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THE
WHITE PAPER
ON

**TELECOMMUNICATIONS
POLICY**

The Ministry for Posts,
Telecommunications and Broadcasting

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FOREWORD

It is with great pleasure that I place this White Paper on Telecommunications Policy before the people of South Africa.

The White Paper is the culmination of an extensive process of consultation with the public and the telecommunications sector and is the product of this interaction between Government, the telecommunications sector and the public. Once it is tabled in Parliament along with the new telecommunications legislation, the elected representatives of the people will have the opportunity to complete this process of consultation.

In a democracy such consultation is of fundamental importance to ensure, first, that the production of policy has occurred with the participation of citizens, stakeholders and interest parties, and second, that the policy enjoys the widest possible support and acceptance by the people and stakeholders on whom the policy proposals will impact.

The role of Government is to facilitate this process of policy formulation and consultation in such a way as to achieve consensus. This is not always possible, of course, and not everyone will be absolutely satisfied. There can be no going back to the authoritarian methods of policy-making of the past.

The White Paper on Telecommunications Policy has also been drafted in full recognition of the dynamic changes radically affecting the role and position of telecommunications in our country. Changes in technology, trade liberalisation and globalisation are moving so rapidly it is becoming increasingly difficult to predict their implications on telecommunications policy. Policy-making has become a dynamic process. It will have to be subject to constant review. The telecommunications policy contained in our White Paper looks no further ahead than six years and the process of liberalisation proposed is itself subject to review after three years. Nevertheless, where investment, the extension of universal service and the introduction of regulated competition are involved it is important to have some certainty.

We have attempted to provide a minimum level of certainty in the White Paper. At the same time, we have articulated a new vision for telecommunications in South Africa.

Our particular goal is to balance the provision of basic universal service in telecommunications to disadvantaged rural and urban communities with the delivery of advanced information services capable of meeting the needs of a growing South African economy. The logic of our telecommunications policy requires us to set in place measures and mechanisms to achieve our goals. These are all spelled out in detail and I invite you to read the White Paper and make your views known to Parliament.

I would like to thank everyone who has participated in this national telecommunications policy process. It has been an impressive period of intensive activity and I am confident the implementation of the policy will have a positive and dramatic effect on the development of telecommunications in South Africa.

Z Pallo Jordan
Minister for Posts, Telecommunications and Broadcasting

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INTRODUCTION

The White Paper on Telecommunications Policy is the result of a broad consultative process involving the public and the telecommunications sector. While the Green Paper on Telecommunications Policy was a consultative document, the White Paper is a statement of Government policy on the future development of telecommunications in South Africa.

The Minister for Posts, Telecommunications and Broadcasting, Z Pallo Jordan, initiated the process of consultation by launching the Green Paper on Telecommunications Policy on 7 July 1995 and inviting the public to respond to the policy questions it posed. The Green Paper was itself the product of extensive consultation with the telecommunications sector. The network operators, labour, civic and black business groupings, the Electronics Industries Federation (EIF) and the National Telecommunications Forum (NTF) all participated in the formulation of the questions contained in the Green Paper. The Green Paper was drafted by a Technical Task Team, assisted by a number of international experts and a local Advisory Panel - all appointed by the Minister.

In all, the Ministry received 131 submissions in response to the Green Paper, totalling 3,989 pages. The submissions were made by a wide range of organisations, both local and international, with an interest in telecommunications. The range of submissions included telecommunications network operators, the local equipment supply industry, trade unions, business groupings, local and international banks, international telecommunications companies, universities and policy groups like the Centre for the Development of Information and Telecommunications Policy (CDITP). Individual submissions from members of the public were also received.

The Technical Task Team and BMI TechKnowledge made an analysis of the submissions and released two reports at an industry briefing on 7 November 1995. These reports are 'A Statistical Analysis of Responses to the Green Paper on Telecommunications Policy' and the 'Interim Narrative Report on the Responses to the Green Paper on Telecommunications Policy.'

On 20-23 November 1995 the Minister convened the National Colloquium on Telecommunications Policy to provide stakeholders in the telecommunications sector with an opportunity to discuss the key issues arising from the responses to the Green Paper. The aim of the Colloquium was to arrive at a consensus position on these key issues. Consensus was reached on all issues with the exception of the issues affecting Telkom's ownership and monopoly position. These issues were referred to the Minister and the Eminent Persons Group respectively. The Eminent Persons Group was selected from nominations by the Colloquium delegates in order to advise and oversee the drafting of the White Paper and the legislation in accordance with the policy framework adopted at the Colloquium.

The Technical Task Team drafted the White Paper in consultation with the Eminent Persons Group and the Minister tabled the second draft of the White Paper for discussion at the National Telecommunications Forum Plenary Conference on 5 February 1996.

Recommendations arising from the NTF discussion were then incorporated into the third draft of the White Paper prior to its submission to the Minister and Cabinet for approval. The White Paper on Telecommunications Policy is published in the Government Gazette and available to the public from the Government Printer.

Once the Minister tables the White Paper and the telecommunications legislation in Parliament, the final stage in the consultative process will begin. The political parties will debate the contents of the White Paper and the legislation in the Portfolio Committee on Communications, the National Assembly and the Senate. The Portfolio Committee may invite the public to give its views at public hearings if it so wishes. The Parliamentary process will bring the telecommunications policy process to an end with a vote in Parliament to enact the telecommunications legislation.

EXECUTIVE SUMMARY

1. TELECOMMUNICATIONS AND DEVELOPMENT IN SOUTH AFRICA

The state's vision for telecommunications is one that balances the provision of basic universal service to disadvantaged rural and urban communities with the delivery of high-level services capable of meeting the needs of a growing South African economy.

The Ministry for Posts, Telecommunications and Broadcasting will establish a universal service agency to promote universal service in telecommunications in South Africa. Its objectives, functions and structure are outlined in this chapter.

2. MARKET STRUCTURE IN THE TELECOMMUNICATIONS SECTOR

A new market structure is necessary for the telecommunications sector to orientate the sector towards accelerated development and universal service as well as take into account technological and international trends. The new market structure entails a period of exclusivity for Telkom, after which various telecommunications market segments will be liberalised in a phased process put into motion and overseen by the Regulator.

3. OWNERSHIP, INVESTMENT AND FINANCING

This issue is subject to the outcome of the state assets' restructuring process in the Government of National Unity.

4. ECONOMIC EMPOWERMENT OF HISTORICALLY DISADVANTAGED SOUTH AFRICANS

The economic empowerment of historically disadvantaged communities is a programme of achieving meaningful participation by all members of these communities in all aspects of productive economic activities in South Africa as consumers, workers, managers and owners. The extension of affordable and accessible universal service will enhance social and economic activities in historically disadvantaged communities by providing the necessary infrastructure as well as by generating employment in the telecom sector itself. In addition specific measures to promote economic empowerment will be taken which include broadening equity ownership, employee share ownership schemes, creating opportunities for meaningful employment and management, the effective promotion of entrepreneurship, licensing opportunities and procurement and set aside-policies.

5. REGULATION OF THE TELECOMMUNICATIONS SECTOR AND RADIO FREQUENCY SPECTRUM

The Ministry for Posts, Telecommunications and Broadcasting will be responsible for setting policy on telecommunications and the radio frequency spectrum. An independent Regulator, called the South African Telecommunications Regulatory Authority (SATRA), will be established to regulate telecommunications in the public interest. SATRA will also manage the radio frequency spectrum with the exception of the broadcasting services frequency bands which are currently administered by the Independent Broadcasting Authority (IBA). The objectives, functions and structure of SATRA are outlined in this chapter.

6. AFFORDABILITY AND TARIFF SETTING

The adequate attainment of universal access and service goals largely depends on meeting the requirements of affordability. The manner in which the cost of services is determined through tariff regulation is fundamental to the achievement of universal service. The key requirement is to create a balance between affordability and the need to expand and upgrade the network. This chapter seeks to create such a balance between affordability and tariff setting.

7. THE EQUIPMENT SUPPLY INDUSTRY

South Africa needs a strong telecommunications equipment supply industry in order to respond to the development needs of the country and to position South Africa appropriately for the 21st century. A vibrant globally competitive local telecommunications industry will attract more investment, generate employment and greater economic activity. The Ministry will move towards the phased removal of any protective measures inconsistent with GATT. However, during a period of transition to enable the local industry to adjust to the new trade and market conditions, the Ministry will request the Minister of Trade and Industry to apply tariff protection for the local equipment supply industry at the GATT binding level. Additional steps to stimulate the local equipment supply industry are proposed in this chapter.

8. HUMAN RESOURCES FOR THE SECTOR

The Ministry proposes that the enhancement of human resource development in the telecommunications sector be supported. The Regulator will form a Human Resources Development Directorate with a number of functions regarding human resource development. Five types of activity will be supported:

- training and retraining of workers;
- training artisans and technicians;
- undergraduate higher education;
- postgraduate training and research;
- promoting an interest in technology among schoolchildren.

9. REGIONAL AND INTERNATIONAL CO-OPERATION

The Ministry is of the view that the integration of South Africa into regional and international telecommunications systems will bring the benefits of synergy, greater participation in the global economy, improved personal and business communications, expanded trade and revitalised economic growth. South Africa, due to its location, its unique African assets, and its ability to develop and deliver African solutions, is well positioned to both contribute and benefit from regional and international co-operation.

10. LEGISLATIVE REFORMS

A new Telecommunications Act will effect the necessary policy and legislative reform required. This chapter reviews the legal situation with regard to licences and supplementary agreements issued or made prior to the introduction of new telecommunications legislation, the licensing of operators, the integration of TBVC areas and the question of the interception of telecommunications call traffic.

1

TELECOMMUNICATIONS AND DEVELOPMENT IN SOUTH AFRICA

THE STATE'S VISION FOR THE TELECOMMUNICATIONS SECTOR

- 1.1 The state recognises the central importance of access to telecommunications to the achievement of its economic and social goals. Affordable communications for all, citizens and business alike, throughout South Africa, is at the core of its vision and is the goal of its policy.
- 1.2 The challenge is to articulate a vision that balances the provision of basic universal service to disadvantaged rural and urban communities with the delivery of high-level services capable of meeting the needs of a growing South African economy.
- 1.3 The vision must therefore reconcile these two seeming opposites within an integrating framework which also allows for a dynamic definition of universal service and facilitates the co-ordination of all available infrastructure behind its goal.

THE RDP

- 1.4 The telecommunications sector is key to the success of the Reconstruction and Development Programme (RDP). Access to communications facilities is not only necessary for the delivery of services in critical sectors such as education and health; it also serves to stimulate the creation of small business and offers a channel of communication to reinforce participation in democratic processes at community, provincial and national levels. It is the essential backbone for development and offers the only opportunity for leapfrogging its relatively slow sequential phases.

ECONOMIC GROWTH AND EMPOWERMENT

- 1.5 The telecommunications sector is both a source of economic growth and an enabler of growth in other sectors.
- 1.6 The sector itself offers opportunities for locally developed innovative products and services which, with appropriate transfers of skills and technologies, can contribute significantly to economic empowerment of previously disadvantaged communities.

- 1.7 The sector can make an important contribution to export growth and import substitution.
- 1.8 In addition it forms part of the basic infrastructure needed for the stimulation of economic activity including the creation and development of business in all sectors and therefore the growth of the economy as a whole.

GLOBAL INTEGRATION

- 1.9 An integrated high-quality network providing value-added services and access to the international information highway is required to support the needs of South Africa's internationally competitive industries and link its economy into the global system.

THE AFRICAN REGION

- 1.10 Improved communication with the African region will reinforce South Africa's presence by facilitating exchanges among institutions in the public and private sectors and providing opportunities for technology exports.

POLICY LINKAGES

- 1.11 Because of the fundamental importance of the telecommunications sector to national economic growth and development, planning for the sector should be closely integrated into broad economic, trade and social planning and effectively linked with other information policy initiatives. The need exists for a broadly based information policy committee to facilitate the development of all aspects of information infrastructure in South Africa and its linkages to the global information society. Telecommunications represents an essential element of that infrastructure; the Minister, and the Sector, should be represented on any such committee and should play a central role in debate on information highway and information society issues.

UNIVERSAL SERVICE AGENCY

- 1.12 The Ministry for Posts, Telecommunications and Broadcasting will establish a universal service agency to promote universal service in telecommunications in South Africa.

BACKGROUND

- 1.13 In designing the universal service agency, and incorporating it into the Telecommunications Act, it will be important to keep in mind the concern, expressed by the Minister and reflected in many submissions to the Green Paper, that classic approaches to managing the implementation of telecommunications policy would not be sufficient to keep the focus on the goal of universal service long enough to redress the existing imbalances. The apartheid system left the vast majority of black South Africans, particularly in rural communities, without access to basic communications services. Liberalisation trends associated with the spread of the global information highway and the legitimate needs

of South African business and urban areas for advanced services could easily combine to draw interest and resources away from the delivery of service to rural and disadvantaged areas. The potential development impact of telecommunications would be limited; the opportunity would be lost for South Africa to leapfrog traditional stages of development through the use of telecommunications to foster the application of new information technologies. Telecommunications infrastructure would not be applied as effectively and as quickly as it might to redress historic imbalances not only, perhaps not even primarily, with respect to access to basic communications but also with respect to many development sectors including health, education, employment and income generation.

