



**Ministry of Works, Transport and
Communications**

**TELECOMMUNICATIONS POLICY
FOR
BOTSWANA**

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TABLE OF CONTENTS

- 1. EXECUTIVE SUMMARY**
- 2. RECOMMENDATIONS**
- 3. BACKGROUND**
- 4. INTRODUCTION**
- 5. GOALS**
- 6. PRINCIPLES**
 - 6.1 Competition**
 - 6.2 The private sector**
 - 6.3 Transparency**
 - 6.4 Regulation**
 - 6.5 Consumer protection**
- 7. ROLES AND FUNCTIONS**
- 8. POLICY MEASURES**
 - 8.1 Abolition of the monopoly**
 - 8.2 Intervention by Government**
 - 8.3 Controlled liberalisation**
 - 8.3.1 Terminal equipment**
 - 8.3.2 Facsimile services**
 - 8.3.3 Public telephones**
 - 8.3.4 Data services**
 - 8.3.5 Electronic mail services**
 - 8.3.6 Cellular telephone services**
 - 8.3.7 Local network services**
 - 8.3.8 Paging services**
 - 8.3.9 National services**
 - 8.3.10 International services**
 - 8.4 BTC becomes a common carrier**
 - 8.5 Separation of BTC's services**
 - 8.6 Mandatory and mutual interconnection**
 - 8.7 Establishment of a Regulatory Authority**
 - 8.8 The legal framework**
 - 8.9 Prices and tariffs**
 - 8.10 Mandatory licensing System**
- 9. Time Frame**

1.EXECUTIVE SUMMARY

The telecommunications sector in Botswana is characterised by a growing unsatisfied demand for telecommunications services in both urban and rural areas and among businesses as well as households. In order to satisfy the demand and exploit the opportunities of the industry to contribute to social and economic development, far reaching structural changes are necessary. The policies outlined in this paper are built around the three national goals of universal service, efficient services and regional balance. Attainment of these long term goals is dependent on a clear division of roles and functions of the actors in the industry and will need clear and pronounced principles to guide the restructuring process.

The principles on which the liberalisation programme is based can be summarized as follows:

- competition as a means to increase efficiency and diversify supply of services
- participation of the private sector in development of the industry to increase resources and supply
- transparency in decision making to promote confidence regulation of supply conditions to promote competition and attainment of national goals
- participation of users to ensure sustained development and protection of consumers from uneven competition.

In a liberalised telecommunications industry, a new structure could be envisaged as follows:

- consumers will have a strong position and be the focus of the market actors
- competing operators provide increased and diversified networks and services
- Government assumes the policy function and establishes the legal framework

MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

- a Regulatory Authority implements the policy and acts as the referee in the market.

Restructuring of the telecommunications industry along the lines above requires a set of policy measures which could be summarised as follows:

- regulatory functions are separated from operational and policy making functions
- the BTC Act of 1980 is amended to allow for competition and a new telecommunications Act which among others establishes a Regulatory Authority is enacted
- measures to complement the market forces are introduced e.g. licence conditions and intervention by Government
- liberalisation of the industry goes hand in hand with development of the regulatory capacity.

2. RECOMMENDATIONS

A strong and clear telecommunications policy needs to be adopted to lay the foundation stone for appropriate legislation and associated regulations, and for a sound and independent regulatory authority to ensure a level playing field in the provision of telecommunications services in a competitive environment. To achieve that, the following recommendation are made:

MARKET STRUCTURES

- M. 1 Competition is introduced in the telecommunications industry.
- M.2 BTC will compete on equal terms in competitive market segments.
- M.3 BTC is contracted to operate and maintain the national network.
- M.4 BTC's competitive business is carried out separately from other activities.
- M.5 BTC's non-competitive operations are regulated in a performance contract.
- M.6 A mandatory and mutual interconnection obligation is introduced.

REGULATION

- R.1 Regulatory functions are separated from operational and policy making functions.
- R.2 A Regulatory Authority is established.
- R.3 The Regulatory authority is established under the Ministry of Works, Transport and Communications but with its own Board of Directors.
- R.4 The Regulatory Authority is empowered to issue regulations and licences and to settle disputes.
- R.5 Prices and tariffs are regulated for national long-distance services, cellular telephone services and local network services.

LEGISLATION

- L. 1 The Botswana Telecommunications Corporation Act of 1980 is amended to abolish BTC's monopoly position and functions to issue licences.
- L.2 A new Botswana Telecommunications Act which establishes and empowers the Regulatory Authority is enacted.
- L.3 A mandatory licensing system for operations of networks and

MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

services is introduced.

