIVES

2.1 INSTITUTIONAL FRAMEWORK

Coherent strategies are required to address the above problems, in order to achieve objectives that have been set for the growth of info-communications services, in an investor-friendly environment which is conducive to rapid development. One of the essential conditions is to pursue more rigorously the structural transformation of telecommunications institutions, started already in the SADC region.

Member States have achieved some institutional re-arrangements and are at various stages of implementing an effective management of the telecommunications industry. Although States still own the dominant operator, no government now provides telecommunications services directly. However, as a result of its ownership, government is directly involved in the management of these enterprises. Actually, basic telecommunications services are provided by state-owned or partially state-owned enterprises, while value added services are offered by both state-owned and private enterprises.

So far, seven countries have established telecommunications regulators separately from both government and operators. But, in most countries, the regulators' mandate and autonomy need to be enhanced in order to be able to function optimally in the current telecommunications environment. In the remaining five countries, regulatory responsibilities are shared in various degrees between government and the state-owned dominant operator.

There is consensus in the region, expressed in the Protocol as well as at workshops and symposia, on the necessity of restructuring existing institutions in order to empower, clarify and assign appropriate roles to key players in the telecommunications sector. What the region has achieved so far is based on these decisions. The ultimate goal is to reach an info-communications industry framework with separate roles for government, regulator and service-providers, operated through adequate legislation. In migrating to this target industry configuration, the reinforcement of human resource capacity in both government and regulatory institutions, to enable them to pursue the building process effectively, has become an urgent consideration.

2.2 OBJECTIVES OF THE INSTITUTIONAL FRAMEWORK

The key objectives of proposed institutional framework are to:

- allocate clear roles and responsibilities to key role-players;
- promote accountability and transparency;
- remove unnecessary duplications, and to promote efficiency and cost-effectiveness in managing the info-communications industry;
- promote investor friendly environment;
- create a "level playing field";
- restructure the national incumbent operator; and
- introduce and promote competition

2.3 KEY ROLE-PLAYERS

The key role-players in building a structure for the info-communications industry are:

- Government
- Regulator
- Investors and Operators
- Labour
- Consumers/Users

Traditionally, governments have played the role of strategic planner and policy maker, regulator and service provider. Currently, they are also owners of state-owned telecommunications enterprises (SOTEs).

In a reformed info-communications industry, these roles must be clearly separated. Government should retain strategic planning and policy making and it should withdraw from the operation of privatised SOTEs. Enforcement should be undertaken by an independent regulator.

The importance of the role of labour should be accorded greater recognition and interests of consumers should be taken into account in decisions affecting the telecommunications sector.

All players have the inherent responsibility to improve the performance of the industry in order to meet macro-economic, micro-economic and social goals.

2.4 THE ROLE OF GOVERNMENT

2.4.1 Overall Functions of Government

At the macro level, Government should be doing the following principal functions:

- Create an enabling environment for the provision of affordable services through liberalisation and commercialisation of telecommunications sector.
- Create a level playing field to facilitate the entry and growth of nascent operators.
- Provide good governance, including ensuring law and order in the state.
- Establish and implement development-promoting policies that are market-guiding and friendly.
- Restructure and consolidate the info-communications sector by assigning responsibilities to players dealing with policy (Ministry), Regulation (Regulator) and operations (operators/service providers) to ensure that the community as a whole, and all of its parts, are provided with adequate choice of services at reasonable prices.
- Allow for, at the most basic level, checks and balances including an independent judiciary and impartial public service competent in telecommunications, all of which are indispensable to a fair and efficient regulation.
- Manage change through adequate mechanisms, such as a policy implementation monitoring unit and an investment centre.

2.4.2. Policy Responsibility of Ministry Responsible for Telecommunications

Recognising that telecommunications is a public utility necessary to the development of all sectors of the economy and society, the Ministry responsible for telecommunications has the following functions:

- Ensure universal service with respect to basic telecommunication services and universal access with respect to advanced information services.
- Create and oversee maintenance of a regulatory framework for the info-communications industry.
- Build and sustain an enabling environment for the provision of info-communications services largely by the private sector.
- Ensure that policy-making, regulatory and enforcement structures have the capacity to perform their respective functions comprehensively and fairly.
- Formulate and review policy and oversee its implementation.

These functions change the responsibility of the Ministry from the previous combination of policy, rule creation, implementation and operation to sector analysis, policy development rule creation and general facilitation.

To fulfil its functions, the Ministry must introduce and enforce effective policies so that the national or regional resources are allocated and utilised in an efficient way in the interest of the public. One of such policies is to enable, promote and facilitate fair competition between interests active in the marketplace.

Once correct policies are established, they should be embodied in a simple, reliable and enforceable set of stable legislation, and introduced and enforced in a transparent manner.

These actions create an enabling environment in which the private sector or other bodies can successfully participate in the building up and delivery of info-communications infrastructure and services.

2.4.3. Capacity Building of Government

To attain the required transformation of Government to the new role, the constitution, job content/description and attitude of the staff may need readjustment. In this regard, the organisational structure of the Ministry will have to be modified to perform these new functions. An adequately staffed Strategic Policy and Planning Unit will be geared to carry out the necessary policy development and endorsement, including the planning for universal service and universal access. Where such a unit exists, it should be strengthened in terms of skills and other resources.

Other options for undertaking policy development for universal service and universal access include the establishment of a Universal Service Fund, Universal Service Unit or an Agency to administer it, under the Ministry or under the Regulator.

2.5 THE ROLE OF THE REGULATOR

2.5.1 The Regulatory Institution

The Ministry for Telecommunications should put in place an appropriate regulatory institution for the enforcement of government's decisions and legislation. By so doing, the regulatory institution will take over the responsibilities for enforcement of regulations and rules to facilitate efficient operations in the market.

The regulatory institution enforces laws and rules within the info-communications market boundaries. In effect, it entails monitoring of market demand and supply capacity of service providers, and intervention to correct imbalances or market distortion in favour of users. Its activity ensures the existence of an efficient and competitive market environment allowing info-communications services to be developed and delivered at affordable prices.

The regulatory institution should have the necessary independence from stakeholders to ensure impartiality, flexibility and transparency. Furthermore, it must have requisite capacity in order to avoid “regulatory capture” by stakeholders and ensure transparent public accountability. Consequently, legislation is required to specify the obligations of operators in the industry and the powers and accountability of a regulatory institution to enforce them.

The regulatory framework should comprise four main elements:

- Legal instruments that facilitate market growth and articulate the scope and powers of a regulatory institution, and the rights and obligations of operators and regulatory processes. The legal provisions should be introduced to support the national socio-economic strategies.
- A regulatory institution which is completely independent from operators and government, and equipped in resources and skills to enforce rules. Where such an institution already exists, but lacks some of the recommended attributes, it should be strengthened appropriately. The institution should also be capable of progressively adjusting itself to changes in technology and services.
- Regulatory processes involving specialised activities, related to expansion and operation of info-communications technologies, services, applications and markets, to perform regulation functions.
- Relationships between the regulatory institution and other institutions or authorities in exercising its powers conferred in the legislation.