- 1.14 While universal service is a global concern, it is located within a unique context in South Africa. Nowhere else does such disparity of access exist side by side with a developed communications technology sector. Nowhere else are both access and ownership concentrated so heavily in one population group. These imbalances, which are the legacy of apartheid, must be urgently redressed. Members of historically disadvantaged communities, and particularly those in rural areas, must be the immediate targets for the delivery of universal service. The universal service agency is a South African response to this very particular South African social, economic and political environment.

RELATIONS WITH THE REGULATOR

- 1.15 The Regulator and the universal service agency shall not be in competition. They are part of the same team focused on the same overall objective but with responsibility for different but closely linked activities.
- 1.16 One set of activities is rules-based: it involves the firm and transparent application and enforcement of the regulations which embody the principles of telecommunications policy. The Regulator has sole power of enforcement. The other set of activities is concerned with development where clearly defined rules, which would apply within the regulatory complex, simply do not now exist. The Agency has no enforcement power but should identify more creative and innovative methods to promote universal service within the broad framework of development planning. The Agency and the Regulator will require different modes of operation, as well as different sets of skills, knowledge and experience.
- 1.17 The Agency and the Regulator will share common administrative and financial systems and information infrastructure. They will report to the same Minister. Ideally the heads and staffs of both agencies will develop close mutually-reinforcing working relationships.
- 1.18 The precise functions of the two agencies must be defined to ensure minimum overlap and maximum synergy with a view to ensuring concentration of resources on achieving their linked objectives and reducing potential opportunities for bureaucratic infighting. The Agency will clearly need to operate within the legal and regulatory framework administered by the Regulator and will be accountable to the Regulator in that sense. It will be the development arm in the regulatory complex.

OBJECTIVES OF THE UNIVERSAL SERVICE AGENCY

- 1.19 The objectives of the universal service agency shall be promotional and catalytic.
They shall be:
- to maintain universal service at the heart of telecommunications policy and of the public debate surrounding it; and
 - to ensure telecommunications components are introduced into development projects whenever their objectives can be reinforced by information flows and communication.
- 1.20 To achieve these ends, the Agency will need to build close links with community-based organisations and with development organisations in both public and private domains and to develop a public relations capability.

THE UNIVERSAL SERVICE FUND

- 1.21 The Agency will manage the universal service fund generated through universal service obligations defined by legislation and implemented by the Regulator. The Regulator will monitor Agency usage of the fund.

FUNCTIONS

- 1.22 The Agency will work with the RDP, the Regulator, Telkom and other operators and with community and development organisations in the following areas:
- 1.22.1 Building national consensus on the meaning of affordable and accessible universal service:
- definition of universal service in terms of the current South African reality;
 - promoting national consensus on the definition and its evolution;
 - monitoring, from a development perspective, technology, applications, use of services and public expectations in order to adjust the definition as and when required.
- 1.22.2 Establishing goals, objectives, timetables, indicators and monitoring mechanisms:
- establishing agreement on the parameters that would govern universal service priority setting: for example degrees of deprivation, geography, availability of applications, institutional base, local government capacity, and so on;
 - recommending to the Minister of universal service goals (and intermediate objectives), country-wide, but differentiated by region or community;
 - identifying indicators for measurement of progress towards those goals;
 - identifying indicators of the impact of access to telecommunications services in terms of creation of small businesses and employment opportunities, economic empowerment of disadvantaged groups;
 - advising the Regulator on the establishment of universal service monitoring mechanisms.

- 1.22.3 Advising the Regulator on universal service obligations in licences to be granted by the Regulator, and on the means to monitor their implementation:
- proposing to the Minister and Regulator methods to redress imbalances in the telecommunications sector and thereby promote the achievement of universal service goals;
 - working with the service providers to develop linkages to communities that will help them design mechanisms to improve implementation of universal service obligations.
- 1.22.4 Regular reporting to the Minister:
- drawing on the information base of the Regulator, supplemented as necessary by community information sources, to maintain and disseminate a South African map of access and services which would indicate the degree of achievement of universal service goals and obligations;
 - highlighting gaps and opportunities for the extension of infrastructure and services, including applications in prime development sectors;
 - proposing adjustments to policy, law and regulation to meet universal service goals.
- 1.22.5 Catalytic functions:
- interacting and consulting with the RDP, health, education and other ministries, with Telkom and other operators, with regard to the progressive connection of schools and clinics and the identification of projects to maximise the development impact of the telecommunications infrastructure;
 - working with communities to identify telecommunication needs;
 - promoting research on model applications of telecommunication and information technology;
 - managing the universal service fund;
 - disseminating information on universal service.

STAFFING

- 1.23 The Minister will appoint the director who will select a small staff with a mix of skills in development planning and social sciences, economics and telecommunications. Experience in community development and community-based organisations will be important as will effective communication skills.

REVIEW

- 1.24 The ongoing need for the universal service agency will be reviewed by the Minister in consultation with all stakeholders after five years and, if appropriate, its functions will be transferred to the Regulator.

FUNDING

- 1.25 Operational costs of the Agency will be funded through a telecommunication fund which is to be administered by the Department of Posts and Telecommunications. The Agency's budget will be prepared by the Department in consultation with the Agency for approval by Parliament.

2

MARKET STRUCTURE IN THE TELECOMMUNICATIONS SECTOR

- 2.1 The Ministry believes a new market structure is necessary for the telecommunications sector, one which orientates the sector toward accelerated development and which also takes into account technological and international trends. In general, the new market structure entails a period of exclusivity for Telkom, after which various telecommunications market segments are to be liberalised in a phased process put into motion and overseen by an independent Regulator.
- 2.2 The new market structure is largely contingent on the assumption that Telkom will be able to access sufficient capital. If Telkom is not able to access capital because of non-resolution of the ownership question, the scenario below will be seriously compromised and will have to be reformulated.

As a kind of preface, three interrelated issues must be acknowledged at the outset:

- 2.3 *First*, because of the inherent flexibility of telecommunication technologies it has become increasingly difficult to define particular market segments or services and establish viable boundaries around them. Because of this reality, there will be to some degree an inevitable arbitrariness to such definitions. The key point is that with this legislation, it is the Regulator, not Telkom, who is now charged with settling upon such definitions and enforcing the rules around them. This fact should raise the level of legitimacy around these contentious issues. That said, *because* of the problem of flexibility and boundaries, the Regulator should endeavor to settle on definitions and establish boundaries which are in principle enforceable. This means that in implementing the provisions of the new market structure, the Regulator should, when possible, try to move with technology rather than against it. If the Regulator moves too far out of step with the opportunities created by technology, it may be difficult to enforce rules and may indirectly encourage extra-legal actions by parties within the sector. And without a combination of enforcement and voluntary compliance, the consensus will break down.

- 2.4 *Second*, there are forces at work in the international arena pushing for liberalisation which, when combined with the technological flexibility discussed above, have great salience when formulating a coherent and enforceable domestic telecommunications policy. International accounting rates are now under review and their resolution will undoubtedly affect domestic tariffs and Telkom's rebalancing. World Trade Organisation (WTO) regulations, which treat telecommunications as a trade-related sector, have begun to be applied in the international arena. South Africa is a signatory to the WTO and has indicated its intention to liberalise trade in basic telecommunications services. Satellite operators such as PanAmSat now permit direct access by users, thus technically allowing the bypass of the domestic telecommunications network by large users. International call-back services are, at this time, unregulatable, and they are growing. Advances in digital voice compression make voice telephony by the Internet and other means a likelihood. These global forces cannot be ignored, and this policy must be realistic in accommodating them. Furthermore, this policy must be consonant with South Africa's general trade policy and its specific obligations as a signatory to the WTO.
- 2.5 *Third*, it is widely acknowledged that in the near future broadcasting and telecommunications will undergo convergence. This White Paper does not undertake policy prescriptions in this area, but alerts the Minister to convergence and empowers her/him to study the issue and generate a policy framework around it.

THE PERIOD OF EXCLUSIVITY

- 2.6 In order to best promote the goals for the sector, which include: the expansion of the telecommunications infrastructure and attainment of universal service, the promotion of growth within the sector and as an enabling infrastructure for economic growth in other areas, the adoption of strong customer focus, and the enhancement of South Africa's telecommunications capacity internationally, Telkom should be granted a period of exclusivity to provide basic public switched telecommunications services. (The word "exclusivity" should be understood as a kind of shorthand for the provision of public switched voice and data. The telecommunications sector is already partially open and Telkom does not even now control all services, particularly the cellular market.) Particularly during the period of exclusivity, the central goal is the building out of the basic network as quickly and as extensively as possible. Following the period of exclusivity, various market segments will be opened to various degrees of competition, as elucidated below (please consult the timing diagram [Figure 1] following this narrative). There must be fixed dates for the transition to a liberalised environment, so that potential competitors are able to plan their entrance and investments accordingly. The Regulator is empowered to grant prospective licences to would-be competitors, so that they can plan and invest and be ready to enter the market as the dates for liberalisation come to pass. The phased opening of the various submarkets to regulated competition must be charted by this document but the exact timing cannot be set by it.

- 2.7 The timing should be determined by the Regulator according to a combination of a universal service penetration rate's being reached and a given date having elapsed (a sunset clause). The timing of the liberalisation represents both the effective stakeholder consensus from the National Colloquium on Telecommunications Policy and an intricate, internally consistent progression. The Regulator should have some degree of flexibility on the timing issue but only a limited degree. The Regulator's authority on timing consists in 1: setting the "starting date" of the process, and 2: monitoring /reviewing the progress of achieving universal service goals in the context of domestic and international economic and technological developments. The determination of the starting date should be the first priority of the Regulator, and should be set as soon as possible. The monitoring of the sector will take place on an annual basis by means of auditing processes aimed at determining the progress made towards achieving the sectoral objectives for which the Regulator is responsible. The Regulator will undertake a comprehensive review of the situation of the sector in year 3 to determine whether adjustments need to be made to the transition to liberalisation. The Regulator will present the findings of its audits and review, and its recommendations on timing, to the Minister. Modifying the liberalisation process is a policy matter, and thus is the Minister's responsibility.
- 2.8 All regulatory functions undertaken by Telkom in the past are now removed from Telkom's authority and are vested in the Regulator. (This includes existing value-added network [VAN] licences. The terms of VAN licences will be determined as part of the Regulator's normal duties.) The Regulator must also determine the precise definition of services and their boundaries before awarding licences.
- 2.9 During the period of exclusivity, Telkom has the primary role in universal access/ service provision. Other existing network providers, to wit, the two cellular network companies, would continue to have certain supplementary universal service obligations as currently stipulated under their existing licences (the Joint Economic Development Plan).
- 2.10 Telkom will function as the primary provider of the local loop, exchanges, transmission, and international services during the period of exclusivity (please consult the glossary of terms following this narrative). Because the central goal of the period is the building out of the basic network as quickly and as extensively as possible, Telkom should engage traditional cross-subsidy mechanisms to help facilitate network roll-out, including maintaining nationally uniform tariffs for standard public switched telephone network (PSTN) services. Because the South African telecommunications market is already in part liberalised, this means that during the exclusivity period reasonable efforts must be put in place to safeguard against private service offerings and practices that unduly divert revenues from Telkom. Perhaps the central element here is the control of bypass and resale. This will be discussed below. On the other side of the coin, because Telkom has a number of advantages when it competes with private sector companies in value-added services, reasonable steps must be taken to ensure that all competitors operate on level playing fields.

- 2.10.1 Telkom will be licensed to operate the PSTN and the public switched data network (PSDN) for a period of exclusivity with clear-cut contractual obligations and performance criteria, as determined by the Regulator. The rough aim is to install 20 telephones per 100 population by the year 2000, recognising that this in part depends on demand, which itself depends in part on affordability. Telkom's stated plan to double the existing network and fully modernise it is seen as a viable means to accomplish the universal access/service goals. The Regulator should set reasonable targets for annual percentage growth of network penetration. The Regulator, assisted by the universal service agency, will set specific targets for public telephones depending on geographical area, type of settlement, and so on. All relevant Telkom (and other existing and future operators') activities and finances should be transparent to the Regulator. The Regulator should have the legal authority to compel operators to disclose information the Regulator deems salient. The Regulator should make provisions to maintain the confidentiality of proprietary information. The essential point is that the Regulator must have easy access to information to fulfill her/his responsibilities.
- 2.10.2 Telkom will incorporate into its network all usable ex-TBVC telecommunications facilities and equipment.
- 2.10.3 Customer premises equipment (CPE) are currently partially deregulated. The remaining Telkom prerogative, that is, the right to provide the first telephone instrument, is removed. CPE are completely, immediately, subject only to type approval by the Regulator to ensure no damage is posed to the network. Customers may purchase the CPE they desire.
- 2.10.4 Given the rapid growth in cellular telephony in the country, the Regulator is empowered to examine the market to see if a third licence is sustainable. If so, a third cellular licence should be granted within two years.
- 2.10.5 The Regulator is empowered, in co-operation with the Competition Board, to look into the structure of the cellular telephone industry and in particular whether cellular network operators should own airtime provider companies, or whether such ownership poses a restraint of trade.
- 2.10.6 Private networks and services over the network should continue to be encouraged, as they facilitate sophisticated and increasingly essential tools for business and other users. In this regard Telkom has responsibilities toward service providers and private networks, and they in turn have responsibilities toward Telkom.