L.4 Licences are limited in time and subject to conditions stipulated by the Regulatory Authority.

L.5 The Regulatory Authority may issue provisions for selection of licence applications

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3. BACKGROUND

In 1992 the following Presidential Directives were issued by Cabinet:

CAB. MEMO/117 SWC 13/30

Competition in the provision of Telecommunications.

CAB. MEMO/98 SWC 13/30

An Appropriate Ownership for Mobile Telephones in Botswana.

In implementation of the above directives, the Ministry of Works, Transport and Communications approached some experienced telecommunications authorities and consultants to consider, examine and advise on the following issues related to the restructuring and involvement of the private sector in the provision of telecommunications services:

- i) Formulation of appropriate telecommunication policy.
- ii) Drafting of appropriate telecommunication legislation.
- iii) Establishment of a telecommunications Regulatory Authority.
- iv) Interconnection and equal access policy for providers of value added network services (VANS) and Botswana Telecommunications Corporation(BTC).
- v) Interconnection charges and tariffs for use of BTC infrastructure and services by providers of VANS.

Considering the complex nature of the assignment, and recognizing the unavailability of in-house expertise, a consultancy contract was awarded to a consortium consisting of Swedtel and ISO-Swedish Management Group in October 1994.

A Reference Group was constituted to initially evaluate the consultancy proposals and then to direct and oversee the activities of the Consultants throughout the duration of the study. The Reference Group, under the Chairmanship of the Ministry of Works, Transport and Communications, comprises members from the Ministry of Finance and Development Planning, the Ministry of Commerce and Industry, Attorney Generals Chambers, the Directorate of Public Service Management and Botswana Telecommunications Corporation.

MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

Because of the far reaching implications of restructuring an industry such as telecommunications, extensive consultations were carried out country-wide with relevant bodies and authorities. During the first half of 1995 the Consultant, accompanied by officials of the Ministry of Works, Transport and Communications, visited district and urban headquarters to conduct such consultations. Counsellors, District and Council Administrations, Village Development Committees (VDCs) and the business communities were specifically targeted.

4. INTRODUCTION

The information and communication revolution sweeping the world has brought new meaning to the concept of telecommunications. New technologies have drastically lowered the cost of communications equipment and erased the previous boundaries between voice telephony, radio communication, data- and video transmission and broadcasting. The telecommunications industry has over the past decade seen many new actors in the market and state owned telecommunications monopolies are no longer regarded as the only means of providing essential telecommunications services to society.

In order to exploit the economic potential of the new technologies and not be left behind in the information race, countries world wide have begun to reassess the structure of their telecommunications industry.

The aims, positions and measures outlined in this paper are intended to establish a balanced and realistic policy framework for the restructuring of the telecommunications sector in Botswana in order to meet the challenges and opportunities of the new global information society.

The policy will lay the foundation for an accelerated expansion of services and networks to the benefit of users in the whole country. It is further likely to increase customer focus of the operators, improve services and lead to lower prices. It will diversify the supply of basic services and promote introduction of new technologies e.g. radio technologies as an alternative to wired local networks.

5. GOALS

The telecommunications industry has an important role to play in attainment of Botswana's development goals. In order to link development of the telecommunications industry with Government's overall development policies, three interrelated objectives for the sector have been identified. These are:

UNIVERSAL SERVICE

Access to basic telecommunication services e.g. basic telephony, has been recognised in many countries as a citizen right, comparable with the right to basic education and primary health care. In Botswana, with 4.1 telephone lines per 100 inhabitants, there is still a long way to go in order to achieve universal services i.e. a telephone in every household wanting the service, at an affordable price. Expansion of networks and services should therefore be the primary goal of the telecommunications industry. By making universal services a primary goal, actors in the industry would be made aware of their expected responsibilities in the development of the sector.

EFFICIENT SERVICES

The former and present driving forces of economic growth are weakening and need to be supplemented and replaced by new and dynamic ones. The need for development and diversification of the economy has been stated by Government as a national goal. Whatever options and directions are chosen, it is evident that they will be dependent on a modern and efficient telecommunication infrastructure and services. The telecommunications policy should aim to promote a broad, reliable and efficient supply of telecommunications services in the country to international standards and at the lowest possible cost to consumers and to the national economy.