2.5.2. Establishment of Regulatory Authority

The regulatory institution, referred to as the “Regulatory Authority ” should be established as an autonomous entity with all the powers of a legal persona.

2.5.3. Scope and Mandate of Regulatory Authority

The Protocol calls for close co-ordination between telecommunications and broadcasting sectors, but states that the local content requirement will be the subject of a separate Protocol. Regional policy on content cannot be addressed before such a Protocol is prepared and adopted. In the circumstances, the mandate of the Regulatory Authority, proposed in this document, is limited to the regulation of the information and telecommunications (info-communications) industries but may include the allocation and management of radio frequency spectrum for broadcasting, as well.

A separate policy document to cover the aspect of content, as an integral part of the merging of broadcasting with telecommunications and information technology, will be developed in the future.

2.5.4. Mission of the Regulatory Authority

The Protocol states the objectives of the SADC region as:

- the provision of adequate high quality and cost-effective services that meet the diverse needs of customers in order to promote economic growth and social development.
- universal service with regard to telecommunications services and universal access with regard to advanced information services.

Based on this primary objective, the specific objectives of the Regulatory Authority will be to:

- regulate info-communications in the public interest;
- achieve progress towards the social goals of info-communications policy - the provision of universal service and universal access;
- ensure the provision of a wide range of info-communications services to stimulate and support economic growth;
- regulate the activities of all telecommunications operators;
- stimulate investment in the public telecommunications network;
- ensure a “level playing field” where competitive entry is permitted under the info-communications policy;
- protect the interests of info-communications users and consumers;
- stimulate innovation in the info-communications industry with a view to provide advanced information services;
- promote the development of human resources for the info-communications industry; and
- manage common national resources, such as the radio frequency spectrum and numbering plan effectively.

2.5.5. Functions and Issues of the Regulatory Authority.

The typical functions of an autonomous regulatory body include rule making and enforcement, licensing, and management of scarce resources. The regulatory body should perform these functions in a transparent manner encouraging public participation. In performing these functions, the following are some of the key regulatory issues:

- Universal Service/Access
- Service provision and user needs
- Investment
- Ownership and control
- Competition
- Standards
- Human Resources Development
- Research
- Interconnection
- Tariffing policies
- Consumer and user protection
- Access to services of International Bodies
- Liaison with Minister
- Reporting to Parliament
- Consultation and international participation
- Information collection and dissemination
- Competitive Safeguards

The above functions and issues are expressly stated or implied in the Protocol (especially article 10.8). They are expanded in a checklist in the boxes below:

Checklist of Functions and Issues of the Regulatory Authority

The establishment or strengthening of a Regulatory Authority is one of the actions proposed under policies for the SADC region.

REGULATORY FUNCTIONS

1. Rule-making and enforcement

- *Prior to making new rules or changing existing rules or regulations, a regulator may enter into a rule-making process. The typical first step in rule-making is a request or petition for rule-making that is made public, and all interested parties are asked to comment. After reviewing comments, the regulator can issue a proposed rule-making proposing specific rules and requesting public comment. Once the rule-making proceeding is completed, the regulator decides whether to amend its rules/regulations or to make a new rule.*
- *To enable the regulatory body to carry out enforcement functions, the regulator must be given investigative powers and the authority to impose appropriate sanctions and penalties for violations of the telecommunication laws and regulations. Such sanctions or penalties can include fines, or revocation of licences/authorisations, etc.*

2. Licensing

- *Undertake the licensing of all telecommunications service provider, according to such policy guidelines as may be set by the Minister.*
- *Licence radio spectrum users, except those operating under licences issued by the broadcasting regulatory agency, where such an agency exists.*
- *Undertake the review of existing licences, where applicable.*
- *Monitor and enforce compliance with the relevant legislation and regulations.*
- *Determine appropriate classes of licences.*
- *Hear complaints from users and service providers.*

3. Management of scarce resources

- *Management of scarce resources (e.g. frequencies, numbers, and orbital positions).*
- *Procedures for the allocation and use of scarce resources.*
- *The different types of limited resources require different management techniques for their efficient use:*
 - *Natural scarce resources, like frequencies or orbital positions, may require usage fees and global co-ordination. Most natural resources should be distributed among countries by*
 - *consensus based on existing and expected future usage;*
 - *contemporary scarce resources, like calling numbers and broadcasting sites, require national, regional and global co-ordination;*
 - *technology-dependent bottlenecks, like shortage of conduits and cable capacity, should be*

handled under the principle of open network obligation.

REGULATORY ISSUES

1. Universal Service/Access

- *Implement the universal service policy formulated by the Universal Service Agency.*
- *Administer the universal service fund..*

2. Service provision and user needs

- *Promote the provision of efficient, effective and affordable telecommunication service for all sectors of society and the development of public and private services which are responsive to the needs of users.*
- *Ensure that telecommunications services, viewed collectively, develop and promote a sound business environment in the interest of healthy competition, efficient services and modern facilities.*
- *Protect the integrity and viability of public telecommunications services.*
- *Develop regulations supporting the achievement of policy objectives.*

3. Investment

- *Encourage investment in, and promote the stability of, the industry.*

4. Ownership and control

- *Encourage ownership and control of telecommunications services by local people and by people from historically disadvantaged groups.*
- *Impose limitations on cross ownership of telecommunications services in accordance with the requirements of anti-trust legislation.*

5. Competition

- *Promote fair competition between telecommunications service providers where such competition is permitted, in conjunction with the country's competition policy.*
- *Allow service providers maximum freedom in the pursuit of their commercial objectives, while simultaneously taking into account of the telecommunications needs of the public and the policy objectives of government.*

6. Standards

- *Set national standards governing the provision of telecommunications services and ensure compliance with them.*
- *Ensure that the needs of disabled people are taken into account, particularly with regard to type-approval for customer premises equipment (CPE).*
- *Set applicable technical and quality standards in consultation with the telecommunications*
- *industry and consumer bodies.*
- *Undertake type-approval of customer premise equipment (CPE) and set the rules for their connection to the network.*

7. Human Resources Development

- *Promote the development of human resources in the telecommunications sector.*

8. Research

- *Promote and conduct research and development in info-communications, including regulation, policy and technology.*

9. Interconnection

- *Determine interconnection guidelines, facilitate interconnection negotiations and approve interconnection agreements (with modifications as necessary) in the public interest.*

10. Tariffs Policies

- *Regulate tariffs if and when required in the public interest.*

11. Consumer and user protection

- *Take responsibility for consumer protection with regard to telecommunications.*
- *Provide for the resolutions of complaints and disputes by consumers and users regarding telecommunications services.*
- *Mobilise sector players including consumers in matter related to telecommunications development*

12. Access to service of International Bodies

- *Promote access to service of and participation in the activities of regional and international inter-governmental bodies in the sector.*

13. Liaison with Minister

- *Advise the Minister with regard to any major issue affecting telecommunications when required or necessary.*

14. Parliament

- *Report to Parliament, through the Minister, on the performance of its functions.*

15. Consultation and international participation

- *Participate in international conferences, in consultation with the Ministry, on issues relating to telecommunications.*
- *Provide a forum for consultation with all interested parties.*

16. Information Collection

Collect, store and disseminate information and data on the sector to parties and organisations concerned by the development and distribution of info-communications services, and to other relevant parties.