- 2.10.7 Telkom, as a common carrier, is obliged to connect all service providers and private networks without discrimination. But more can be done than at present. Telkom must not be able to put roadblocks before providers wishing to connect into the PSTN, and must accommodate legitimate interconnection requests with reasonable promptness. The Regulator is empowered to enact mandatory interconnection policies if necessary. Where possible, Telkom should facilitate the growth of services by offering interconnection in "unbundled," customised packages, and in which lesser quality or lesser extensive connections are reflected in lower interconnection charges. The Regulator must oversee these practices.
- 2.11 Government has several goals for the sector during the period of exclusivity (as described previously), the most important of which is the expansion of the telecommunications infrastructure and the promotion of universal service. Telkom is the primary means to achieve this central goal. Telkom itself has additional requirements, particularly as the sector moves toward liberalisation and competition. In brief, Telkom has two essentially conflicting requirements during the period of exclusivity: to roll out the network and keep usage affordable, and to rebalance its tariffs in order to prepare for competition. In order to facilitate these conflicting requirements, bypass and the resale of capacity must be controlled to prevent large-scale migration of traffic away from Telkom. Yet that control must itself be realistic.
- 2.11.1 Telkom should be permitted to move toward rebalancing its tariffs immediately, which should be concluded by the end of the period of exclusivity. The boldest moves toward rebalancing will take place in year 4, the last year of exclusivity. Until that time, the Regulator must take steps to prevent bypass of the PSTN.
- 2.11.2 Private Networks: A private network is normally established when a user leases capacity from a common carrier and configures it in a way that best suits the user, including the provision of switching capabilities as required. Private networks are almost always businesses with geographically dispersed units, and the purpose of such networks is to connect the business units integrally by carrying traffic between the terminals of their own networks only. In the past, private networks were allowed to carry either data traffic or voice traffic, but not both.

A new, more liberal definition of private network shall be used, as follows: a private network shall be allowed to carry traffic "principally or integrally related" to the business of the company operating the private network. No other traffic is allowed. Thus, private networks now distinguished as being devoted either to voice or data cannot continue to be so distinguished. If a private network is used for purposes principally or integrally related to the business of the company, it does not matter whether voice or data pass over it. Private networks can engage in adding value to the facilities within the private network.

Private networks need to interconnect with the public networks (PSTN and PSDN). As shown in Figure 2, the interconnection between public and private networks technically permits "break-in" calls from the public to the private networks, "break-out" calls from the private to the public network, and break-in/break-out on the same call. Break-in and break-out, by themselves, are permitted. What is not permitted is a *combination* of break-in and break-out in a single call. A call originating from the PSTN and accessing a private network cannot then be broken out back into the PSTN. Break-in/break-out on the same call constitutes direct bypass of the public network, with potential loss of revenue for Telkom, and is impermissible.

The Regulator shall license private networks. Resale of leased capacity shall not be permitted until year 4.

- 2.11.3 At the beginning of year 4, resale is permitted, thus encouraging new and innovative uses of the telecommunications infrastructure. To guard against excessive migration of traffic from Telkom and to safeguard network rollout for universal service, a combination of interconnection charges and universal service fund contributions from private networks and value-added networks will be enacted. These must be determined by the Regulator to be sufficient to recoup a reasonable percentage of expected lost revenue. Interconnection charges are probably best accomplished by leaving the matter for commercial negotiation between the parties, but giving the Regulator power to approve or disapprove the resulting interconnection agreement as well as to intervene if the parties cannot agree. The Regulator should, however, put forward a "guide" for determining interconnect charges.
- 2.12 The universal service fund contributions are levied on all market segments in which there is competition. Hence it begins in year 4, when resale is permitted. Thus, if private networks and VANs are permitted resale, they must contribute some fixed percentage of their revenues to the universal service fund (USF). It may be better to keep interconnection charges relatively low and Universal Service Fund obligations relatively high. This combination presumably has the effect of encouraging the growth and variety of services while at the same time indirectly protecting the revenues of the universal service provider. But the Regulator will have to be vigilant in monitoring whether the combination of resale and Telkom's tariff rebalancing tends to undermine the central universal service goal, and adjust contributions accordingly.

The monies from the universal service fund are divided between two parties, according to a formula devised by the Regulator. Part of the USF monies go directly to existing targeted end-users, subsidising them to promote affordability of telephone take-up and use. The purpose of this portion of the USF is to assist targeted users as Telkom rebalances its tariffs during year 4. The other portion of the USF goes directly to fund network expansion in areas where there is no infrastructure.

- 2.13 Value-added network (VAN) providers offer services such as electronic data exchange, e-mail, protocol conversion, access to databases, and managed data network services. In order to reach a large number of customers, VANs normally interconnect with the PSTN. In some cases their service offerings compete directly with those offered by Telkom. In areas where there is competition, playing fields should be level and Telkom must not be permitted to practise predatory pricing. Telkom should not be required to establish separate subsidiary companies at this time, but it must put into place adequate accounting and reporting mechanisms (Chart of Accounts and Cost Allocation Manual - COA/CAM). Indeed, all providers should adhere to COA/CAM requirements. However, the Regulator should limit any COA/CAM requirements to the minimum required to perform its tasks effectively, so as not to impose unnecessary costs on the operators that ultimately will be reflected in end-user prices. The Regulator must monitor whether competition in these areas threatens large diversion of traffic and revenue away from Telkom. This is a complicated task. It may be that certain VANs services bring *new* traffic and revenue to the network, hence calculating the "damage" to Telkom will be tricky. The Regulator should be permitted to experiment with various interconnection formulae. Rules around *international* VAN providers must be negotiated within the framework established by the WTO. Notwithstanding, due consideration will have to be taken to prevent the diversion of voice traffic from Telkom.
- 2.14 Licenced service providers and private network users are ordinarily required to use Telkom infrastructure, including links and other associated equipment. However, if Telkom is unwilling or unable to provide a solution of acceptable quality within a reasonable period of time as determined by the Regulator, these parties may elect to provide their own links under specified conditions set by the Regulator. In other words, Telkom must have the right of first refusal, but thereafter any other capable party (including Transtel and Eskom) may offer services. Because Transtel and Eskom may not, according to Government policy, compete with Telkom or provide end-user customers with telecommunication services at this time, they must lease their available links and associated equipment to Telkom. In parallel, Telkom must lease links and associated equipment from Transtel and Eskom, if these are available and Telkom cannot provide them, to a customer who requests them. The Regulator must oversee this leasing and final pricing to ensure fairness to all parties, including the end-customer.
- 2.15 With the exception of the licenced cellular providers, there can be no network or infrastructure-based competition to Telkom during the period of exclusivity. Transtel and Eskom may not compete with Telkom. These infrastructures should "complement" that of Telkom.

WHAT IS COMPLEMENTARITY?

- 2.16 Complementarity in the use of the telecommunications facilities of Telkom and those of Transtel and Eskom (the parastatals) is advocated in recognition of the fact that the parastatals' facilities are established and operational, and their use should be optimised in a manner that enhances the country's telecommunication capabilities but does not undermine Telkom's exclusivity.

The telecommunications facilities of these parastatals can be seen as consisting of three "functional" layers, as described below.

CRITICAL OPERATIONAL SUPPORT: the parastatals were given permission to build and operate their own telecommunications facilities primarily to enable them to have direct control over critical operations where life may be at risk. At the time when this exception to the national operator's monopoly was granted, it was felt the public telecommunications network could not provide the necessary level of reliability.

IN-HOUSE COMMUNICATION: having been permitted to establish their own telecommunications facilities for their critical operations, the parastatals were also allowed to use these for their own internal needs, so as to optimise the use of their investment in these facilities. In practice they were allowed to self-provide their "private networks", both voice and data, that other organisations were only allowed to obtain from Telkom. The parastatals also made use of Telkom's facilities in their private networks, at their own discretion, in accordance with their needs.

EXCESS CAPACITY: it is not technically and economically practical to build telecommunications facilities to perfectly match the required capacity. There is always therefore a certain amount of excess capacity in any network, including those of parastatals. The parastatals would have an interest in "selling" this excess capacity, and in fact could be encouraged to provide capacity in excess of their requirements if they were allowed to resell capacity, in competition with Telkom, in those areas where Telkom's unbalanced tariff structure would make it profitable.

While Eskom does not have any significant competition in the generation and transmission of electricity, Transnet (Transtel's parent) operates its transport business in an increasingly competitive environment. Transnet therefore could derive competitive advantage by making its telecommunications facilities available to strategic customers or partners.

In consideration of the above, and specifically not to undermine Telkom's exclusivity while optimising the use of the country's telecommunications infrastructure, the following "complementarity" principles shall apply during the period of exclusivity:

- 2.16.1 the parastatals are allowed to continue to self-provide telecommunications facilities for their critical operational support, and for their in-house requirements, in terms of licences that will be issued by the Regulator with due regard to Telkom's exclusivity;
- 2.16.2 the excess capacity of the parastatals can and should, where technically feasible, be leased to Telkom, under mutually agreed commercial and operational terms and conditions, overseen by the Regulator to foster the country's interest. The guiding principles for this operation between Telkom and the parastatals should be that:
 - Telkom will endeavor to make use of the parastatals' excess capacity, for example, to provide alternative routing to its large customer base, especially where it cannot economically provide its own infrastructure.

- the parastatals will endeavor to minimise investment in infrastructure that could result in unnecessary duplication. Some kind of co-ordination with Telkom will be required.
- Telkom is not empowered to forcibly "take over" the other parastatals' networks.

2.16.3 After the period of exclusivity the parastatals shall be treated, depending on Government's policy, as any other licenced provider of telecommunications services.

2.17 The policy on complementarity is subject to the resolution of issues being debated in the Government of National Unity on the "Restructuring of State Assets". Transnet Group and Eskom corporate structures may undergo significant changes with the formation of multiple separate legal entities within the respective groups. Under such conditions, Eskom and Transnet could derive competitive advantage by making their telecommunication facilities available to strategic customers and/or partners. Alternatively, the telecommunications capabilities of Eskom and Transnet may be cut back to what is absolutely necessary for in-house and critical operations functions. Whatever the outcome of the intra-government debates, they will have bearing on the complementarity issue and the Minister for Posts, Telecommunications and Broadcasting, in consultation with the Department, the Regulator, and other relevant ministries, will need to adjust the policy accordingly, consonant with the fundamental goals set out for the telecommunications sector.