REGIONAL BALANCE

Economic development is taking place unevenly in different regions of the country and between rural and urban areas. This is a natural phenomenon in all economies, in developed as well as in developing countries. Traditionally, the State has intervened to counterbalance the gap created by market forces. In Botswana, with the majority of the population living in rural areas, an important challenge for Government is to integrate these people and areas into the economic and social development of the nation. The relevance of telecommunications in this process should be recognised.

6. PRINCIPLES TO GUIDE THE RESCRUTURING PROCESS

The present structure of the telecommunications industry is characterised by monopoly provision of services by a state owned corporation. Although a common structure in many countries, this model has been less successful in satisfying the needs for efficient telecommunication services in Botswana in the past, and it is even more unlikely to achieve the stipulated goals for the future. BTC's financial and human resource constraints have created an imbalance in supply and demand of services which might have a negative impact on Botswana's economic and social development. Thus, it is necessary to add resources to the industry to exploit the potential of telecommunications as a means for national development. The private sector should be promoted to supply these additional resources.

The underlying philosophy for transformation of the industry is to give the market forces a chance to determine supply and demand in a regulated environment.

6.1 COMPETITION IS INTRODUCED IN THE INDUSTRY AND THE MONOPOLY IN PROVISION OF TELECOMMUNICATIONS SERVICES IS ABOLISHED.

Justification. Considering the huge and growing demand for telecommunication services it cannot be expected of one operator to satisfy the demand for an increasing range of telecommunication products and services in the industry.

Implications. Competition encourages service improvements, innovation and efficiency and it will also accelerate the speed of market coverage of telephony. However, competition may be a less effective instrument for rapid expansion of the network in rural areas. Given the prevailing situation, with massive investments needed to meet the unsatisfied demand, market forces alone will not develop the industry in a direction satisfactory to Government. Although new entrants will increase the capacity of the industry, investments are likely to concentrate in the most profitable areas where the rate of return on investments is highest. Competition will also decrease the margins of service providers and reduce the possibility of cross-subsidization. In order to secure a balanced

expansion of the network and meet the demand for services in both urban and rural areas, the market forces need to be supplemented. License conditions for penetration and social obligations, as well as special obligations for BTC to continue expansion of the national network, need to be introduced.

To what degree competition actually will take place in a liberalised market will depend on the existence or expectation of profitable market conditions which will vary according to different market segments of the industry. Policy measures to encourage competition might subsequently be necessary.

6.2 PRIVATE INTERESTS ARE ENCOURAGED TO ASSUME GREATER RESPONSIBILITY FOR DEVELOPMENT OF THE INDUSTRY.

Justification. The private sector will provide much needed business expertise, know-how, entrepreneurship and additional funding to the industry.

Implications. Barriers to entry into the telecommunications industry have historically been high mainly due to legal obstacles and high initial investment costs. The fact that the industry in Botswana is dominated by a statutory monopolist, and thus a closed market with little outside knowledge and know-how, will make it difficult for new entrants to gain ground in a liberalised market. Recognising the often still dominant role of the previous monopolist once the market is liberalised, many countries have adopted measures to promote competition by making it easier for new players to operate than for the incumbent operator.

In order to encourage new entrants and private investments into the market, the market will be liberalized in such market segments as would allow an expansion of the supply of telecommunications services and an improved utilisation of the present telecommunications network at the same time as being commercially attractive. BTC will be encouraged to form partnerships in such markets to have access to additional business expertise and know-how. On the other hand, provisions will be made in the proposed new legislation which would prevent BTC to abuse its present dominant position in the market. New entrants into the market will also enjoy such tax advantages and incentive packages as would normally apply to other industrial investors in Botswana.

Participation of citizen owned companies and individual citizens could also be promoted by imposing limits to foreign equity in different market segments and obligations in areas of employment of Botswana.

6.3 A TELECOMMUNICATIONS INDUSTRY CHARACTERISED BY TRANSPARENCY IN DECISION MAKING AND DEVELOPMENT.

Justification. Transparency will promote confidence in potential investors and is a prerequisite for private sector participation in the industry.

Implications. The ability of regulations to serve the public interest depends on the way decisions are made. Decisions made behind closed doors, without public input and which are not published will not create the necessary environment for a successful restructuring of the industry. A transparent regulatory process is desirable not only because it is likely to enhance the regulator's autonomy and effectiveness, but also because it makes good business sense. Where the rules of the game are unknown or uncertain, new investments will be deterred. Unless new market entrants are assured that they will be treated fairly vis-a-vis other providers and that there are transparent, established procedures, investors will be reluctant to invest in the industry.