2.5.6. Structure of Regulatory Authority

The size of the Authority in terms of its members and staff will depend on the size and complexity of the market. In principle, the regulatory organisation should be lean, comprising members and core staff to perform core functions.

It will be efficient and cost-effective to outsource as many non-core functions as possible. Both members and staff should be qualified in fields which are relevant in the regulation of the info-communications industry including economics, telecommunications or electronics, information technology, law and accounting. In view of the sensitive nature of their responsibilities, it is essential that members and staff are persons of high integrity and commitment to service.

Salary and terms of service, commensurate with responsibilities, will assist in attracting and retaining persons of the right calibre, as well as reducing temptation to corrupt practices which are inimical to fair and efficient regulation.

2.5.7 Composition of the Regulatory Authority

Two main designs of regulatory organisations exist around the world to-day. A single regulator in the form of a Director, Director General or Chairman has the advantage of a quick decision-making process in a fast changing industry. A collegial body, on the other hand, may generally be slower, but has the advantage of offering participatory approach and a sharing of responsibility.

All seven existing regulatory agencies in SADC, except one, are collegial. Also, the majority of the existing Regulatory Authorities in SADC Member States have part-time members, but there is also an example of mixture of one full-time member (the Chairman) and part-time members. A small collegial authority of between three and five full-time members would seem to be ideal. It has the following advantages:

- members concentrate on and master their responsibilities;
- it avoids conflict of interest more effectively than other mechanisms;
- selection and commitment is likely to be more serious for full-time members than for part-time members.

2.5.8. Selection Criteria

Members should be appointed on the basis of their competence and integrity rather than on political considerations, such as mere representation of interest groups. In addition to the professional qualifications referred to in paragraph 2.5.6, members should be free from disqualification relevant to appointments to high public office. A term of 5 years, with a mechanism for rotation of members to ensure continuity, would be desirable.

2.5.9. Appointment and Removal

A consultative process in the selection of members and the Chief Executive Officer (CEO) of the Regulatory Authority would ensure appointment of persons with the required attributes. The appointing authority would be the Head of State or the Sector Minister on the recommendation of some committee, such as a Select Parliamentary Committee or other appropriately constituted committee. Protection against arbitrary removal of any member of the Regulatory Authority is a crucial element of regulatory independence. It is proposed that

removal of a member should be by the appointing authority and for cause, such as misconduct or incapacity, on the recommendation of a judicial committee as is usually the case with the removal of an ombudsman, an electoral commissioner or a similar official. These procedures are necessary because, by nature, a Regulatory Authority is a quasi-judicial body.

2.5.10. Resources

The independence and effectiveness of the regulator in the market will depend largely on the financial and human resources available to the Authority.

International and regional experience suggests that there is a need to avoid making Regulatory Authority dependent on the regular budget of government and to draw upon the industry for the financing of regulatory functions. There are number of options to finance regulatory activities, ranging from fees on licences for access to limited resources - such as radio spectrum - through taxes on services, to a percentage on revenues of all operators in the market. International experience has shown that due to the dynamism of the industry, the Authority needs to collect and control its own financial resources. This would provide the Regulatory Authority the required flexibility to respond to the changing regulatory demands of the industry.

There are other options for funding the Regulatory Authority, for example:

- Through Government budget.
- Through Government budget for start-up funds.
- Supplementing the Regulatory Authority's own funding from the Government budget.

The independence and flexibility of the Regulatory Authority points to freedom for the Authority to determine level of funds to be raised for its operations and budget. However, the magnitude of the fees to be levied by the Authority for the purpose of its operations should be directly related to the costs of such operations.

2.5.11. Staff

As an autonomous body, the Authority should have the freedom to appoint, exercise discipline and remove staff as well as to determine their terms and conditions of service. The staff should be multidisciplinary. In addition to the professional qualifications referred to in paragraph 2.5.6, some of the staff should be skilled in human resources development and administration.

2.5.12. The Regulatory Process

Whilst the autonomy of the Regulatory Authority is essential to guarantee fairness in its decision making, yet, autonomy, independence, and other related concepts are fairly subjective and elusive notions and , therefore, contestable and questionable from various quarters of the industry at different points in time.

For this reason, and to avoid any doubt about the independence of the regulator, it becomes essential that the decision making process in the Regulatory Authority is transparent to all parties involved and affected by the ruling of the Authority.

Transparency can be achieved by incorporating, into the legislation, mechanism that would allow for the wide diffusion of proposed and forthcoming rulings. Public consultations,

opportunities for reviews, and other related processes, that open the regulatory process to interested parties and the public in general, reinforce the legitimacy of the regulator and, therefore, should be encouraged.

A fair and equitable ruling in the sector should allow for appeals from the decision of the Authority. Here, there is also a need to specify, in legislation, the mechanism and procedures required to appeal against the decisions of the agency and how they should be carried out. In view of the technical and legal nature of regulatory matters, appeals should be to a judicial tribunal rather than an administrative authority, such as the Minister. There is no appellate system for semi-judicial decisions in SADC countries that is separate from the court system.

Some regulatory matters, for example tariffs determination and/or regulation require quick decisions, which are not possible with the normal judicial system. In the circumstances it is proposed that appeals against the decisions of the Regulatory Authority, on tariffs and other time-sensitive matters, should be handled by a tribunal appointed by the head of a country's judiciary and presided over by a judge or a person qualified for appointment as a judge. The decisions of the tribunal should be final. The telecommunications legislation should stipulate procedures, including time limits for decisions, for such a tribunal. There should be a right of appeal against other decisions of the Regulatory Authority to a superior court e.g. High Court or Supreme Court.

Legislation should give the Regulatory Authority the flexibility to determine its agenda and to make rules for conducting its affairs, subject to the overriding requirement of transparency.

2.5.13 Enforcement

The Regulatory Authority should act only in accordance with the powers conferred on it, the functions and duties assigned to it by the relevant legislation and general guidelines published by the Minister.