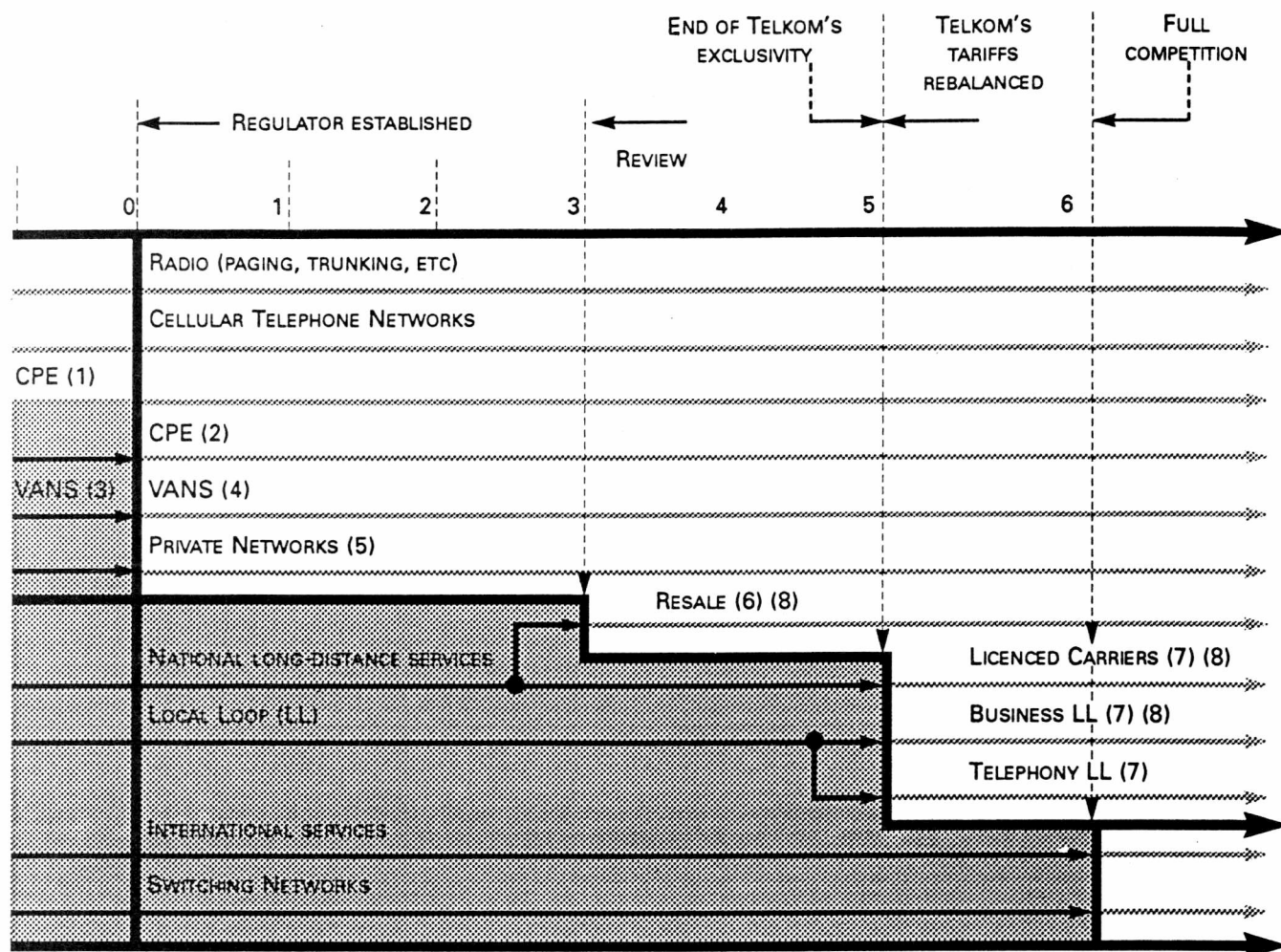
AFTER THE PERIOD OF EXCLUSIVITY

- 2.18 The key problem in the provision of universal service in South Africa is the availability, or lack thereof, of infrastructure, of which the local loop represents a large component. But the local loop is historically the least profitable market segment in the telecommunications sector. This, of course, is why it makes sense to grant Telkom a period of exclusivity. We must assume Telkom (and the existing cellular providers as part of their JEDP responsibilities) will succeed to some important degree in building out local loops in many areas of the country. But it is also reasonable to assume there will be areas Telkom and the cellular providers will not have reached during the period of exclusivity.
- 2.19 Thus, simply opening the local loop market to competition at the end of the period of exclusivity is unlikely to have much effect. In unconnected rural areas the considerable capital outlays, combined with expected low usage, would likely deter entrants. In already connected areas, an entrant would not normally duplicate infrastructure unless she/he could add so much value that customers would move to the new service. This is why, for the most part, the only realistic competition in the local loop in the developed countries has come from cable television operators. And the consensus was that such duplication of infrastructure, at least in the near future, is counterproductive in South Africa. However, it may be that SMMEs and/or co-operative organisations would be able to build local loops, even utilising new and unexpected technologies, such as mobile and the Internet, and after the period of exclusivity they should be allowed and encouraged to do so.

- 2.20 As has been discussed, for Telkom the two central purposes of the period of exclusivity are to allow the company a grace period to roll out the network and to prepare for competition by rebalancing its tariffs. For the most part this chapter on market structure displays a concern to protect Telkom's ability to carry out these central tasks. It is impossible at this time to know the extent and strength of competition Telkom will face after the period of exclusivity. If new entrants are likely to be cash-rich global operators like AT&T and BT, Telkom will indeed benefit from the time it is given to prepare for competition. However, we must articulate a concern on the other side, as well. There is a danger, ironically, that the plan succeeds too well, and Telkom during the period of exclusivity is able to position itself in such a way that it can impede competitive ventures. This has indeed been the case in many other countries, where a strong incumbent operator so dominates a liberalised market that the benefits of competition are few. Thus the Regulator has the difficult task of monitoring Telkom's activities to distinguish between actions that facilitate the central goals of the sector in terms of reconstruction and development, and actions whose effect will position Telkom so powerfully as to undermine eventual competitors. This will not be easy, but must be done. The objective is not promoting competition per se, but of promoting the welfare of the consumer. To the extent that competition facilitates that welfare, the Regulator should do what is necessary to establish a fair playing field.
- 2.21 At the beginning of year 6, the following phased liberalisation will ensue:
- 2.21.1 Where there are not yet local loops but where some Telkom switching infrastructure is in place, SMMEs and community co-operatives are permitted and encouraged to provide local loops in co-operation with Telkom, under the supervision of the Regulator.
 - 2.21.2 Telkom may sublease lines to competitive installers of public pay-phones at normal rates in designated geographical areas. The aim is to increase the number of payphones in underdeveloped areas. Agreements and tariffs will be overseen by the Regulator.
 - 2.21.3 National long distance is opened up for competitive provision, but must interconnect into Telkom PSTN exchanges. Telkom must now endeavor to ring-fence its core network from its service offerings in the national long-distance market segment so as to ensure that it is not practicing predatory pricing. Interconnection charges must be fair and cannot favour Telkom's long-distance offerings over the new entrants' long-distance offerings. Subject to Government policy, the entrants into long-distance could include Transtel and Eskom, so long as provision is done through fully separate subsidiaries.
 - 2.21.4 Metropolitan area networks (MANs) are permitted. MANs are networks of private networks, and hence are ordinarily interlinked business networks.
 - 2.21.5 National long-distance providers and MANs will be assessed for contributions to the universal service fund.

THE MOVE TOWARD FULL, REGULATED COMPETITION:

- 2.22 International long distance is opened to competition and a second full service network operator is licensed at the beginning of year 7. Under regulatory supervision and licensing, in principle full facilities-based competition is permitted. All users may choose whatever facilities and whichever provider they find most appropriate.
- 2.23 Interconnection agreements assume great importance as the environment moves toward a network of networks, and no network player should be permitted to erect bottlenecks. Hence the Regulator is empowered to oversee and compel interconnection agreements and set appropriate formulae. Indeed, as the telecommunications environment gets more complicated, there will likely be a rise of "system integrators." System integrators are organisations that assemble packages of various types of services and equipment and customise these packages to the specific requirements of their customers. Even though they may not own or operate networks or lines, system integrators, in principle, should also be under regulatory oversight.
- 2.24 Universal service fund contributions will be made by all competitive players according to fair and transparent formulae established by the Regulator. In what is now a competitive environment, all USF monies go to targeted end-users to facilitate affordability and indirectly encourage further network rollout.
- 2.25 The policy relating to the liberalisation of the telecommunications sector and the period of exclusivity of Telkom will be subject to:
- the review, mentioned in 2.7;
 - further discussion, in various fora, including Parliament.



- (1) Excluding the basic telephone instrument
- (2) Including the basic telephone instrument
- (3) Licences issued by Telkom
- (4) Licences issued by the Regulator
- (5) Both Voice and Data on facilities leased from Telkom, no break-out / resale until year 4
- (6) Licenced resale of facilities leased from Telkom
- (7) Interconnect with Telkom's switching network
- (8) Contribution to Universal Service Fund

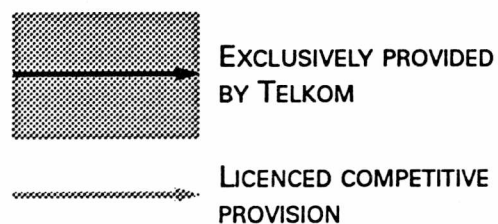


FIGURE 1 - Telkom's exclusivity and gradual introduction of competition

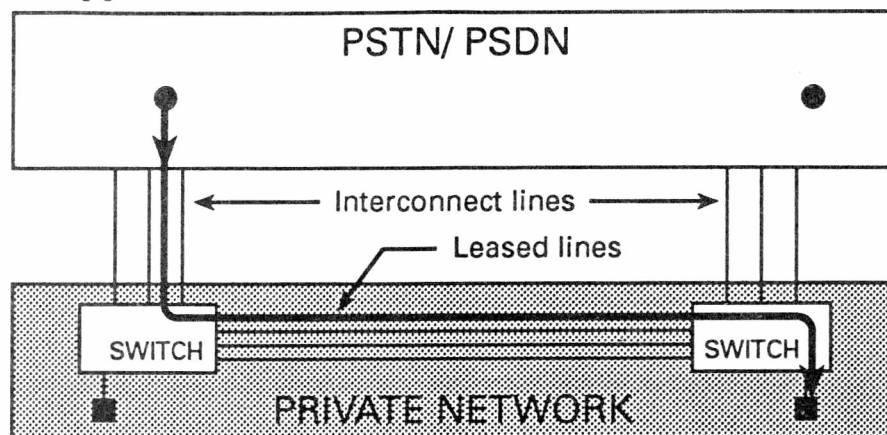
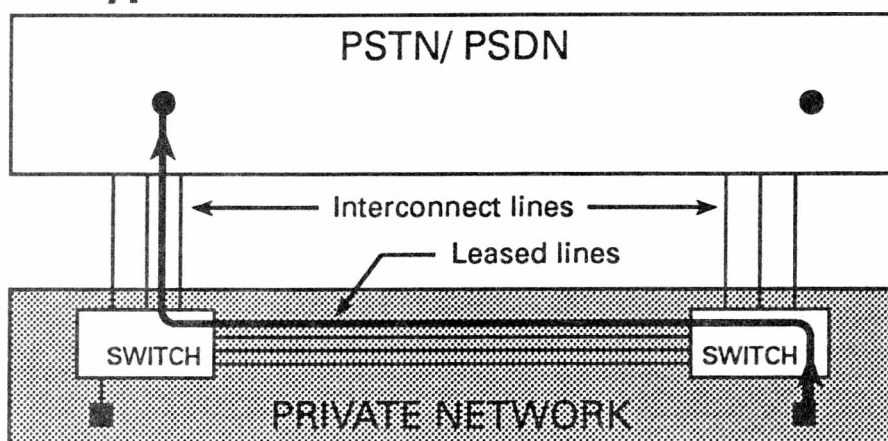
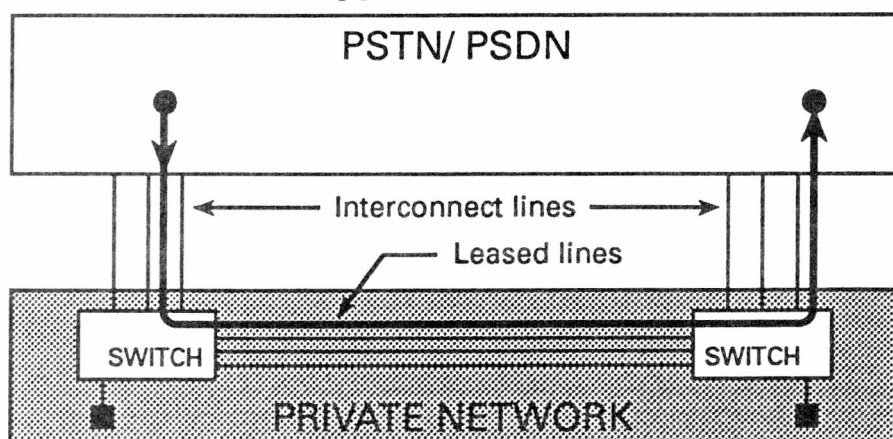
A) Break-in and bypass**B) Break-out and bypass****A) Break-in / break-out and bypass**

FIGURE 2 - Interconnection between public and private networks

GLOSSARY OF TERMS

CPE

Telecommunications equipment installed on customer's premises. Includes devices from simple single-line telephones to multi-line systems such as PABXs.

LONG-DISTANCE

Circuits used to interconnect local exchange areas with other local exchange areas, or with other networks abroad. It includes both circuits for switched and for point-to-point (leased) traffic.

LOCAL LOOP

- The communication channel connecting customer with the nearest exchange, or long-distance transmission facility. It is normally used for the transmission of basic telephony and data.
- The communication channels interconnecting telecommunications terminals within a restricted (local) area, usually for high speed communication (e.g. MAN).

PRIVATE NETWORK

Any network that is designed and operated for the exclusive use of a particular organisation or group of users. It can comprise both leased lines and switching units (PABX), and it may or may not be interconnected to the PSTN.

PSDN

Public Switched Data Network. The wired data network operated by Telkom.

PSTN

Public Switched Telephone Network. The wired telephone network operated by Telkom.

RESALE CARRIER

An operator that leases capacity from facility-based operators and resells it.