A fair and transparent regulatory regime where users, operators and other interested parties are able to participate will enhance a sound development of the industry.

6.4 PROMOTION OF A CONTROLLED DEVELOPMENT OF THE INDUSTRY BY REGULATING SUPPLY CONDITIONS.

Justification. The fundamental purpose of telecommunication industry regulation is to optimize sector performance by creating an environment which is conducive to long term investment and by enforcing effective measures to prevent exploitation. When competition is introduced it is also necessary to create a "level playing field" and have a referee in the market

Implications. Telecommunications regulation is a complex and demanding task even where competition already exists and resources are plentiful. In Botswana, where the monopoly position of the government-owned operator is well entrenched and where skilled human resources are in short supply, the task may be daunting. Not only must the Regulatory Authority cope with the task to physically establish the organisation, but also within a short period after its establishment address a host of critical issues from licensing to pricing, interconnection and competition policies. It is envisaged that technical and financial support for development of the regulatory capacity and necessary human resources will be needed for a number of years.

Given the fact that data available for the Regulatory Authority for its decision making, at least in the beginning, is mainly available from BTC or the Ministry, it is important that the Authority demonstrates its independence by developing its own information channels as quickly as possible.

To achieve desired development of the industry and enable the Regulatory Authority to carry out its functions, it is imperative that the Authority's legal mandate and its routine operations are defined in a manner which separates it from direct day to-day interference from either the Ministry or the dominant operator.

An independent and well functioning Regulatory Authority has an important role to play in pursuit of the national goals.

6.5 PROMOTION OF USERS' INFLUENCE IN DEVELOPMENT OF THE INDUSTRY.

Justification. Users participation in shaping and development of the telecommunication sector will ensure sustained development and protect

customers from exploitation, too rapid price changes and poor quality of equipment and services.

Implications. As the liberalisation of the telecommunications market will not immediately ensure that free and fair competition is established there is a need to indicate what type of behaviour is not acceptable and a violation of the principles that uphold a liberalised market economy. In the absence of a Fair Trade Act and of measures to stimulate competition and protection of consumers, these principles need to be incorporated in the proposed new telecommunications legislation.

In order to advance free and fair competition and the provision of telecommunications services on a competitive and non-discriminatory basis, practices such as e.g. collusion, forming of cartels, providing of false or misleading information and charging of unreasonable prices should be considered as offenses and be included in the proposed Telecommunications Act.

The telecommunication sector could be in the forefront for development of consumer protection legislation and customers could exercise influence for instance through representation in the Regulatory Authority. It is proposed that a person representing the business community and another person representing domestic users should be appointed to the board of the Regulatory Authority. The Regulatory Authority should have the function of receiving complaints from users and the power to require service providers to submit comments on such complaints.

7. ROLES AND FUNCTION

Based on national goals and guided by the above principles, a new Structure for the telecommunications industry in Botswana could be envisaged as follows:

- i) Government assumes the over-all policy functions and establishes the legal framework for the telecommunications industry.
- ii) The Regulatory Authority implements the policy and issues regulations. It further monitors sector performance and supervises compliance with rules, regulations and other conditions imposed on actors in the industry.
- iii) Competing operators provide telecommunication networks and services and associated investments.
- iv) Consumers are users of the services and will decide which products and services will make up the industry.

Justification. The separation of responsibilities in the telecommunications sector should be as clear as possible. Government should retain the responsibility for establishing over-riding policies and the legal and organisational framework for the sector. A specialised authority, as independent as possible within the government structure, should act as supervisor, regulator and arbitrator for the sector. Operators and service providers should perform their services in competition on as equal terms as can be established, and users should have the largest possible freedom of choice and an assurance of protection against exploitation through unfair or illegal practices by operators, service providers and equipment suppliers.

Implications. This perception of the future telecommunications industry in Botswana implies that the Government's role in the sector, as policy maker, market supervisor and commercial operator, should be separated as much as possible from each other. It furthermore means that any special benefits or subsidies to BTC must be withdrawn with respect to operations which are carried out in competition with other commercial operators. A comprehensive legal and regulatory framework must be established to ensure the commercial operators in the market that competition will be on equal terms and furthermore that the rules regulating the market will remain predictable. Consumer protection and fair competition regulations will have to form part of the legislative framework.

8. POLICY MEASURES

The process of liberalisation of the telecommunications industry is a fairly recent occurrence and there is limited international experience to draw from. Besides, each country is unique in its social, economic and political structure and subsequently requires specific solutions for its own development. Policy measures presented in this paper have been subject to intensive consultations in Botswana and they have been designed to represent a balanced and realistic policy framework for a modern telecommunications industry in Botswana.