It is proposed that the Regulatory Authority should have the power, where a telecommunication service provider or user of radio frequency spectrum contravenes the provisions of legislation or licence, to impose sanctions, including suitable fines. The Authority should also have necessary judicial powers of enforcement of its decisions. A member of the public who contravenes the provisions of the telecommunications legislation will be guilty of an offence and liable for an appropriate fine or other sanction by the Authority. Contravention of the telecommunications legislation by service providers or members of the public should also be subject to sanctions under general legislation provided that a person is not punished twice for the same offence.

2.5.14. Relationships between Regulatory Authority and others

Although independent, the Regulatory Authority will have relationships with other institutions and authorities and should be accountable for its actions in carrying out its responsibilities. The following relationships and modes of accountability are proposed.

2.5.14.1. With Ministry Responsible for Telecommunications

- The Minister is responsible for policy and overall administration of the telecommunications legislation.
- It is proposed that the Ministry be responsible for issuing guidelines on universal service/access.

- The Minister may determine the degree of liberalisation and in which market segments it will take place. The Minister should have the power to give to the Regulatory Authority general, but not specific guidelines on licensing. Such guidelines should be issued after public consultation and published in the official gazette. The regulator will determine the number of entrants and the related terms and conditions.

2.5.14.2. With Parliament

The Regulatory Authority should report to Parliament through the Minister. This should be done through the submission of an annual report on the activities of the Authority showing achievements in carrying out its mission.

2.5.14.3. With Courts and Tribunals

The Courts or special Tribunals can review disputed decisions of the Regulatory Authority.

2.5.14.4. With Auditors

The accounts of the Agency should be audited by a country's Auditor General or by an Auditor appointed by the Authority's members.

2.5.14.5. With Users and the General Public

The Authority is responsible for:

- consulting with users and the general public;
- the provision of information; and
- the investigation of complaints.

2.5.14.6. With Service Providers

The Authority is responsible for the provision of information and settlement of disputes and third party complaints.

2.6 ROLE OF INVESTORS AND OPERATORS

2.6.1 New Vision for the Future

In the past, government provided all resources. Financial resources for sector development, in particular, were obtained principally from multilateral lending or donor agencies as well as bilateral governmental or other government-sponsored sources. These sources have either dried up or are being drastically curtailed, and private and local and foreign sources are becoming more and more the norm. To get access to these resources and complement the little available public and own institutional resources, there needs to be major changes in the whole approach to resource mobilisation, utilisation and management. Still, government has a different but important role to play even in this new environment.

Government, acting through the Ministry responsible for telecommunications, has the key responsibility for providing a vision for the future of the info-communications sector. The Ministry should design explicitly a policy framework, for investment, competition and economic growth of the industry, which both public and private sectors can use as a reference for their own commercial decision-making. Additionally, the Ministry should devote a great share of its resources to produce long term sector strategies as well as timely and accurate

information and analysis which would be available to the public and private sectors alike, without discrimination, on a cost recovery basis.

2.6.2 Implementation of Structural Changes

In building the info-communications industry, along with the reconfiguration of Ministry and the Regulatory Authority, it is necessary to re-design the operating environment to ensure that infrastructure and services are actually delivered to users at affordable prices. As provided in the Protocol, structural changes have to be effected in phases.

Ideally, the structural changes of institutions, concerned by policy development and policy enforcement, would be in the following sequence:

- Establishing development strategy and creating an enabling policy environment.
- Translating policy into legislation.
- Establishing an Independent Regulator.

These institutions ensure the adequate build-up and management of the industry. They do so by focusing on the expansion of capacity for service provision. This goal will require that they undertake further operational restructuring in the following sequence:

- Incorporating the dominant state owned telecommunication enterprise (SOTE).
- Liberalising valued added and other non-basic services.
- Sale of Minority shares in the SOTE with exclusivity in fixed voice services for limited period of time.
- Sale of majority shares.
- Removal of exclusivity and opening all services to competition.
- Sale of all shares retaining only a golden share.

The actual sequence and the pace of change will depend on the circumstances of individual countries. As specified by the Protocol, individual countries or groups of countries may chose a faster pace (fast track) while others may adopt a slower pace (slow track). However, the changes will have to be well co-ordinated at regional level to ensure a reasonable pace of overall regional growth and competitiveness in the global market, a goal enunciated in the SADC Treaty

2.6.3 Restructuring of Dominant Operator

Some of the existing state owned telecommunications enterprises (SOTEs) are corporations established by special law (statutory corporations) or companies established under a combination of special law and company law. They constitute essentially of providers of basic telecommunication services as dominant operators in the sector. Such a corporation or company usually lacks flexibility to pursue development and has to accommodate privatisation through the sale of shares and related transactions.

The alternative is for governments to restructure the SOTE to enable it to operate in a competitive market economy. The restructuring of a SOTE should encompass full corporatisation, by bringing it fully under company law, followed by the sale of minority shares of the company. The Board should be given full authority to run the company including appointing top management. Management should be accountable through results. The aim of these processes is to give the SOTE sufficient management and financial autonomy in order to improve its overall performance.

It is further proposed that governments should gradually privatise the dominant state owned enterprise.

Various options are available for this kind of restructuring. They include:

- sale to a strategic equity partner or partners;
- a combination of sale of shares to a strategic equity partner and to the public; or
- sale of shares to the public only.

Eventually the governments should sell all the shares, retaining only a golden share, if desirable in order to have a say in major decisions. Each country has to determine the mode of privatisation best suited to its circumstances, such as need for market expansion and diversification, capital, foreign exchange, managerial and technical skills.

As shareholder, any government, through its Ministry, should stay out of the management of the SOTE, and should ensure management autonomy on agreed upon socio-economic strategic plans of the enterprise. If a Ministry requires the services of the SOTE, it should buy them at commercial prices.

2.6.4 Issue of Exclusivity and Competition

In the situation of shortages of capital, managerial expertise and lack of technology that exists in SADC, the involvement of a larger number of service providers may be an attractive option to consider. The benefits are the increase in financial and human resource capacity to provide a larger infrastructure in a shorter time frame. This option, however, raises issues like competition and exclusivity.

On one hand, it is widely recognised that competition helps attract investments through multiple service providers whose interaction in the market lowers prices, improves quality of service at least cost and fosters innovation. These are obvious key factors for the rapid diffusion of info-communications technologies and services. As a result, competition is accepted as one of the necessary conditions for leap-frogging to the global information society (GIS).

On the other hand, two imperatives must be satisfied. First, the industry must be made more attractive to investors. Second, some time could be required by the existing institutions (e.g. newly established regulators) and operators to adjust to new market conditions.

Accordingly, there is a need to follow a progressive approach in building the industry and a transition period may be required to allow the industry to face competitive challenges ahead. A limited period should be sufficient for government and regulatory institutions, as well as the SOTEs, to acquire capacity to operate in a largely liberalised global economy.