TARIFFS REBALANCING

Setting the tariffs for telecommunications services in line with the costs of providing them, so that cross-subsidies from calls to rentals, from long-distance to local services, and from international to national services, are eliminated.

VANS

Value Added Networks: a data communication system in which special service features, such as protocol conversion or access to databases enhance the basic data transmission facilities offered to the customer.

3

OWNERSHIP, INVESTMENT AND FINANCING

- 3.1 At the National Colloquium on Telecommunications Policy, there was no consensus on the question of ownership. Organised Labour felt that Telkom should remain wholly state-owned, while the rest of the Plenary was in favour of a strategic equity partnership with an international partner and/or private equity participation.
- 3.2 This issue is subject, at present, to the outcome of the state assets' restructuring process in the Government of National Unity.

4

ECONOMIC EMPOWERMENT OF HISTORICALLY DISADVANTAGED SOUTH AFRICANS

- 4.1 Political empowerment of the majority through democratic processes underway in the country must be accompanied by economic empowerment in order to achieve the national goal of sustainable social and economic development. The creation of meaningful jobs, wealth and a decent standard of living for the population will give meaning to their right to vote. Thus, political power cannot bring stability and growth without addressing the issue of historical disparities within the economic power. Besides referring to those who were disadvantaged by the apartheid system in the past, the term 'disadvantaged' also applies to those South Africans who have been historically disadvantaged through discrimination on the grounds of gender and/or disability. In the context of telecommunications, the severe disadvantage experienced by members of rural communities under apartheid should receive special attention.
- 4.2 Economic empowerment of historically disadvantaged communities is a deliberate programme of achieving meaningful participation by all members of these communities in all aspects of productive economic activities in South Africa as consumers, workers, managers and owners. Achievement of sustainable economic empowerment for historically disadvantaged communities will require a deliberate long-term phased programme utilising a wide spectrum of approaches. These will include extension of telecommunications services to all; broadening equity ownership of current and future enterprises (subject to the state assets' debate); creating opportunities for meaningful employment and management; and effective promotion of entrepreneurship. The effectiveness of any of these aspects and the success of the overall programme of economic empowerment will be rooted in the principle of a broad-based and non-discriminatory involvement of all communities in the economic development of South Africa. Human resource development within the telecommunications sector also needs to be seen as a form of economic empowerment to enable disadvantaged South Africans to participate in the industry effectively.

PROVIDING UNIVERSAL SERVICE

- 4.3 The extension of affordable and accessible telecommunications service to all communities as envisaged in the universal service goal will enhance social and economic activities in historically disadvantaged communities by providing required infrastructure as well as by generating employment in the sector itself. Providing telecommunications services to schools, hospitals and the community at large will greatly increase the participation of all communities in the nation's economy. Special emphasis will be placed on providing services to all disabled people.

BROADENING EQUITY OWNERSHIP

- 4.4 With regard to the public sector, this issue is subject to the outcome of the state assets' restructuring process underway in the Government.
- 4.5 With regard to the private sector, the Ministry for Posts, Telecommunications and Broadcasting would like to encourage the broadening of equity ownership in private enterprises.

EMPLOYEE SHARE OWNERSHIP PROGRAMMES (ESOPS)

- 4.6 With regard to the public sector, this issue is subject to the outcome of the state assets' restructuring process underway in the Government.
- 4.7 With regard to the private sector, the Ministry for Posts, Telecommunications and Broadcasting would like to encourage the establishment of employee share ownership schemes in private enterprises.

MANAGEMENT AND EMPLOYMENT

- 4.8 The telecommunications sector has a severe shortage of managers and technical employees from the historically disadvantaged communities of South African society.

The implementation of affirmative action programmes in the sector will be required as detailed in Issue 8: Human resources for the sector.

- 4.9 Programmes will be put in place to appoint qualified individuals to genuine decision-making and strategic executive and management positions in the companies in the industry. These companies will be required to undertake specific actions in this regard including:
- Setting targets for transformation of their management to reflect the participation of the majority population; these targets will be determined in consultation between Government and the telecommunications industry;
 - Establishment of skills development programmes to upgrade and broaden the skills base of employees; a special human resources development directorate will be established by the Regulator to support these programmes on an industry-wide basis, which would include operators, equipment suppliers and the Regulator;
 - Entrepreneurial support for employees who will be affected by the reforms of the industry.

- 4.10 The South African Qualifications Authority (SAQA) and the National Qualifications Framework (NQF) will recognise experience, certify skills and promote industry-wide transfer of skills. Compliance with these guidelines will be monitored by the Ministry for Posts, Telecommunications and Broadcasting.

PROMOTING ENTREPRENEURSHIP

- 4.11 The telecommunications industry can play an enabling role by providing entrepreneurial opportunities for South Africans from historically disadvantaged communities in its own sector as well as in other sectors. In order to achieve the stated objective to support and strengthen the local industrial capacity and base for sustained development of telecommunications in South Africa, it is essential to support the economic empowerment of historically disadvantaged communities in the same context. The Government procurement policy can provide such support – for instance through programmes of set-asides of a percentage of contracts for procurement, tenders, outsourcing, or subcontracting for qualified contractors from disadvantaged communities in consultation with stakeholders. The specific percentages would vary with time as well as specific aspects of the industry and would be negotiated on a regular basis among industry, the small business sector and Government.
- 4.12 Small, Medium and Micro Enterprises (SMMEs) are recognised as an important component in the nation's development, particularly through their ability to create additional employment opportunities and promote technical innovation. These enterprises are often relatively labour intensive and are located within the communities they serve. In view of the importance of this sector in job creation, Government accords special emphasis for their use as a vehicle for empowerment of disadvantaged communities and will actively promote their development.

Government and state parastatals can also play a major role in promoting SMMEs by

- revising procurement policies to allocate some percentage of procurement of goods and services from emerging SMMEs with due consultations with the affected workforces;
- the formation of joint ventures with SMMEs that would assist in developing their capacities; and,
- facilitating the necessary training for emerging entrepreneurs;
- encouraging the equipment supply industry to support the development of SMMEs through joint ventures and with equity participation in emerging SMMEs.

PROCUREMENT

- 4.13 Procurement is one of the mechanisms which can be used to effectively increase the participation of disadvantaged communities in the development of telecommunications. It can be used as an incentive for businesses who undertake positive steps by allowing significant equity stakes to black businesses, striving for gender balance, undertaking active training of its employees and implementing all the programmes towards the attainment of the objectives of affirmative action. The incentives in procurement may be expressed as points for, or against, competing bids and, all things being equal, preference will be given to the businesses with more points regarding the above issues. Of course, such preferences would be within the allowable limits under the GATT framework.

SET ASIDES

- 4.14 A specified percentage of contracts from public enterprises will be set aside for qualified contractors from disadvantaged communities. In addition, information on all tenders will be made available to all contractors from the disadvantaged communities and a system of price preferences will be established for tenders in which these contractors offer bids. Similarly, a data base on existing SMMEs in the disadvantaged communities will be established so relevant information can be widely disseminated to telecommunications operators and equipment suppliers for use in their outsourcing programmes. Such a data base would also act as an information source for verifying the ownership validity of such companies as well as their capability for meaningful contribution to the nation's economy (for example, the level of local content of their products). The data base should be managed by the Small Business Council and the State Tender Board, including provincial tender boards.
- 4.15 The implementation of a set-aside programme by the key participants in the sector will be monitored by the Minister.

LICENSING

- 4.16 Specific conditions for the promotion of economic empowerment programmes will be included in the conditions for granting and/or renewing of licences to operators in the sector (as is the case in the Independent Broadcasting Authority Act). In particular, frequency spectrum will be allocated to those operators with acceptable levels of equity stake held by members of the disadvantaged community only.

5

REGULATION OF THE TELECOMMUNICATIONS SECTOR AND RADIO FREQUENCY SPECTRUM

ESTABLISHMENT OF AN INDEPENDENT TELECOMMUNICATIONS REGULATORY AUTHORITY

- 5.1 Regulatory arrangements for telecommunications are still in the transitional stage provided for in the legislation of 1991 which transferred the running of the telecommunications service from the Department of Posts and Telecommunications to the public company Telkom SA Ltd.
- 5.2 Under these arrangements, the telecommunications service monopoly formerly exercised by the Department is continued by Telkom except for the provision of cellular services and a few other areas. In those cases, other providers have been allowed access to the telecommunications field by the Minister under powers conferred on her/him by the above legislation.
- 5.3 The regulation of the telecommunications equipment manufacturing industry is still largely based on temporary contractual arrangements entered into by the Department and Telkom.
- 5.4 Developments have since highlighted the urgent need for suitable new arrangements in accordance with an adequate legislative regulatory framework. The key element in the new arrangements proposed by the Government is the establishment of an independent statutory telecommunications regulatory authority.
- 5.5 The radio frequency spectrum is a national asset and a scarce resource that should be utilised in the interest of all South Africans and in conformity with the international treaties and conventions to which South Africa subscribes. Overall frequency management includes functions such as allocation to users, long-term planning, national and international co-ordination and prevention of interference. Particular consideration should be given to the fact that technology trends indicate that radio technology will become more and more feasible for providing telecommunications services, thus it becomes essential to have the closest linkage between the licensing of telecommunications services and the licensing of the spectrum to be used by these services.

- 5.6 The Department of Defence is a very large user of many frequency bands (fixed and mobile, ground, air and satellite communications, radar, Electronic Support Measures and Electronic Counter Measures (ESM/ECM), ionosphere sounding, weapon guidance systems and so on. Lack of co-ordination between the civilian and military sectors may result in costly mutual interference. Hence the Regulator will, as one of its first tasks, institute a review of the current allocation of frequency spectrum, particularly the allocation between military and civilian sectors.

RELATIONSHIP BETWEEN THE MINISTRY FOR POSTS, TELECOMMUNICATIONS AND BROADCASTING AND THE REGULATOR

- 5.7 It is proposed that:

- The Minister for Posts, Telecommunications and Broadcasting and the Department of Posts and Telecommunications will remain responsible for setting of policy on broadcasting, postal services, telecommunications and the radio frequency spectrum and for administering the relevant legislation;
- Any policy in respect of the telecommunications sector resulting from the White Paper process shall be subject to Ministerial review;
- The telecommunications regulatory authority and the universal service agency will report to Parliament via the Minister as is presently the case for the Department and the IBA;
- Telecommunications and broadcasting will in the medium term be regulated by a single authority;
- In the period before the merger of broadcasting and telecommunications regulatory authorities into one, the two structures managing the broadcasting and telecommunications frequency bands respectively should jointly co-ordinate the management of the frequency spectrum;
- An independent and impartial telecommunications regulatory authority shall be established with the objectives, functions and structure indicated below;
- The independence of the Regulator is necessary in order to ensure its impartiality. Independence has three aspects:
independence from the operational organisation(s) responsible for building and operating the public telecommunications infrastructure and providing telecommunications services (e.g. Telkom); independence from other interested parties, such as industrial interests in the telecommunications sector; independence from the Government in dealing with its mandated functions, once the general framework of telecommunications policy has been set.

OBJECTIVES OF THE REGULATOR

5.8 The telecommunications regulatory authority will have the following objectives:

- to regulate telecommunications in the Republic of South Africa in the public interest;
- to achieve progress towards the social goals of telecommunications policy - the provision of universal service;
- to ensure the provision of a wide range of telecommunications services to stimulate and support economic growth;
- to regulate the activities of Telkom in conjunction with the Minister for Posts, Telecommunications and Broadcasting;
- to stimulate investment in the public telecommunications network;
- to ensure a 'level playing field' where competitive entry is permitted in terms of the telecommunications policy;
- to protect the interests of telecommunications users and consumers;
- to stimulate innovation in the telecommunication sector with a view to building an information superhighway in South Africa;
- to promote the development of human resources for the telecommunications sector;
- to promote a competitive and effective manufacturing and supply industry;
- to assure the technical pre-conditions for effective telecommunications operations;
- to manage common national resources such as the radio frequency spectrum, effectively.

FUNCTIONS OF THE REGULATOR

5.9 It is proposed that the regulatory functions of the independent regulatory authority should be, *inter alia*:

5.9.1 Universal Service

- set goals for the achievement of universal service;
- liaise with Telkom with regard to universal service during the period of exclusivity;
- set universal service obligations;
- administer the universal service fund which will be managed by the universal service agency;
- ensure that the needs of disabled people are taken into account in the expansion of universal service.

5.9.2 Service provision and user needs

- promote the provision of efficient, effective and affordable telecommunication services for all sectors of society and the development of public and private services which are responsive to the needs of users;
- ensure that, in the provision of public services, the needs of the constituent regions of South Africa and local communities are duly taken into account;
- 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.