8.1 COMPETITION IS INTRODUCED IN THE TELECOMMUNICATIONS INDUSTRY AND BTC'S EXCLUSIVE PRIVILEGE TO PROVIDE TELECOMMUNICATIONS SERVICES IS ABOLISHED.

Justification. Various concepts of market structures, ranging from full or partial retention of the monopoly in some market segments to a mixture of duopoly and competition in other areas have all been rejected by the consulted interest groups. | Strong support for full competition in all aspects of provision of telecommunication networks and services has been pronounced.

Implications. In Botswana, with a very large unmet demand for telecommunication services, these demands might be more quickly satisfied by lifting all barriers to market entry at the outset of the reform programme.

The prevailing situation of unsatisfied demands and high prices makes the industry attractive also for new entrants, thus creating a favourable climate for real and sustainable changes to take place

Full competition in all areas of telecommunications, however, requires sophisticated and well developed regulatory capacity. In the absence of trained expertise and supportive legislation, interim measures and solutions need to be put in place.

The consequences of introduction of competition, as indicated in paragraph 6.1, also need careful consideration. Measures to compensate under-privileged groups and areas as well as concern about the expansion of the national network need to be addressed. Hence, competition should

initially only be encouraged in the fields of telecommunications where it adds to networks expansion and services. In these respects, Government should enter into a performance contract with BTC to advance a smooth transition of the industry. A performance contract could include e.g. agreed network expansion plans, targets for connection of customers, compensation for non-viable operations and agreed service and quality standard.

Too rapid restructuring of the market might jeopardise BTC's financial viability and lead to disruption of services.

8.2 INTERVENTION BY GOVERNMENT TO SUPPLEMENT THE MARKET FORCES.

Justification. The market forces alone will not satisfy Government's social development ambitions and they will not achieve all the goals for the telecommunications industry.

Implications. Liberalisation of the market and introduction of competition will lead to uneven supply of telecommunications services among different regions of the country. In order to spread the benefits of communication widely and reduce the number of individuals excluded from at least minimum access because of low incomes or that they happen to live in areas which from telecommunications point of view are regarded as commercially non-viable, the state has to intervene.

License conditions imposed on operators and service providers may to some extent rectify the imbalances, but given the scope of investments needed to achieve universal services, Government needs to finance desirable but commercially nonviable investments. This should be done through existing procedures and controls.

8.3 A CONTROLLED LIBERALISATION OF THE INDUSTRY TAKES PLACE ALONG THE FOLLOWING LINES:

8.3.1 Liberalisation of the sales of **terminal equipment** means, that anyone can sell such equipment without a specific license from the Regulatory Authority. However, this does not dispense from the requirement to have a business licence and other licences for operating a business. Furthermore, the equipment sold will have to correspond to type approvals made and standards laid down by the Regulatory Authority, as a person selling such equipment will be responsible under the proposed new Telecommunications Act for the safety of the equipment put on the market. This requirement is also intended to ensure compatibility of equipment.

8.3.2 In respect to **storage and forwarding** of facsimile services, it is intended that this will only require an ordinary business licence. The service provider is in effect only an ordinary telecommunications customer.

8.3.3 In order to put up a **public telephone**, no specific telecommunications licence should be required. However, the proposed Telecommunications Act applies in respect of type approvals and

standards. It is furthermore assumed that the service provider will have to enter into a contract with the network operator regarding the interconnection. Again this should be a contractual matter, subject to dispute resolution with the Regulatory Authority.

8.3.4 **Packet switched data services** should require a telecommunications licence. Such a licence should only be refused on technical grounds (that the proposed system is not acceptable) or if there are convincing reasons to believe that the operator is not serious or has the capacity to operate the services sustainably.

8.3.5 **Electronic mail services** would not require any licence.

8.3.6 Cellular telephone services would require a telecommunications licence. An application procedure should be put in place so that the first licence may be granted soon after the enactment of the new Telecommunications Act.

Government will have to decide beforehand (and for a period of at least three years) how many licences the Authority may grant. It would not be in Botswana's interest to have too many operators involved, but more than one licence should be granted in order to introduce competition.

The licences should be subject to conditions stipulated by the Regulatory Authority. This may involve negotiations with the applicants, but the basic conditions should be known beforehand. Transparency and predictability of the procedure must be safe-guarded.