2.6.5 Privatisation and Competition Strategies

As prescribed in the Protocol, changes have to be effected in phases. Accordingly, below are proposals on the application of these strategies in the SADC region:

- Partial or total privatisation of the SOTE is to be undertaken by selling shares to a strategic investor.

- A limited period of exclusivity can be granted. This period can vary from country to country due to varying circumstances. However, in view of the impact of rapidly changing technology and the norm from experience elsewhere, an exclusivity period of up to 5 years is recommended.
- While a country may decide to decentralise or unbundle the basic public switched telephone network (PSTN) under the SOTE, vertically or horizontally on the basis of network components and network coverage, it is considered that it will be more attractive to retain the integrated nature of the SOTE network intact during negotiation on exclusivity. The public switched telephone network is considered to be an integrated part of long distance domestic transmission network, and the international switching and transmission centre for technical and commercial reasons.
- In return, the strategic equity partner should not only bring financial resources but also managerial, technological and human resource development.
- In addition, during a period of exclusivity, the strategic equity partner has the obligations to meet set targets in line with policy objectives, including info-communications service penetration; infrastructure modernisation and extension; technical improvement of the network; and universal service and universal access.
- Competition may nevertheless be allowed in networks and services other than the integrated PSTN, including:
 - Mobile cellular
 - Radio Paging
 - GMPCS
 - Data Communication, including Internet, EDI and e-mail.
 - Customer Premises Equipment importation, manufacture, distribution, installation and maintenance.
- In this case, the SOTE can also participate in the provision of these services, in its full capacity or through subsidiary companies, fully or jointly owned with other investors.
- After the period of exclusivity, a review should be carried out to consider the following options, among others:
 - Licensing more operators to provide switched voice services in competition over the whole country.
 - Licensing more operators to provide switched voice services in exclusive territories over the country.
- Stability and predictability of the policy and regulatory environment and decisions are critical to investors, especially private investors interested in long term investments. It is important for a government to transparently set and respect consistent policies and conditions for investment, trading and operations in the country for all businesses. The Ministry responsible for telecommunications and the Regulator have to devise fair and consistent policies in respect of investment and entry conditions specific to the sector and shall make them known to the public.
- In countries, where privatisation and/or competition have already been introduced, it is important to review their policies and regulatory frameworks. This review will provide the

necessary long- term stability, consistency and predictability that current and future investors need for their assurance and confidence on the viability of the telecommunications business in specific country and in the region. Furthermore, such a review is necessary in order to institute effective monitoring mechanisms for guarding against abuse of monopoly power.

- To achieve local and national participation as well as intra-regional investment and integration, SADC Member States may consider allocating some shares of the SOTEs in priority to local and SADC investors,. These have to be carried out transparently and on a non-discriminatory basis, with public and regional interest being key considerations.

2.6.6 Employees

In the process of corporatisation and privatisation, the rights of employees, including pension rights, should be protected. During privatisation a bloc of shares could be reserved for employees in order to foster employee commitment and morale. Employees and their unions must be consulted about changes that affect them and the industry. Special training and development programme must be negotiated and introduced to ensure the re-skilling of employees for the purpose of redeployment within the enterprise or industry. Where employees are in excess, redeployment within and outside the enterprise must be investigated and implemented over a period of time. Where retrenchment is unavoidable, it must be applied as a solution of last resort.

2.6.7 Change Management

It is essential for the success of the proposed changes that they are carried out smoothly and in a transparent manner. Government should ensure availability of the necessary information and resources for managing the change.

2.7 Role of Consumers and Users

Government should encourage the formation of consumer and user groups to give them the opportunity to participate in the development of telecommunications. The regulator should encourage the formal participation of such groups through the establishment of an advisory committee on consumer affairs.

2.8 Role of Labour

Labour is a key component in the transformation of the telecommunication sector and should be consulted continuously. Labour is central to the development of new skills for a new industry to gear SADC towards global competitiveness. This will require specialised knowledge in the areas of policy, regulation, new technologies and services, and business management.

PART 3

SOME POLICY AND REGULATORY PRINCIPLES

Some key principles underpin the design of policies for the provision of info-communications services crucial to the overall achievement of a universal service and universal access.

These principles are related to the following:

- Universal service and universal access.
- Tariffs.
- Interconnection.
- Frequency spectrum.
- Numbering plan.
- New and advanced services.
- Standards enforcement.
- Indigenous participation in development.
- Social obligation.
- Regional and international participation.

3.1 Universal Service and Universal Access

The provision of universal service/access is one of the most important objectives of telecommunications policy and legislation. The concept of universal service/access, its content and the implementing policy may vary depending on a country's specific needs. The concept and policy must be sufficiently flexible to adapt to the changing needs of the country concerned.

It is important for governments to play an active role to ensure that the provision of universal service/access is successful. However, it is also necessary for governments to examine how responsibilities can be appropriately allocated to telecommunications operators and local authorities, particularly in a competitive multi-operator environment.

Universal service entails the following:

- Assured access to all existing users.
- Provision of access to the national telephone network to all potential users.
- Provision of service on standard terms and conditions.
- Provision of service on affordable terms.

There are different approaches to financing universal service obligations, some of which are:

- A telecommunications operator must provide service to urban, rural and remote areas as a condition of the licence or specified in the performance contract.
- Service providers engaged in an interconnection agreement may be required to pay certain charges, with some or all of the charges being used to provide service to rural, remote and unprofitable areas.
- A telecommunications operator may have the choice of paying certain charges into a universal service fund or providing the service directly itself.

- Where the incumbent telecommunications operator cannot or does not want to provide service to rural or under-served areas, the opportunity will be given to other service providers to attain universal service/access goals.
- A transparent government subsidy financed from its tax revenues helps pay for service to under-served and high-cost areas, including rural and remote areas.

To take care of the universal service obligation in its specific environment, a country may assign the responsibility of designing related policies to a Universal Service Agency/Unit, established under the auspices of either the Ministry or the Regulator. The Agency/Unit may also be responsible for ensuring the implementation of approved policies.

To start, a Universal Service Fund may be set-up, through one or more of the above approaches, to finance the installation of services in areas where it may not be economical to do so. Policies that encourage operators to provide telecommunications in unprofitable areas can thereby be implemented by way of government incentives through the Agency/Unit/Fund.

3.2 Tariffs

Usually, operators should file tariffs for services that are regulated by the regulatory body. These tariffs should be published, thereby reducing the possibility of discrimination. The regulatory authority should intervene if an operator abuses its dominant position. To allow for a competitive regime, suitably re-balanced, cost-orientated tariffs are required.