5.9.3 Ownership and investment

- encourage investment in, and promote the stability of, the industry;
- encourage ownership and control of telecommunications services by people from historically disadvantaged groups;
- impose limitations on cross ownership of telecommunications services in accordance with the requirements of anti-trust legislation.
- to look into the structure of the cellular industry, in co-operation with the Competitions Board, as well as into whether cellular network operators should own airtime provider companies, or whether such ownership poses a restraint of trade.

5.9.4 Competition

- promote fair competition between telecommunications service providers where such competition is permitted, in conjunction with the state's competition policy;
- allow service providers maximum freedom in the pursuit of their commercial objectives, while simultaneously taking into account the telecommunications needs of the public and the policy objectives of the Government.

5.9.5 Licensing

- undertake the licensing of all telecommunications service providers according to the policy guidelines set by the Minister;
- license radio spectrum users, except those operating in terms of licences issued by the Independent Broadcasting Authority;
- undertake the review of existing licences, where applicable;
- monitor and enforce compliance with the relevant legislation and regulations;
- evaluate and prioritise tenders for new licences;
- determine appropriate classes of licences;
- hear complaints from users and service providers.

5.9.6 Radio frequency spectrum management

- manage the radio frequency spectrum in the public interest;
- institute a review of the current allocation of frequency spectrum, particularly the allocation between military and civilian sectors;
- ensure the most efficient use of the radio frequency spectrum and institute the necessary mechanisms to achieve this;
- control and rationalise radio frequency spectrum allocation and usage by means of appropriate measures;
- establish and implement the national radio frequency spectrum plan.

5.9.7 Standards and quality

- set national standards governing the provision of telecommunications services and ensure compliance therewith;
- 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 the rules for their connection to the network.

5.9.8 Human Resources Development

- establish a human resources development directorate to provide funding for human resource development in the telecommunications sector (see Issue 8);

5.9.9 Research

- promote and conduct research into developments in telecommunications regulation policy and technology.

5.9.10 Interconnection

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

5.9.11 Tariffs

- regulate tariffs if and when required in the public interest.

5.9.12 Consumer and user protection

- take responsibility for consumer protection with regard to telecommunications.
- provide for the resolution of complaints and disputes by consumers and users regarding telecommunications services.

5.9.13 Numbering

- administer South Africa's numbering plan.

- 5.9.14 Access to Intelsat
 - regulate access by others to Intelsat services;
- 5.9.15 Liaison with Minister
 - advise the Minister with regard to any major issues affecting telecommunications in the event of enquiries, complaints, objections or disputes;
- 5.9.16 Parliament
 - report to Parliament on the performance of its functions;
 - annually submit a budget to Parliament for approval.
- 5.9.17 Consultation and international participation
 - participate in international delegations, in consultation with the Ministry, on issues relating to telecommunications;
 - provide a forum for consultation with all interested parties.

STRUCTURE OF THE REGULATOR

COMPOSITION OF THE TELECOMMUNICATIONS REGULATORY AUTHORITY

5.10 It is proposed that the Regulator should consist of a Council.

5.10.1 Composition of the Council

- A Council, consisting of no fewer than five and no more than seven members, one of whom shall be designated as chairperson, will be appointed by the Minister;
- Councillors will be broadly representative of the people of South Africa and will, viewed collectively, be broadly knowledgeable of the telecommunications sector;
- The Minister will determine the levels of remuneration of the chairperson and councillors, in consultation with the Minister of State Expenditure;
- A councillor of the telecommunications regulatory authority shall not perform or engage himself or herself to perform any remunerative work outside the duties of his or her office.
- The chairperson shall be appointed for a period of five years. Councillors shall be appointed for a period of four years, subject to a mechanism to ensure their rotation at intervals of two years. Appointments may be renewed.

SELECTION CRITERIA

5.10.2 It is proposed that the following persons should not be considered eligible to be members of the Council:

- a person who is not a citizen of and permanently resident in the Republic;
- a person who is in the service of any state department;
- a member of Parliament or any subordinate governmental authority;
- an unrehabilitated insolvent;
- a person who has at any time been convicted (whether in the Republic or elsewhere) of theft, fraud, forgery or uttering of a forged document, perjury, an offence under the Corruption Act, (Act No. 94 of 1992), or any offence involving dishonesty; or a person who has been sentenced to imprisonment without the option of a fine, with the exception of political prisoners.

In order to take up office as a councillor, one may not be:

- a person who is in the service of any state department;
- a member of Parliament or any subordinate governmental authority;
- a person holding an office in any political party;
- a person who directly or indirectly has a financial interest in the telecommunications industry;
- a person who holds office in a company or other institution engaged in or having a financial interest in the telecommunications industry;
- a person who is employed in the telecommunications industry;

5.10.3 The Minister should, in appointing a member to the regulatory authority satisfy her/himself that such a member is a person of high calibre, integrity and expertise, capable, together with the other members, of performing the duties and functions of the regulatory authority.

SELECTION PROCESS

5.10.4 An open and transparent process should be followed. Nominations should be called for and public hearings should be held by a panel appointed by the Minister.

REPORTING LINES

5.11 The Regulator should report to Parliament through the Minister.

ADMINISTRATION

5.12 The Council will establish its own administration in consultation and negotiation with the Ministry and the Department with regard to staff and resources. The staff composition of the Regulator should reflect the demographics of the country.

TRANSPARENCY

- 5.13 In principle the Regulator will conduct the business of regulation in an open and transparent manner. Documents will routinely be opened to public scrutiny and due provision should be made to make these accessible to the public. Information submitted by licensed operators or service providers considered proprietary (that is information about company plans, investments and so on, whose public divulgence might affect those plans or provide a competitor with inside information) should be kept confidential by the Regulator.

ENFORCEMENT

- 5.14.1 The Council should act only in accordance with the powers conferred on them and functions and duties assigned to them by or under the relevant Act;
- 5.14.2 It is proposed that the Regulator should have the power, where a telecommunications service provider or user of radio frequency spectrum is in contravention of his/her licence, to:
- act against a licensee who fails to comply with the conditions of the licence, and
 - impose a suitable fine, (subject to a maximum limit approved by the Attorney General or prescribed in the Act);
 - suspend or revoke a licence;
 - other appropriate measure of enforcement.
- 5.14.3 Where a member of the public contravenes a provision of the Act, that person is guilty of an offence and is subject to a suitable fine, or other appropriate means of enforcement.

FUNDING

- 5.15 It is proposed that
- 5.15.1 the cost of regulation should not fall on the fiscus but on the beneficiaries of regulation;
- 5.15.2 all monies raised in the process of regulation should be ploughed back into the telecommunications sector;
- 5.15.3 a telecommunications fund be established which should be administered by the Department of Posts and Telecommunications and funded from:
- fees and monies payable to it in terms of licences. Licence fees shall be approved by the Minister and based on cost recovery or on value as dictated by circumstance;
 - income derived from its investment and deposit of surplus monies;
 - loans raised for capital expenditure;

- fines payable in terms of the Telecommunications Act on account of the contravention thereof or on account of the breach of licence terms, conditions and obligations; and
 - the proceeds derived from the sale of anything declared forfeited to it in terms of the Telecommunications Act;
 - contributions in terms of universal service obligations (and other potential sources, including the RDP);
- 5.15.4 The funds should be used to defray all expenditure incurred by the Department, the Regulator and the universal service agency;
- 5.15.5 A contribution from the telecommunications fund will also be made to consultative/advisory forums in the telecommunications sector;
- 5.15.6 An allocation for the promotion of universal service should annually be made from the telecommunications fund. This allocation should be made to the universal service fund and be used for the promotion of universal service. The universal service fund should be managed by the universal service agency, which should be accountable to the Ministry;
- 5.15.7 The Department should annually, in consultation with the Regulator and the universal service agency, compile a consolidated budget for approval by Parliament. This budget should reflect, on an item by item basis, all operating and capital expenditure incurred by the Department, the Regulator and the universal service agency;
- 5.15.8 An adequate treasury function should be established within the Department to manage the fund. Any excess of income over expenditure should revert to the Treasury.

NAME OF THE REGULATOR

- 5.16 The name of the Regulator shall be the South African Telecommunications Regulatory Authority (SATRA).

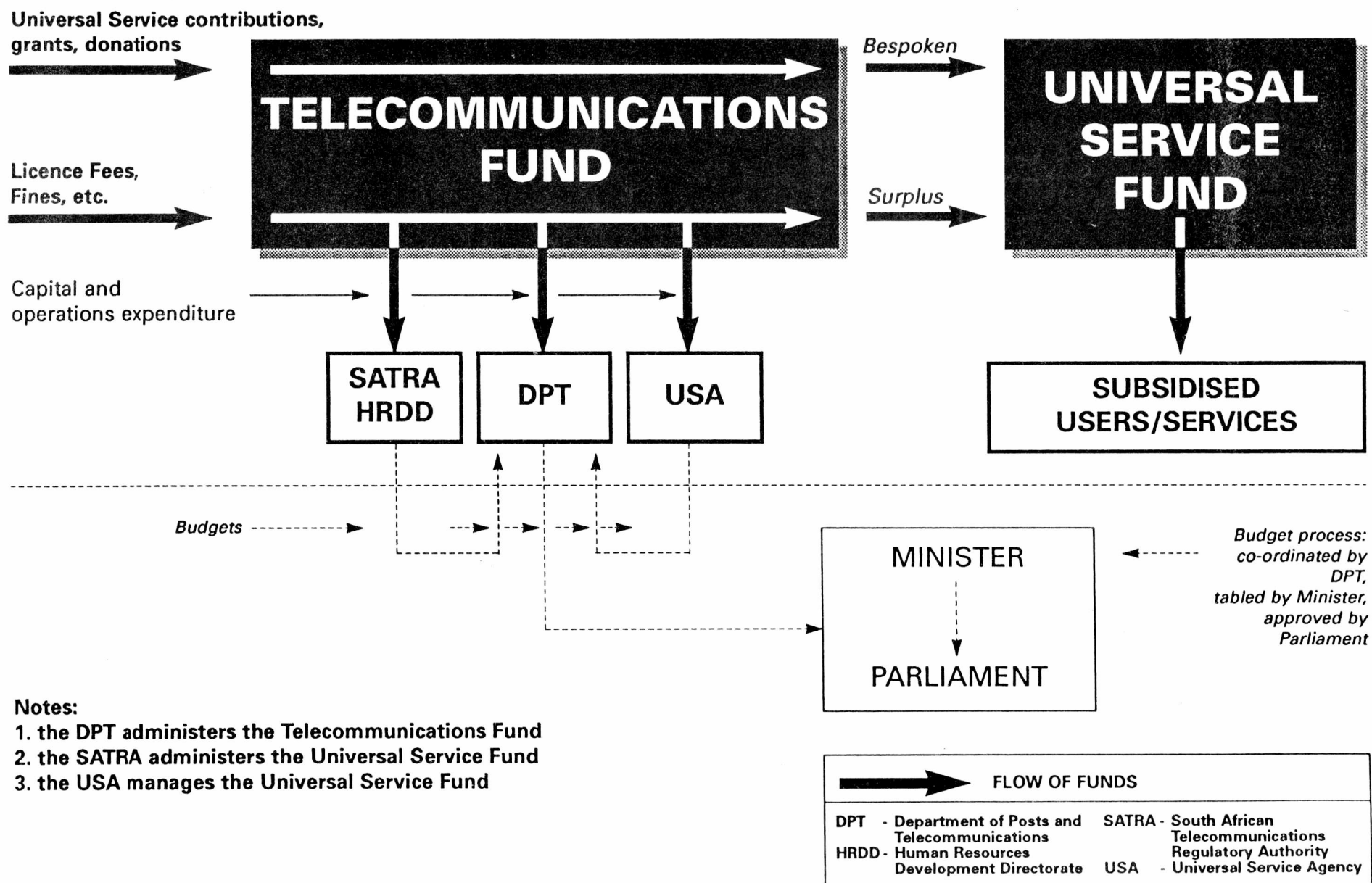


FIGURE 3 - Flow of telecommunications' funds

6

AFFORDABILITY AND TARIFF SETTING

- 6.1 The adequate attainment of universal access and service goals is largely dependent upon meeting the requirements of affordability. Indeed, the manner in which the cost of services is regulated or determined is fundamental to the implementation of Government policy. The key requirement is to create a balance between affordability and the needs of the operator to expand and upgrade its network. This chapter seeks to create such a balance.

TARIFF REGULATION

- 6.2 In respect of tariff regulation, the Ministry favours the application of the following principles:
- 6.2.1 Tariffs should be regulated. However, the nature and extent of such regulation will vary in accordance with the circumstances in evidence in different areas of the telecommunications sector. The dominant influencing factor is the presence or otherwise of competition.
 - 6.2.2 Tariff regulation is unnecessary in the face of sufficient competition to allow market forces to determine pricing levels. Regulation would, however, be required in such competitive areas in response to collusion or to eliminate any threats or acts of predatory pricing.
 - 6.2.3 In areas of the telecommunications sector in which a monopoly is in place, or in which competition is not sufficient to ensure acceptable levels of affordability, tariffs should be regulated. The preferred mechanism is a price-capping regime, allowing for the freedom to set tariff levels at any reasonable point below the cap, and for consumer price index-related increases on an annual basis.
 - 6.2.4 The tariffs of franchise telephone services should be regulated by means of a price-capping mechanism, until such time as there is sufficient competition to facilitate the determination of tariffs by market forces.
 - 6.2.5 The independent regulatory authority would be responsible for the regulation of tariffs.