8.3.7 **Local network services**, i.e. geographically restricted operations, with a right to connect to the national network would require a licence. The extent of such a licence needs to be discussed as in some cases it might be justified to grant an exclusive licence for a certain area in order to promote expansion of networks and services.

8.3.8 **Paging services** would require a telecommunications licence, but there is no reason to restrict the number of licences.

8.3.9 **National telecommunications services** i.e. services covering more than one local network would require a licence. As the granting of such licences would be a major threat to BTC, it is necessary to decide at Cabinet level to what extent such competition is desirable. In support of the universal service goal, competition in fixed networks i.e. duplication of infrastructure should initially be discouraged. The more of the existing

network capacity is used, the easier it becomes to justify and fund further expansion of the network. This must be considered in relation to the Performance Contract to be entered into between Government and BTC in which BTC's responsibility for operating, expanding and maintaining the network should be stipulated. BTC should not be relegated to the role of network operator, but should also on competitive terms be a service provider.

First of all it is in Government's interest to make sure that unprofitable areas are served, where no competition can reasonably be expected. Secondly, BTC must have a basis for its operations, and thus a geographical exclusivity area will have to be agreed for a certain period of time in the Performance Contract. This can be expressed in an opposite manner, BTC has the responsibility of operating the network and provide services in all areas except those specifically enumerated, in which areas licences will be granted for provision of telecommunications services on the basis of a competitive tendering system. Not more than two licences should be granted in each such area.

8.3.10 In addition to BTC, one more licence for providing international services may be granted by the Regulatory Authority after an open application procedure. The timing of granting the second licence needs to be decided by Government.

Justification. An agreed agenda for market reforms will provide the market actors with a stable and predictable environment for their business decisions thus facilitating participation of the private sector.

Implications. During the policy formulation process expectations have been raised for rapid and far reaching reforms. A prolonged implementation process might therefore dissipate public support and the momentum gained could be lost. However, it is important to get well functioning policies and regulatory arrangements in place before competition is introduced to avoid a regulatory vacuum.

The time table for liberalisation of the industry will be dependent on the pace at which the regulatory capacity can be developed. It is envisaged that the capacity could be developed as follows and thus become the time frame for the liberalisation of the industry. The time table is based on the assumptions that members of the Board of Directors of the Regulatory Authority are nominated and key personnel is recruited within three months of the legal establishment of the Regulatory Authority and that funds are available for its operations.

- Within 9 months of the establishment of the authority, the minimum requirements for handling of type approval issues should be met.
- Within 12 months basic procedures for processing of telecommunications licence applications should be at hand.
- Full regulatory capacity, covering all aspects of regulation, will probably take 3-5 years to develop out once the above requirements are met the liberalisation process can commence.
- The above time frame could be shortened considerably if Government decides to acquire international expertise while indigenous human resources are developed.

8.4 BTC BECOMES A COMMON CARRIER IN COMPETITION WITH OTHER OPERATORS AND BTC'S NON-COMPETITIVE OPERATIONS ARE REGULATED IN A PERFORMANCE CONTRACT.

Justification. The expertise and experience accumulated in BTC should be safeguarded for smooth transition of the industry.

Implications. Recognising the fact that BTC because of its local expertise and well established organisation is likely to be the dominant operator for at least the immediate future, and considering the need to continue developing the national telecommunications network, it is important to clearly formulate the role and functions of BTC in these respects.

The existing telecommunications infrastructure has been developed by and is presently operated by BTC. In a free and open telecommunication market anyone who wants to make use of that infrastructure should be able to do so. This raises the questions of who should maintain and operate the infrastructure and with whom should agreements for use of the network be worked out.

Although, operation of the national network is an area which in principle will be open for competition, maintenance, operation and interconnection to the network requires knowledge and information about systems and equipment which only

BTC possesses at present. It thus seems natural initially to let BTC manage the national network and negotiate interconnection agreements

with other operators and service providers. A Performance Contract between Government and BTC would stipulate among others agreed performance in efficiency, reliability and accessibility of services.

The contract should be designed and negotiated in consultation with the Regulatory Authority, Ministry of Works, Transport and Communications and Government's Public Enterprise Monitoring Unit. The contract should also include measures to facilitate competition and be of short term nature. The main purpose of the contract is to facilitate the reform process in the industry, but it can also serve as an instrument for the owner to exercise control over BTC and it can of course be terminated if BTC does not perform properly.