To do so, the factors that have to be taken into consideration, to allow for fair competition in domestic, long-distance, and international traffic, include the following:

The award of specific service areas to local operators; application of adequate routing rules for transport of info-communications between different urban and rural areas; establishment of a reasonable national or international access charge (i.e. an amount that long-distance operators have to pay to the local operators to originate or terminate calls); and introduction of higher tariffs for local communications and of cost-orientated accounting rates, in the light of tariffs re-balancing.

Tariffs are among the key factors that influence competition and the rate of penetration of services and should be guided by the principle of affordability. This principle relates the cost of services to the purchasing power of users to allow the widespread diffusion of services. Tariffs are set differently under monopoly and competition market structures.

In the context of monopoly, a telecommunications enterprise designs its tariffs on the basis of its actual costs and users are price-takers. The Regulatory Authority has to intervene to ensure that monopoly pricing does not impose a limit on demand.

3.2.1 Tariff Regulation Schemes

The three popular tariff schemes applicable for tariff control are price caps, rate-of-return, and market forces.

- **Price-cap and Price-floor** is a scheme whereby a “cap or ceiling” as well as a “floor” are placed on the prices of a basket of services, with an annual inflation factor. This price-cap approach is based on the notion that, for the dominant operator, prices should increase at a rate equal to the general retail price index less an allowance for the expected productivity gain of the operator. Price cap is therefore designed not only to limit profit

to a reasonable level but also to encourage efficiency. It is applicable where a proper system of price index exists. Furthermore, a plan, to reduce price progressively in relation to a cost-reduction schedule, should be available.

- **Rate of return** follows the cost-based approach. To maintain a targeted return on investment, tariffs are adjusted on a cost-plus basis. The principle is to achieve a predetermined margin of profit by adding a certain percentage of mark-up to average variable costs and overhead expenses. The rate of return method allows freedom to enterprise to adjust their prices according to costs. It is suitable in a competitive market due to the fact that market forces press enterprises to reduce their costs.
- **Market forces** apply in a competitive market and there is no one dominant operator. In this case, competition is working effectively and market forces determine tariffs. The criteria for choosing the principle for tariffs regulation shall, under the current circumstances, be first to achieve a high telephone density; second, to encourage the introduction of advanced info-communications services; and finally, to provide a world-class quality of service.

3.2.2 Tariffs re-balancing

Re-balancing of tariffs is a process whereby the charges for local calls are adjusted to reduce the charges incurred by long distance callers. Similarly the reduction of international call charges is necessary due to the international trend towards application of cost-based tariffs, and the need for SADC operators to become competitive.

The choice of the effective tariffs regulation system must however be weighed against the following requirements:

- The urgency of tariffs re-balancing, stemming from the imminent reduction of international tariffs.
- The importance of assuring investors of a reasonable return on investment to raise the attractiveness of the SADC market.
- The necessity to have affordable tariffs to increase demand.
- The improvement of efficiency of operating units to achieve cost-reduction.
- The elimination of cross-subsidisation.

3.3 Interconnection

Interconnection specifies the transmission links that must be established between all public operators, including providers of value-added services, having an installation within a national boundary to allow for inter-operability and inter-communications.

Interconnection stems from the open network access principle, which determines that any network should be fully accessible to any other operator in a non-discriminatory manner, while protecting the privacy of subscribers and databases.

For a competitive industry to work effectively, sound interconnection agreements are essential. Telephone users need full interconnection between competing networks for access to all other users. New entrants cannot offer a viable service without interconnection and without transiting through the network of the dominant operator/s.

Interconnection entails the existence of physical and working links between:

- international gateways within and outside national boundaries;
- all domestic public operators with the international gateway;
- public operators, including public-switched telephone network, public data network, Internet network, public data-bases, call-centres, directory-information centres, emergency services, personal communications networks, fixed and mobile satellite services, satellite earth stations, and submarine cable stations; and
- other operators having the status of public operators.

Interconnection should facilitate the inter-operability of new services, including carrier pre-selection and number portability. Accordingly, links will perform signalling and control, using either analogue or digital technology, including common channel signalling number 7, and will be used as a conveyor of information between the interconnected public networks. In the event of non-uniform number length, the operators involved in an interconnection agreement shall use an adequate transformation interface and the cost shall be borne equally by the operators.

Moreover, an operator has to be compensated for the traffic that it carries for another operator. Where additional equipment capacity is required, the carrier operator will use the long run incremental cost principle to calculate the applicable tariffs. The applicable tariffs for interconnection should not be worse than those applicable to own subscribers to promote expansion of infrastructure.

The level and structure of interconnection tariffs will, in fact, be major determinants of how efficiently the industry uses scarce network resources, how well end-users prices reflect underlying costs, how rapidly incumbent operators improve their efficiency and how responsive the industry is to changing market needs.

The principles guiding interconnections are the following:

- Interconnection between international gateways, both within and outside national boundaries, is determined by bi-lateral accounting rates agreement, after authorisation received from the Regulatory Authority. In the event where two international gateways are established in a country, the two operators may have some transit or alternative routing agreement.
- The operators should specify their short term and long term interfacing requirements, limited to 3 years, based on their traffic forecast together with the desirable grade of service.
- Agreements shall be designed on the basis of transparency, objectivity and non-discriminatory principles.
- Agreement should be bilateral and the Regulator shall intervene for resolution only in the event of dispute.
- Agreement shall be legally binding on the involved operators.

3.4 Frequency Spectrum

Radio waves constitute one of mainstay of info-communications and underpin the existence of a vast array of radio-communications networks and services. Useful radio waves extend from frequency limit of 3 kHz up to 300 GHz, called the frequency spectrum. Radio spectrum is divided into eight bands, which accommodate all types of radio transmission: maritime communications, short-wave radio, sound and television broadcasting, microwave communications, satellite communications and radar.

At national level, frequency spectrum has to be shared among the users of radio-based equipment, divided into radio and television; fixed and mobile telecommunications; maritime; security and miscellaneous and it is often necessary to match demand for spectrum with availability. It entails, therefore, a distribution of a limited resource, raising the importance of allocation and management of frequency spectrum as a key national activity.

Frequency spectrum management consists of the following broad functions:

- Assignment of specific frequencies or groups of frequencies.
- The determination and collection of fees.
- Allocation of frequency bands.
- Monitoring and co-ordination of the use of spectrum.

Frequency spectrum is one continuous bloc with a number of sub-blocs, used by different categories of institutions. This single bloc can be more effectively managed by a single institution as it promotes accountability, eliminates any source of confusion and provides for proper records to be maintained. It is in harmony with the establishment of a single info-communications industry resulting from the convergence between telecommunications, information technology and broadcasting.

Frequency spectrum is a key factor in the development of info-communications infrastructure in a country. The increasing application of radio-based technologies to provide access to basic telecommunications services, from fixed and mobile cellular technologies and from the planned satellite-based GMPSC technologies, places focus on spectrum management function.