CROSS-SUBSIDIES

- 6.3 As regards the question of cross-subsidies, the Ministry favours the following principles:
- 6.3.1 Under no circumstances should cross-subsidisation from non-competitive to competitive services be permitted.
 - 6.3.2 Cross-subsidies result in market distortions, and accordingly, as a general rule, should not be permitted. There are, however, two exceptions to this general rule:
 - Cross-subsidisation within competitive areas is not sustainable in the long term, and accordingly is permissible.
 - Cross-subsidisation regimes implemented for the purposes of attaining specified social objectives and which are approved, prior to such implementation, by the independent regulatory authority.
 - 6.3.3 All cross-subsidisation regimes implemented on the grounds of the attainment of social objectives should be transparent to the Regulator, using a chart of accounts and cost allocation manual.
 - 6.3.4 Cross-subsidisation regimes in non-competitive areas should be eradicated as soon as possible.
 - 6.3.5 Tariffs which are inflated for the purposes of effecting approved cross-subsidisation regimes should be protected from competition by other operators, subject to review on an ongoing basis, by the independent telecommunications regulatory authority.
 - 6.3.6 Telkom's tariffs should be completely rebalanced, on a phased basis, as soon as practically possible, but with regard for the realities of the adjustments required.
 - 6.3.7 The Regulator should, in consultation with Telkom, determine a rebalancing time-table, taking into consideration the attainment of social objectives, the practicalities of regular tariff adjustments and the realities of market perception.

AFFORDABILITY

- 6.4 The universal service agency will be tasked with the detailed assessment of affordability mechanisms. Special emphasis should be placed upon the investigation of direct subsidy schemes directed at individuals, and upon differentiated pricing structures including the extension of payment periods for installation fees.
- 6.5 The requirements of the telecommunications sector preclude the extensive subsidisation of telecommunications costs of other strategic social sectors.

7

THE EQUIPMENT SUPPLY INDUSTRY

THE STATE'S VISION

- 7.1 South Africa has a long established and significant telecommunications supply industry, which currently has a turnover of some R3 billion and directly employs more than 7,000 people.
- 7.2 It is the view of the Ministry that South Africa needs a strong telecommunications equipment supply industry in order to respond to the developmental needs of the country and position South Africa appropriately for the 21st century. A vibrant, competent and globally competitive local telecommunications industry will attract more investment, require more employment and generate greater economic activity.
- 7.3 This vision is in compliance with Government proposed industrial policies, which state that the long-term vision of South Africa's policy makers is to guide and expedite the country's process of industrial development up the so-called value-added chain and, in so doing, to achieve the goal of creating substantial (high-skill and high-income) employment opportunities on a sustainable basis in the long term.
- 7.4 To achieve these goals, the local supply industry must undergo an active transformation process to a globally competitive national manufacturing resource for both international and domestic markets. In close co-operation with buyers and suppliers of telecommunications equipment the Ministry will actively explore methods of stimulating the local supply industry and supporting it in this transformation process, and will encourage the implementation of such measures by all licenced operators.

SUPPORT FOR THE LOCAL INDUSTRY

- 7.5 Given that the South African telecommunications supply industry is the largest and most advanced in Africa, it requires no more protection from the Ministry than given to local industries of other countries at a similar stage of development. The Ministry believes it can best support the local supply industry by creating a stable macro-economic environment with realistic policies which support capital, technology and skills accumulation.

- 7.6 It is the intention of the Ministry, therefore, to act towards the gradual and phased removal of any protection measure inconsistent with the Government's World Trade Organisation obligations, and to implement measures aimed at supporting and stimulating the industry towards achieving the fundamental restructuring needed. Such measures will take cognisance of the need for a transitional period for Telkom, the local supply and manufacture industry and their staff and workers to complete their adjustments towards more efficient local institutions and higher global competitiveness.
- 7.7 In particular the Government will provide special assistance to those segments of the supply industry facing severe down-phasing of import tariffs, those in need of substantial modernisation and those not yet capable of surviving without support. The Ministry is of the view that the local telecommunications supply industry has tremendous opportunities to establish itself as a major player in specific niche markets on the African continent. The Government will therefore provide special support to those segments of the industry which are competitive and have the potential to expand their markets both abroad and locally.
- 7.8 The Government will strive to ensure inter-governmental trade agreements in the telecommunications sector will appropriately address anti-dumping measures, requirements for technology transfer and technological and managerial skills transferred to South Africans, and that counter-trade agreements will not include restriction on the export capabilities of local industry. It will thus contribute to improving the balance of trade.
- 7.9 South Africa signed the Uruguay round of the General Agreement on Tariffs and Trade (GATT) and the associated Trade Related Investment Measures (TRIM) and Technical Barriers to Trade agreements in 1994. The World Trade Organisation (WTO) will now monitor and police these agreements, which are intended to lower barriers to international trade. The net effect on South Africa is that the previous system of long-term agreements is obsolete and the market is now open to new entrants who can compete on favourable terms with South African companies, forcing the latter to adjust to global productivity and efficiency levels. The local equipment supply industry needs time and assistance to adjust to these new market conditions.
- 7.10 Tariff protection within the agreed binding levels is therefore the only remaining protective measure available to Government, and Government intends applying tariff protection to the binding level for at least the period of transition, as foreseen by GATT. Such tariff protection will last only for a short period of transition to enable the local equipment supply industry to re-orientate itself to the conditions of global competition. The Ministry for Posts, Telecommunications and Broadcasting will make a request to the Ministry for Trade and Industry in this regard, subject to the needs of universal service expansion and the provision that equipment which is not manufactured locally will not be affected by tariff protection.

STIMULATION OF LOCAL INDUSTRY

7.11 Protection through tariffs is a relatively blunt instrument which may not be suitable for effecting the directed transformation of industry envisaged. Instead, Government can stimulate industrial development through:

- various supply side measures such as tax incentives for training and investment, and the Support Project for Industrial Innovation (SPII) of the Department of Trade and Industry; and
- Creating strategic partnerships between equipment suppliers and network operators via licensing conditions such as the JEDP. In this regard, the Australian Telecommunication sector has had significant success in transforming its equipment supply industry into a growing, competitive, export-oriented industry. The Ministry is, therefore, committed to seriously examine the Australian model and other models with regard to measures to stimulate the equipment supply industry for regulating equipment purchases, and to consider their adaptation to the local environment for possible deployment in South Africa.

7.12 The Regulator will promote the activities of the local supply industry to produce equipment and to add value. Consideration should be given as to whether and how licence conditions can promote support of the local equipment supply industry while ensuring even-handed treatment of competing network operators and service providers.

7.13 Telkom has already moved toward an open tender system. It is the intention of the Ministry to continue this process and ensure equipment purchase transactions be based upon merit in an open tendering process. In such a process, all things being equal, preference would be given to suppliers with the local manufacturing, research and development and support capabilities, which ensure the lowest life cycle cost.

7.14 All network operators, existing and new, should be compelled to direct their purchases of telecommunications equipment and service in such a manner that:

- small, medium and micro-enterprises (SMMEs) are given access;
- black economic empowerment goals are promoted, according to criteria to be set by the Regulator from time to time.;

To ensure equity between service providers, these goals should be quantified in licence conditions.

7.15 It is the view of the Government that in the interests of a competitive environment supporting the lowest cost of telecommunications equipment, network operators should not be allowed to manufacture such equipment.

SOCIAL IMPACT

- 7.16 In order to maximise the ripple effect benefits to society of a strong local telecommunications supply industry, it is imperative this industry as a major employer contributes pro-actively to the empowerment of historically disadvantaged communities.

As SMMEs are major creators of new employment in most economies, it is of particular importance to encourage their integration in the sector's mainstream activities and to establish an environment conducive to the development of their innovation and their growth. To reach these objectives the Government will take measures to ensure effective and meaningful empowerment and ownership structures by black and other disadvantaged groups is advanced in the local equipment supply sector. Such measures are detailed in Issues 4 and 8 of the White Paper.

- 7.17 In addition, an active role should be played by women and the disabled community in the equipment supply industry. There should be a clear recognition that appropriate technology can enable the disabled to work in the industry. Technology produced by the equipment supply industry must allow disabled people access to telecommunications equipment on an equitable basis with non-disabled people. Technology must not only allow disabled people to work in the industry but equipment produced by the industry should allow disabled people to utilise it anywhere in the labour market. Therefore, with regard to visually disabled people, the equipment should allow blind people to be able to have the information necessary to operate a switchboard. With regard to deaf people it should provide easy and quick access for their equipment.
- 7.18 The Ministry will also develop a code of conduct for investors in the local manufacturing sector, which will aim at ensuring investments are directed fairly and with foresight towards both the material and the human components of the local manufacturing industry, and that labour standards or industry agreements are adhered to.

8

HUMAN RESOURCES FOR THE SECTOR

- 8.1 The knowledgeable and skilled human resources of the nation are its wealth. Without adequately trained people at all levels, the nation will not be able to expand its economy to create the wealth needed to lift the standard of living of all its people. This is particularly true of the Telecommunications sector. Believing this, the Ministry proposes to make funds available to enable the enhancement of the human resources of the sector. The management of such funds will be the responsibility of the Regulator. The essential provisions are follows:
- 8.2 The Regulator will support telecommunications focused applications in the following five categories:
- 8.2.1 Training and re-training of human resources presently active in the sector.
 - 8.2.2 Development and growth of the training of artisans and technicians.
 - 8.2.3 Development and growth of undergraduate higher education.
 - 8.2.4 Development and growth of postgraduate training and research.
 - 8.2.5 Promotion of interest in technology among schoolchildren.
- 8.3 These activities of the Regulator must be seen to be in addition to any existing funding the Government provides for training in general. Wherever possible, the Regulator will encourage applications that are "top up" in nature. The Regulator will never do any training itself. Human resource development supported by the Regulator should be consonant with the broad educational policy of the country.

FUNDING

- 8.4 The Ministry believes that the enhancement of the human resources of the sector should be paid for by the sector itself. Such monies should in no way replace the funding that Government normally provides for higher education. The Ministry proposes the following method to make the funds available.
- The Regulator will retain a portion of the licence fee paid by companies licensed to operate in the sector.

- 8.5 The Regulator will form a human resources development directorate with a number of tasks:
- 8.5.1 It will set up a budget for the portion of the licence fee retained for human resources development. It will base this on appropriate applications it receives from companies, NGOs and educational institutions. Affirmative action will be one of the criteria applicants will need to meet in making their applications.
 - 8.5.2 It may "subcontract" the management of the funds to organisations such as the Foundation for Research Development (FRD), which may have greater expertise and capacity in specific areas. However, the ultimate responsibility for the correct usage of the funds will rest with the Regulator.
 - 8.5.3 Wherever possible the Regulator will set realistic targets for all types of activities. It will institute monitoring and measuring procedures to ensure such targets are met.

TYPES OF ACTIVITIES TO BE SUPPORTED

Type 1 Activity - Training and re-training of human resources in the sector

- 8.6 This activity is primarily aimed at persons active in the sector who do not have formal qualifications. The Ministry supports affirmative action as a conscious strategy to correct the social and gender imbalances in our society. The Ministry believes the human resources strategy should be based on the principles of democracy, non-racism, non-sexism and equity. It should redress the inequalities of the past. Therefore the upliftment of people in the sector should be achieved by purposely redressing imbalances in the workforce at all levels. This would require pro-active recruitment and training of people from previously disadvantaged groups, particularly in areas where the network is being "rolled out". Suitable training of a high standard, focused on historically disadvantaged groups, will equip large numbers of prospective employees with suitable qualifications, knowledge and skills to facilitate effective placement in the job market.

Other factors will also cause an enormous amount of training and re-training to be required for people in the sector. Some of these factors are:

- Changing market structure may cause re-deployment of present staff as companies take on different roles within the sector;
- New operators within the sector will cause increased mobility;
- New technologies, strategies and management models may be implemented.

- 8.6.1 The Regulator will support programmes, mounted by both companies and educational institutions, addressing these problems. The following kinds of projects will be supported:

Accelerated development; Accreditation activities of the SAQA in respect of previously unrecognised informal qualifications; Adult basic development; Multi-skilling; The teaching of management and entrepreneurial skills; Formal training programmes, within or outside companies.

- 8.6.2 It is a recognised principle that any objective must be measurable.

Type 2 Activity - Development and growth of the training of artisans and technicians.