8.5 BTC SHOULD BE OBLIGED TO CARRY OUT COMPETITIVE ACTIVITIES SEPARATELY FROM OTHER ACTIVITIES.

Justification. To achieve transparency and ensure fair and equitable competition, BTC's competitive business should not be mixed with its role as operator of the national network.

Implications. It is important to emphasise the commercial nature of BTC and its operations. BTC should have the possibility of forming alliances and joint ventures on the basis of what is good business; it should be able to raise loans on the open market; it should operate under the same conditions as its competitors; and it should not be, or suspected to be, unduly subsidized. For these reasons there might be a need to increase BTC's autonomy from Ministry of Works, Transport and Communications.

New competitive services, such as the introduction of mobile telephone services, should be carried out by BTC in a separate subsidiary company. The BTC Act should be amended to the effect that BTC's allowed to form such subsidiaries. As far as already established activities are concerned, Government should instruct BTC, for instance in a performance contract, to make an accounting separation of BTC's operations into three parts:

1. network operations and maintenance
2. services that are expected to remain sub-economic for a considerable time

3. other services.

The Government should decide on the allocation of services between the latter two categories. The assets and liabilities as well as the personnel of BTC will have to be accounted for separately between the three parts of the operations. In the longer term perspective, all BTC activities which are provided under actual or potential competition should be carried out in a separately established company. This would be important to demonstrate that Government does not give any subsidies or undue preferences to BTC in relation to other competitors.

8.6 MANDATORY AND MUTUAL INTERCONNECTION OBLIGATION IS INTRODUCED.

Justification. In order to rationalise the use of present network and to avoid duplication of infrastructure all new and present networks should be interconnected for national economic benefit as well as for the benefit of consumers.

Implications. A mandatory requirement will ensure the integrity of the national network and avoid fragmentation. Experience shows, however, that interconnection arrangements between operators in a liberalised market have been a long and frustrating process to work out. The former monopolist will most likely try to make life difficult for prospective competitors by being moderately interested in coming to an agreement about charges and tariffs for the use of the network. Clear and precise formulas need to be worked out if introduction of competition really is going to succeed.

8.7 REGULATORY FUNCTIONS ARE SEPARATED FROM OPERATIONAL FUNCTIONS AND A REGULATORY AUTHORITY IS ESTABLISHED.

Justification. Regulation of the industry becomes much more complicated when there is more than one operator in the market and the incumbent operator (BTC) cannot be a player and referee at the same time.

Implications. With introduction of competition there are many new regulatory functions that need to be addressed. Examples of regulations in this area include licensing of private operators, supervision and handling

of disputes in the market and rules for fair competition. Type approval procedures for liberalised terminal equipment, management of the radio frequency spectrum and licensing schemes for competing providers of mobile or value added services are other examples. There is also a need to regulate and oversee the interconnection arrangements between BTC and newcomers in the market.

The extent of regulation will, of course, be dependent on the number and variety of market actors, but it is obvious that development of the regulatory capacity is vital for the success of the restructuring process.

Given the size of the telecommunications market and associated cost to regulate it, and bearing in mind the short supply of experienced professionals, the regulatory authority should be a small entity contracting out as much as possible of the regulatory tasks and functions to other public and private institutions, while keeping the ultimate responsibility in accordance with proposed new legislation. Furthermore, regulatory measures which are simple to implement and supervise and which reduce the workload and political burden on the regulator should be developed. Price cap models, standardised license conditions and uniform reporting systems would facilitate the regulator's work.

The cost of regulating the industry should as much as possible be borne by the industry itself by levying fees and charges for licensing of operators and equipment that reflect the real cost of producing the services. Considering the new regulatory functions to be carried out in a liberalised market, it is expected that the cost of regulating the industry will be somewhat higher than the present costs incurred by BTC to perform the regulatory tasks. Work on administrative measures, including detailed costing, for implementation of the new policy is in progress, but it is presently assumed that the cost of regulating the industry will amount to about one per cent of the turnover of the industry.

8.8 THE LEGAL FRAMEWORK FOR RESTRUCTURING OF THE TELECOMMUNICATIONS INDUSTRY IS DEVELOPED.

Justification. Reforms in the telecommunications industry require a legislative base along which structural changes can take place.

Implications. The far reaching structural reforms in the telecommunications industry outlined in this paper require clear mandates to be successful. A critical issue relating to the policy level of functions is the relationship between the Ministry (MWTC) and the Regulatory

MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

Authority. International experience shows that the more autonomy and political latitude given to the regulator, the more successful the liberalisation process has been. This implies that an authority as independent of the Ministry as is legally possible should be established.