Consequently, frequency spectrum has to be allocated and assigned by the institution that delivers license to conduct business of info-communications services. In many countries where a Telecommunications Regulatory Authority exists, this institution has been assigned the responsibility to manage the whole frequency spectrum. This is the best possible arrangement and it must continue.

Frequency Spectrum is tied to licensing given that the license-holder can put his license into application only if he obtains the required frequency band and bandwidth. Accordingly, the procedure for allocating frequency spectrum shall follow the licensing procedure, as follows.

- For a new applicant, the tendering process or negotiation process may be followed. For the incumbent operator, the negotiation process will apply.
- In the case of tendering, it entails that the Telecommunications Regulatory Authority shall initiate processes to select operators to build infrastructure in the country. Licenses will be awarded inclusive of frequency spectrum, for the purpose of development, under conditions specified in the tendering documents.
- In the case of negotiation, an operator may seek a license to conduct a development project, which was not identified by the Telecommunications Regulatory Authority. A license, inclusive of frequency spectrum, may be awarded if the conditions of the Authority are fulfilled.
- The license that is eventually awarded should make provision for the commitment for the award of additional bandwidth that the licensee may require during the life of the licence.

3.5 Numbering Plan

The policy on numbers is limited to telephone numbers and to the management of area and exchange codes only. In the monopolistic environment, it was adequate for the incumbent operator to manage the numbering scheme. However, with the introduction of a wider range of info-communications services and of competition, the numbering scheme has become more complex. This activity has to be separated from the incumbent operator and transferred to the Telecommunications Regulatory Authority.

This entails that the Authority has the responsibility of ensuring the design and existence of a uniform numbering scheme, incorporating all current and future services, in line with the forecast needs of the country. The existence of a uniform numbering scheme reduces the complexity associated with interfacing and interconnection, and improves the quality of traffic flow in the national network.

The following principles will be followed:

- The Authority will have to maintain co-ordination with the ITU for the allocation of country codes and numbering schemes of new systems and services.
- The area exchange and communications systems access codes will be under the responsibility of the Authority
- The individual operators will manage their own directory number systems.

3.6 New and Advanced Services

Monitor and facilitate the introduction of new advanced services like Global Mobile Personal Communications by Satellite (GMPCS), Very Small Aperture Terminal (VSAT), Internet etc. at national and regional levels in a way that enhances policy objectives.

3.7 Standards Enforcement

The Regulator, in consultation with the industry and users, has to:

- set national standards, when relevant, governing the provision of telecommunications services and ensure compliance with them;
- undertake type-approval of customer premise equipment (CPE) and set the rules for their connection to the network;
- ensure that the needs of disabled people are taken into account, particularly with regard to type-approval for customer premises equipment (CPE); and
- set applicable technical and quality standards in consultation with the telecommunications industry and consumer bodies.

3.8 Indigenous Participation in Development

In developing the info-communications industry, the long-term success will depend on the participation of investors, managers and workers, belonging to the country and region. It is, accordingly, necessary to plan, from the outset, the involvement of indigenous people in the

development strategy of the industry. This goal can be achieved through designing adequate schemes to ensure the mobilisation of local investment, the development of entrepreneurs, and the employment of local people as managers and operatives.

The guiding principles are the following:

- Promote the development of human resources in the info-communications industry.
- Encourage technological transfer.
- Conduct research and development in info-communications policy, regulation, technology and services.
- Develop local investment and business management skills.
- Encourage and invest in local manufacturing schemes.

3.9 Social Obligations

Social obligations for all operators may include, inter alia, universal service contributions, human resource development, local ownership and participation.

3.10 Consultation and International Participation

Government and Regulatory Authority should:

- participate effectively in international conferences, in consultation with other SADC members, on issues relating to telecommunications;
- provide a forum for consultation with all stakeholders at national and regional levels; and
- mobilise and sensitise stakeholders to participate fully in international fora.

Glossary of terms

Basic telephone service

The provision of domestic or international telecommunications service over the public switched telephone network.

CEO

Chief Executive Officer

Company or Corporation

An enterprise having a legal persona and having the autonomy necessary to: make investment and divestment decisions, enter into joint ventures, create subsidiaries, issue stock and bonds, and make other business decisions.

A Corporation, established under special legislation (Statutory Corporation), might be given all these powers. However, they are more likely to be fully realised in a corporation or company established under company law.

Core functions

Tasks of a Regulatory Authority that must be undertaken in house. For example, issuing notices, attending to inquiries, settling disputes, preparing briefs for members of the Authority, initiating outsourcing actions and co-ordinating outsourced activities.

Core staff

The nucleus of skilled employees of a Regulatory Authority necessary for performing core functions.

Corporatisation

It refers to the transformation of a state owned telecommunications enterprise (SOTE) into a business structure, usually by converting it into a legal entity that has all of the freedom of action of a corporation established under company law.

Cross-subsidisation

The practice of using surplus revenues generated from one product or service to support another service priced at less than full compensation rates.

Customer premises equipment or CPE includes terminal equipment

Equipment employed on the premises of a customer of a public telecommunications service or private telecommunications to originate, route, or terminate telecommunications. CPE includes telephone handsets (whether for wireless or wireline communications), fax machines, computer modems and associated hardware and wiring internal to the customer's premises (property on which the customer has installed the CPE).

Data communications

Digital transmission of information usually between computers.

Dominant operator

A regulatory classification of a telecommunications operator that has the largest market share in a given market segment or that is otherwise able to exercise market power in the same or other market segments.

Economic distortion

Occurs when government interferes in the marketplace in a manner, which leads supplier of goods or services to price them either above or below the actual economic costs of producing them.

EDI or Electronic Data Interchange

The use of telecommunications and information processing to conduct business transactions, often in an integrated network combining different media, such as voice, text and data processing.

Electronic messaging

The creation, transfer, storage, and retrieval of text, graphics, images, voice, or messages of any nature entirely by electronic means. Messaging implies retrieval at the recipient's discretion. Facilities are generally provided for filing, redirecting, and replying to messages received.

GIS or Global Information Society

A society that is both technology and knowledge-orientated. The constituents of the society, namely students, researchers, developers, producers and users are dependent on information, as a key resource, to pursue their activities.

GMPCS or Global Mobile Personal Communications by Satellite

Geo-stationary or non-geostationary satellite technology possessing the capability to offer telecommunications services directly through a mobile handset to a user.

GNP or Gross National Product

The total value of all final goods and services produced in the economy during a specific period of time, usually a year.