- 8.7 The Ministry is mindful of the importance of the training of artisans and technicians. Such training is normally undertaken in various types of technical colleges. Industry also has a vitally important role in that it provides the practical experience integral to this type of training.

- 8.7.1 The Regulator will consider applications from colleges to enhance their training for the telecommunications sector. Such funding must not be seen to replace the existing funding provided by Government for secondary level education. Typical applications may be for the following:

Additional staff; Staff training and re-training; Equipment; Mobility between colleges and industry.

Type 3 Activity - Development and growth of undergraduate higher education

- 8.8 The Ministry is mindful that the legacy of Bantu Education has meant the number of engineering graduates from South African universities and technikons is far too low. In the short term, the Ministry believes the output of engineers will need to double whilst that of technologists will need to quadruple. The Ministry proposes to facilitate the growth of telecommunications-orientated courses at universities and technikons by making funds available for additional staff, equipment or running expenses. Possible activities could be:

- Universities and technikons may wish to expand their teaching in the area of Telecommunications Engineering and Management. The social, policy, legal and regulatory dimensions of telecommunications development could also be the subject of courses.
- Universities and technikons which do not presently teach telecommunications-orientated courses, and may not even have engineering faculties, should be encouraged to create departments of Physics and Electronics within their science faculties. Such departments can be described as "pre-engineering" and may eventually become fully fledged engineering departments.
- Universities and technikons should be encouraged to "twin" with other institutions in a "mentoring" role.

- If there is a special need, the Regulator may make student bursaries available to supplement (*and not replace*) those granted by companies in the sector.
- The Regulator will make funds available to facilitate mobility of staff between industry and the educational institutions.
- The Regulator will make funds available to facilitate student internships in industry.

8.8.1 It is recommended that the funds for Type 3 activities be channelled via the FRD, which will establish a special programme for telecommunications education and research. The FRD has extensive experience in funding universities and technikons. The FRD will evaluate proposals and prepare budgets for the Regulator.

Type 4 Activity - Post-graduate training and research

8.9 The Ministry is of the opinion that the long-term viability of the sector is dependent on a healthy flow from the nation's graduate schools. The Ministry proposes to pro-actively promote and encourage appropriate post-graduate study and research in the field.

- The Ministry particularly wishes to facilitate the creation of a network of "centres of excellence", at universities and technikons. Such centres will then be able to undertake contract research for companies in the sector. It recognises that the creation of such centres is dependent on institutions being able to build up a "critical mass" of both intellectual capacity and research equipment. It therefore wishes to specifically encourage proposals to promote long-term capacity building and international collaboration. This could even extend to the creation of "bricks and mortar" research institutions where appropriate.
- The Regulator will also support the creation of specialist professional postgraduate degrees at institutions with appropriate expertise.

8.9.1 It is recommended that funds for Type 4 activities also be channelled via an FRD special programme for telecommunications education and research. The FRD will manage such a programme according to its long-standing practice.

Type 5 Activity - Support of Science and technology at schools

8.10 The Ministry is aware that the limited output of the school system of students with adequate mathematics, physical science and language capability seriously curtails potential entrants to the sector. The Ministry recognises that the primary responsibility for finding solutions to this problem lies with the Department of Arts, Culture, Science and Technology and the Department of National Education. However, it believes the sector can make a contribution in a limited sense. The Regulator will consider proposals which "popularise" technology-related subjects. An example would be a project that assists schools to become connected to the Internet.

ADDITIONAL STEPS TO BE TAKEN ADMINISTRATIVELY

- 8.11 The Ministry supports the establishment of the South African Qualifications Authority (SAQA) and the National Qualifications Framework (NQF). It proposes that a set of qualification standards be created to provide progression across all levels of the industry. The standards must not be narrowly focused, but must provide credits for general education as well as core industry skills. The Regulator will make funds available to support these activities.
- 8.11.1 The Ministry would like Continued Engineering Education (CEE) to be accredited by the NQF for the reasons indicated above.
- 8.11.2 The Ministry will ask the Department of Labour to facilitate the creation of an industrial training board for the sector.

9

REGIONAL AND INTERNATIONAL CO-OPERATION

- 9.1 With the end of the apartheid era, South Africa has rejoined the international community. The Government believes using this opportunity to the benefit of all South Africans will depend to a large extent on the success of South Africa's own RDP as well as on the success of development efforts in Africa in general and Southern Africa in particular. It goes without saying that the telecommunications sector should strive to develop within the parameters of South Africa's foreign policy objectives.
- 9.2 The integration of South Africa into regional and international telecommunications systems will bring the benefits of synergy, greater participation in the global economy, improved personal and business communications, expanded trade and revitalised economic growth. South Africa, due to its location, its unique African assets, and its ability to develop and deliver African solutions to African problems, is well positioned to both contribute and benefit from regional and international co-operation.
- 9.3 On the international level it is the Government's intention to participate fully through the Ministry for Posts, Telecommunications and Broadcasting in the relevant international consultative telecommunications organisations (such as the ITU, PATU, and SATCC) as well as in intergovernmental fora and groups working on issues related to the global information infrastructure. Representation in international operational organisations to which South Africa is a party will continue to be through appropriate signatories. Access by others to Intelsat services will be regulated by the Regulator.
- 9.4 Regional integration of the economies of the many small nation-states in Africa has long been recognised as the best possible means for attaining sustainable development of the whole region, and led to the formation of the Organisation of African Unity (OAU) in the early '60s. Further efforts to promote integration in Africa resulted in the formation of regional economic communities, including the Southern African Development Community (SADC) in the early '80s and the recent Abuja Treaty (1991) establishing the African Economic Community.

- 9.5 Telecommunications is an important component of the infrastructure and services required for regional integration. This vital link for information flow for trade and social integration can only be realised through operation and co-ordination among the different parties involved in its development, as users, operators, manufacturers and policy makers.
- 9.6 The Government attaches great importance to effective regional integration and will actively support the activities of all South African players in these fields through policies which promote such regional co-operation in terms of cross-border communications, opening of markets for equipment and services, adopting harmonised standards and technical specifications, efficient use of the radio spectrum, and formulation of common African positions for international negotiations in various world fora for telecommunications and information development.

REGIONAL PROJECTS

- 9.7 The Government will encourage South African participation in joint projects aimed at improving regional integration, such as RASCOM, which are deemed to be in the nation's interest. However, the decision to invest in such projects will be made by the concerned organisations, whether public or private, based on assessment of the technical and commercial viability of each project.

10

LEGISLATIVE REFORMS

EXISTING LICENCES AND SUPPLEMENTARY CONTRACTS

10.1 In this regard, the Ministry favours the application of the following principles:

- As a general rule, licences issued prior to the introduction of new telecommunications laws should not be prejudiced by such legislation. Any licence amendments needed as a result of inconsistencies within the new telecommunications policy framework, should be negotiated by the Regulator and the licensee concerned.
- Supplementary agreements are indicative of areas of inadequacy in the current legal and regulatory framework of the telecommunications sector. The new policy framework should facilitate in the amendment and/or termination of these contracts with the agreement of the concerned parties. Where a party derived the right to provide a service through a contractual arrangement with Telkom, for instance the value-added network providers, such contractual arrangements should be terminated and the relevant party should be licensed to provide the service without being prejudiced in the process.

LICENSING OF OPERATORS

10.2 In this regard, the Government favours the application of the following principles:

- All operators should be licenced in order to facilitate effective regulation and to ensure obligations are clearly defined, particularly in the context of the provision of universal access and universal service.
- Accordingly, parastatals, in similar fashion to other operators, should be empowered to operate by means of a licence, as opposed to a statutory right.

TBVC AREAS

10.3 The repeal of laws currently obstructing re-incorporation of the so-called TBVC states should not be contingent upon the new telecommunications legislation. Indeed, it is anticipated specific legislation aimed at such re-incorporation shall in all probability pre-empt the new telecommunications legislation.

INTERCEPTION OF CALL TRAFFIC

10.4 In this regard, the Ministry favours the application of the following principles:

- The right of Government to intercept telecommunications traffic should be stringently controlled.
- The Interception and Monitoring Prohibition Act should be reviewed in order to ensure sufficient safeguards are in place. Such a review should of necessity involve public debate and the participation of other Ministries, such as that of Safety and Security.
- The question of traffic interception should be dealt with in specific legislation, as is currently the case.

ENACTMENT AND REPEAL

10.5 In the light of the current discussions between Government and organised Labour, concerning the restructuring of state assets ("the discussions"), the Ministry favours the application of the following principles:

- Ideally, the necessary policy and legislative reform should be effected by means of one Telecommunications Act, which consolidates the legal framework of the sector.
- However, should the discussions threaten to delay the introduction of policy changes in respect of other matters, the Ministry favours the enactment of more than one Act.
- In such an event, a Regulatory Authorities Act should be enacted with all due expediency, to provide for matters not dependent upon the discussions. Such matters would include the creation and empowerment of an independent South African telecommunications regulatory authority, the creation and empowerment of a universal service agency and the repeal or amendment of laws currently obstructing such creation or empowerment. (For example, provisions currently precluding the accountability of Telkom to the Regulatory Authority would be repealed and/or amended.)
- Subsequent to this and subsequent to the conclusion of the discussions, any change in Telkom's ownership structure could be facilitated by the enactment of a Post Office Amendment Act, or alternatively, by a Telecommunications Act. Further, the necessary clarity and order could be sought and attained by the simultaneous enactment of a Postal Services Act.

10.6 In summary, the Ministry prefers the enactment of one piece of legislation. However, should the current discussions concerning the restructuring of state assets preclude this possibility, the Ministry favours the enactment of a Regulatory Authorities Act, and subsequently a Telecommunications Act and a Postal Services Act (the latter to restructure the remains of the Post Office Act).

Use it

Don't abuse  it

water is for everybody



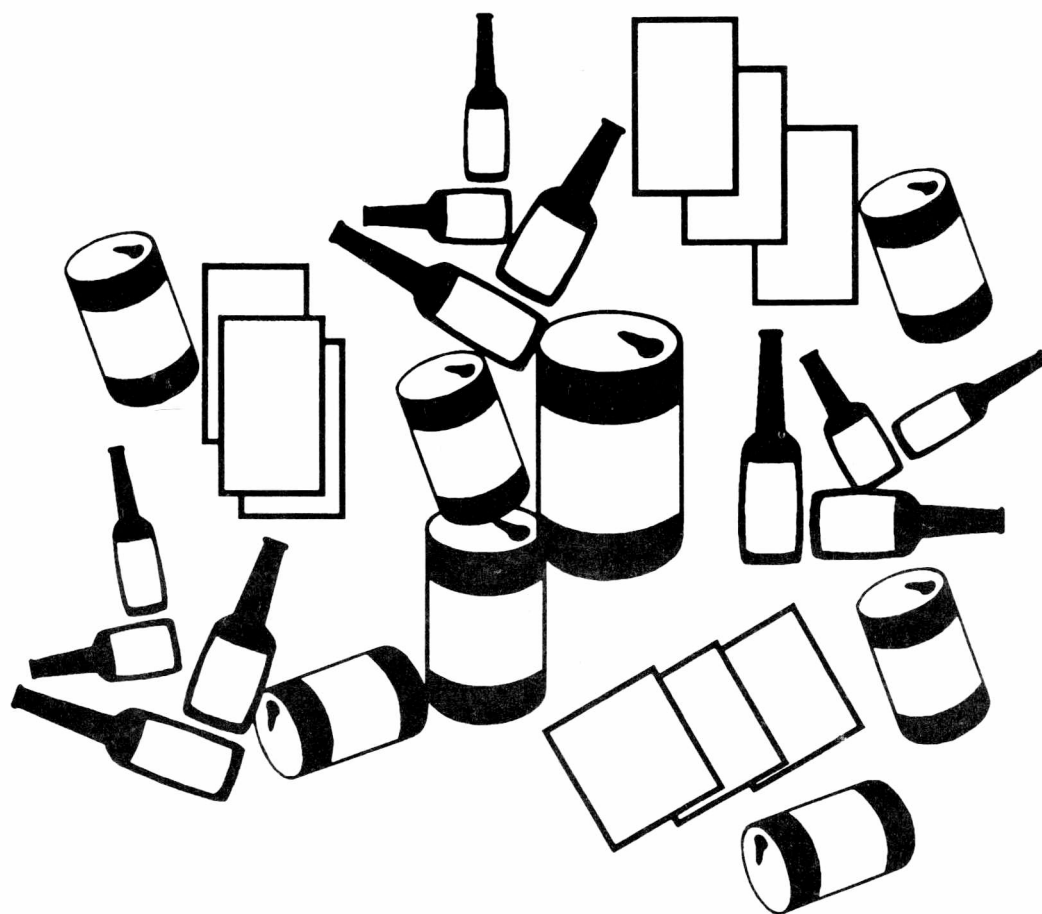
Werk mooi daarmee

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water is kosbaar



RECYCLE HERGEBRUIK



Department of Environment Affairs
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