However, considering the limited availability of professional expertise, and to enable both the Ministry and the regulator to operate effectively and avoid duplication of work, division of roles and responsibilities along the following lines should be made.

Establishment of a Regulatory Authority reporting to the Minister responsible for Communications with its own Board of Directors to perform all the regulatory functions and handling some policy functions on behalf of the Ministry.

The underlying principle is to separate overall long term policy making from practical regulatory activities and at the same time avoid building up expertise in more than one organisation by making available to the Ministry expertise in the Regulatory Authority for its policy formulating role.

In order to emphasise the regulator's independence from the ministry in its day-to-day regulatory activities, the Board of Directors should appoint its own Chief Executive and be given the power to issue regulations and licenses as well as settling of disputes. Furthermore, decisions of the Regulatory Authority should not be able to be overruled by the Minister but could be appealed against to the High Court.

Liberalisation of the telecommunications sector requires new legislation as well as amendment of the existing Act. The Botswana Telecommunications Corporation Act of 1980 needs to be amended as a first step and could at a later stage be repealed if Government wishes to change the status and/or ownership of BTC. The first step will entail amendment of the sections of the Act dealing with BTC's exclusive privileges to provide telecommunications services in Botswana and power to issue licences and regulations. This amendment will enable the enactment of new legislation for introduction of competition and establishment of the Regulatory Authority. Those parts of the Act which establish BTC as a Government corporation will not be an obstacle for the liberalisation process.

8.9 PRICES AND TARIFFS ARE REGULATED IN CERTAIN MARKET SEGMENTS DURING THE INITIAL PHASE OF THE RESTRUCTURING PROCESS. |

Justification. In a liberalised market with open and free competition, competitive forces will determine prices and tariffs and there will be no need for any regulation. This scenario, however, is not likely to occur in all segments of the market and especially not at the onset of the restructuring process.

Implications. Price regulation and control is a cumbersome task and will be a heavy burden for the Regulatory Authority if all telecommunications services are to be regulated. It will defeat the purpose of competition and it will be difficult to determine the level of tariffs which will achieve the goal of universal service at affordable prices and at the same time allow for rapid expansion of networks and services.

Since it is impossible at this point in time to predict to what extent full competition is going to take place in various market segments, interim measures along the following lines should be introduced.

- i) No price control on;
 - terminal equipment
 - storage and forwarding of facsimile services
 - public telephor~e boxes
 - packet switched data services
 - electronic mail services
 - paging services

- ii) Price control on;
 - national long-distance services
 - cellular telephone services
 - local network services.

Prices should be deemed fair and reasonable if they reflect recovery of the investment in the medium to long term perspective.

The above measures require close monitoring of price formations in the industry and customers are likely to be the best watch-dogs of abuse or exploitation.

8.10 A MANDATORY LICENSING SYSTEM FOR ALL NETWORKS AND SERVICES IS INTRODUCED.

Justification. Licences are important instruments for attainment of national goals and for a controlled development of the industry.

Implications. A comprehensive licensing system for operation of network and services will add to the bureaucracy and workload of the regulator, but given the far reaching implications of a total liberalisation and considering the absence of supportive legislation for consumer protection, the justification for such a system is strong.

The comprehensive licensing system should be of temporary nature and could be withdrawn once the market has matured and shown signs of self regulation. The licence requirement for publicly accessible telecommunications systems, i e national and international fixed or mobile networks and services, should remain in force as it is of national interest to be able to control and guide the development of the national telecommunications network.

The rapid development in the telecommunications industry implies that licences should be limited in time and allow for timely adjustments as conditions change.

9. TIME FRAME

A controlled liberalisation of the telecommunications industry implies that control instruments need to be at hand before the liberalisation process can commence.

All of these instruments are not available at present and thus need to be developed. The main instruments which need to be in place are:

- a new telecommunications Act
- amendment of the Botswana Telecommunications Corporation Act of 1980
- new and revised telecommunications regulations issued by the Regulatory Authority
- systems and procedures for handling of type approvals
- systems and procedures for handling of licence applications
- licence conditions for various types of telecommunication networks and services
- parameters for assessment of interconnection arrangement and for prices and tariffs
- systems and procedures for monitoring and supervision.

MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

Separation of BTC's activities along the lines discussed in paragraph 8.5 is a pre-requisite for free and fair competition and needs to be done in parallel with development of the regulatory capacity.

Provided resources are available for regulation of the industry, it is estimated that basic regulatory capacity can be developed within 12 months.