Golden Share

It is an entitlement, which confers on a government a special voting right (the control vote), which would be required for certain corporate actions of a privatised enterprise. These include, for example, increasing or decreasing the enterprise's authorised capital stock; establishing the enterprise's dividend policy; selling all or a substantial portion of the enterprise's assets; or intervening in other major policy decisions concerning the affairs of the enterprise if, exceptional, predetermined circumstances occur, especially those affecting

the attainment of specific defined goals. The details and terms of the “Golden Share” would be written into the privatisation agreement.

Incumbent

The existing operator in a market which is opened to competition.

Incumbent national operator or incumbent

The national telecommunications enterprise.

INTELSAT

International Telecommunication Satellite Organisation

Infrastructure or Network

An integrated system of facilities, which comprise the facilities, used to provide one or more info-communications services.

Interconnection - Technical, organisational and financial standards, which allow the interconnection of two or more distinct networks, for instance the cellular radio network and the fixed network within a country.

ITU - International Telecommunication Union

Level playing field – A market condition where new market entrants and existing service providers operate with equal opportunities and rights as the incumbent national operator.

Liberalisation (and Deregulation) - refers to the relaxation by government of formerly rigid or constraining degrees of economic regulation. Thereby, greater freedom is offered to market entry, providing operators with greater flexibility to invest, alter operations and services, and fix and negotiate tariffs. Liberalisation does not mean the absence of regulations but a new set of regulations able to bring about the intended relaxation.

Licence - An authorisation granted by a regulatory authority for the provision of telecommunications services or for the use of the radio frequency spectrum.

Licensing - An administrative procedure for selecting operators and awarding authorisations for the operation of particular telecommunication services, for instance GMPCS, cellular telephone service or data service.

Member - refers to a person, belonging to a group of persons, to whom a mandate for deciding on the policy of a Regulatory Authority is entrusted. Where the regulatory institution is a commission, such persons are called Commissioners or just “members”. In other instances, governing bodies such as Boards or Councils are established in the Regulatory Authorities, in which case the members are referred to as Board Members or Councillors, as appropriate.

Minister or Ministry - The Minister or Ministry responsible for telecommunications matters within the Government

Mobile Cellular Service - A communications service providing voice or data to mobile users. The service area is divided into cells each served by a transmitter. The cells are connected to a mobile switching exchange which is connected to the worldwide telephone network..

Monitoring - refers to the function of comprehensive and continuous review of the adequacy of info-communications networks, facilities and services and the reasonableness of charges imposed for services. This is generally the responsibility of a regulatory authority, but is often assisted by info-communications providers and/or user organisations.

Operator - A person that operates telecommunications facilities.

Outsourcing - Awarding a contract to an external organisation or person to provide a particular service related to the exercise of regulatory functions, for example preparing licences and evaluating licence bids etc.

Price cap regulation - A method of regulating prices whereby a “ceiling” is placed on the price of a service or on the prices of a basket of services, with annual increase tied to an inflation factor and a productivity index.

Privatisation - The partial or full transfer of development responsibilities, facilities (including asset acquisition and control) and/or operating functions from SOTEs to private sector developers, investors, operators and organisations. Government, as owner and controller of assets of the SOTE concerned, gives up some or all of its ownership and control, with the expectation that there will be increased efficiency and effectiveness of the privatised enterprise. These progress, in turn, are expected to contribute to higher national economic growth and employment, and increased tax revenues.

Public switched telecommunications network (PSTN) - A fully interconnected and integrated system of telecommunications consisting of various means of transmission and switching, utilised to provide basic telephone services to the general public.

Public telecommunications services - Telecommunications services provided to the general public or to a class of persons so as to be generally available.

Radio frequencies or radio frequency spectrum - Frequencies or spectrum of naturally propagated electromagnetic waves in the range of 3 kilohertz to 300 gigahertz which are utilised for transmission and reception of telecommunications signal.

Radio paging - A service that provides selective calling from any telephone through a base station to one or a predetermined group or radio receivers, which emit an audible, visual, or tactile alert and sometimes then record a numeric, alphanumeric, or even a short verbal message.

Rate of return regulation - Regulation of prices that telecommunications operators charge, based on a fixed rate of return on the operators’ investment.

Regulation - The process of ensuring that public utilities, such as telecommunications operators, operate in accordance within legal rules. These rules may govern the offering of service by an operator and include practices, classifications, and definitions.

Regulatory Authority - An agency empowered to regulate and monitor the activities of telecommunications operators or any other info-communications providers in the public interest.

Restructuring

The sum of all actively and consciously taken organisational changes, to transform the relationship within an enterprise as well as between it and its environment, in order to give it a new focus, character, scope, goals and purpose for its existence. In an economic sense, restructuring means transforming the enterprise concerned to render it more effective, efficient and competitive in providing services, usually by changing the way it is owned, controlled and/or operated. That is, bringing about a condition of economic viability to the enterprise.

SADC

Southern Africa Development Community

State Owned Telecommunications Enterprise (SOTE)

A telecommunications service provider that is either a government department or a separate entity in which a government owns the majority shares. It is usually, not necessarily, the incumbent national telecommunications operator. For example, subsidiary companies, of national incumbent operators, fall under this definitions.

Strategic Policy Unit

A unit or department proposed to be established in the Ministry responsible for telecommunications to undertake policy analysis, development and monitoring.

Telecommunications or Info-communications

Any domestic or international transmission of information by wire, radio waves, optical media or other electromagnetic systems, between or among points of the user's choosing.

Teleconferencing

Telephone conversation between three or more parties.

Transparency

Requires that a government and a regulatory authority must conduct business in an open manner and either be accountable ultimately to the public through an appropriate representation (e.g. Parliament) or provide information on their activities together with reasons for decisions to an appropriate body.

Type approval

An administrative procedure of technical tests and/or vetting applied to items of telecommunication equipment before they can be sold or interconnected with the public network.

Universal access

A policy of government to make telecommunications services available, at affordable prices, to as many people as possible through common points or end-user facilities such as libraries, schools, health-centres, community centres, public call offices and pay-phones. This policy also applies to advanced information services, for instance the provision of Internet services and applications such as tele-education, tele-medicine and electronic commerce.

Universal service

A policy of government to make telecommunications services, including advanced telecommunications services, available throughout the country at affordable prices so that they are either available or easily accessible to anyone whenever they are needed, regardless of geographical or physical locations, with due regard to people with special needs.

Universal Service Agency (USA)

An institution recommended to be established under either the Ministry or the Regulatory Authority to design universal service strategies and policies and monitor their implementation.

Universal Service Fund

A fund into which contributions from operators and/or other sources are paid for the purpose of providing basic and advanced telecommunications services to underserved areas, communities or individuals who cannot afford such services on their own, in the pursuit of universal service/access.

Value-added services

Means (i) the manipulation of the format, content, code, protocol, or other aspect of information transmitted via telecommunications by a customer (ii) the provision of information to a customer, including the restructuring of information transmitted by a customer or (iii) the offering of stored information for interaction by a customer.