GENERAL NOTICE

NOTICE 1114 OF 1999

UNIVERSAL SERVICE AGENCY

NOTICE IN TERMS OF SECTION 59 (2) (a) OF THE TELECOMMUNICATIONS ACT, OF 1996 (act 103 OF 1996) INVITING REPRESENTATION IN RESPECT OF THE PROCESS OF DEFINING UNIVERSAL SERVICE AND UNIVERSAL ACCESS WITHIN SOUTH AFRICA

The Universal Service Agency (the Agency) hereby gives notice that it intends defining Universal Service and Universal Access in terms of section 59 (2) (a) of the Telecommunications Act 103 of 1996 (the Act).

Copies of the Draft 2 of the Discussion Paper will be available from the Johannesburg offices of the Universal Service Agency and on its website - http://www. usa.org.za.

All interested parties are hereby invited to submit written representations on the intended policy to the Universal Service Agency not later than 25 June 1999 for the attention of **Ms Katharina Pillay** at **c/o USA, Private Bag x10, Wits, 2050**; or **Empire Park**, Block A, Ground Floor, * Empire Road, **Parktown**; Tel: (011) **726 5241** or Fax: (011)7*5313 or **e-mail kathrina@usa.org.za**.

Copies of representations will be made available to the public for inspection during the **normal** business hours of the Universal Service Agency (Monday to Friday, except public holidays from 8h00 to 16h30). Organisations that do not wish their submissions to be made public should state this explicitly.

A national colloquium will be held at the Public Development and Management Auditorium (Wits Business School) Cnr of St. Davids Place and St. Andrews on 1 and 2 July 1999.

UNIVERSAL ACCESS AND UNIVERSAL SERVICE DISCUSSION PAPER

1. SUMMARY

This is the second draft discussion paper for the process of defining Universal Access and Universal Service for Telecommunications in South Africa. The Universal Service Agency (USA) is mandated by the Telecommunications Act (1998) to develop such definitions, and the USA is doing this work in collaboration with the South African Telecommunications Regulatory Authority (SATRA).

A first draft document was completed in October 1998 which raised issues such as:

- Will the amazing advances in telecommunications systems and related information technology only be of benefit to a minority in South Africa, increasing inequity between an information elite and a majority living in information poverty.

- Or will these new technologies promote information literacy throughout the country and work as an infrastructure to promote development.

- What will decide how the Information Society evolves in South Africa is policy, regulation, the market and a number of projects from government, business and communities?

- The document was distributed for public comment - written and oral. This was followed by provincial public hearings and the production of this document.

The key objectives of this process are to establish national definitions for South Africa and to set national achievable goals for Universal Access and Universal Service for South Africa. However, this should not be seen as an academic exercise to come up with a dictionary definition, but rather to engage all in the sector to set realistic, achievable goals.

This document then incorporates comments from the public hearings as well as written submissions.

It outlines Universal Access with regard to basic public telephony (based on payphones), telecentre-type projects (phoneshops), higher services (Internet through telecentres) and definitions of under-serviced areas.

It addresses issues of Universal Service with regard to general targets for the country. Economic issues are discussed later, as these are particularly relevant to the affordability of Universal Access and Universal Service.

Several organisational issues are pertinent to this process. These include the following, Ordination to provide service in under-serviced areas, partnerships, competition versus co-ordination and the gathering of statistics.

This is to be an ongoing process. While the national definitions are expected to be developed by August 1999, there may well be annual reviews of progress made and a redefinition of targets -it is hoped that as South Africa meets Universal Access targets, they will be redefined to provide a higher level of service.

2.   INTRODUCTION AND BACKGROUND TO PROCESS

This paper seeks resolutions on issues and targets for Universal Service and Universal Access to Telecommunications in South Africa. The Telecommunications Act (103 of 1998) states in section 59 (2) (a) that "The Agency shall, . . . after obtaining public participation to the greatest degree practicable, make recommendations to the Minister to determine what shall constitute -

(i)   universal access by all areas and immunities in the Republic to telecommunication services: and

(ii)   the universal provision for all persons in the Republic of SouthAfrica telecommunication services, including any elements or attributes thereof."

2.1 Context of the Information Age and Development

As the Information Revolution has increasing impact around the globe, the issues of who has access to these technologies has great importance. Connection to these networks and services influences a people's access to jobs, education, health care and full participation as a citizen. The convergence of telecommunications, computers, intimation production and broadcasting largely determines how societies are structured. The Africa Telecomm Conference held in Johannesburg in May 1998 demonstrated the significance of these systems for Africa.

There is a major question throughout the world: will these technologies and systems lead to increasing disparities between the connected information elite and a large majority of intimation poor or can they be used to support widespread development and a more just society? These communications and information networks are often now referred to as the Information Infrastructure and are as important to the development of a country as the road and water networks.

2.2 South African Initiatives

South Africa has been one of the leading nations calling for these technologies to be used for economic and social development in developing countries, for example at the Information Society and Development Conference (May 1998, Midrand) and at Global Knowledge (June 1997, Toronto). The Telecommunications Act (103 of 1998) makes providing access to telecommunications to all a key priority of the sector. This commitment is demonstrated in the licence renditions of Telkom, it (Telkom) being required to rollout 1.8 million lines in rural areas and also in the Community Service Obligations of the cellular phone operators.

Despite the fact that South Africa has the best telephone network in Africa, there are major inequalities with the cities having generally excellent service while in many rural areas there are no phones at all (see chapter 2).

2.3 Introduction to this process

This paper, and the process that it supports, aims at setting definitions for Universal Access and Universal Service to telecommunications and information systems. These definitions should serve as targets for South Africa to work towards. But first, these terms need to be explained.

Universal Service refers to all households in a country having a telephone, so that all individuals can make a telephone call from home.
Universal Access refers to all individuals having access to a telephone that they can use. This could be either in their homes, at a business or some public facility. While Universal Service has a fairly dear meaning, Universal Access, is a public telephone within a reasonable distance, which is a *very* flexible concept - what does "reasonable" mean? Devising a coherent definition is an aim of this process.

South Africa already has a number of policy initiatives, and different related definitions in this area. The Community Service obligations (CSOs) of the cellular phone operators refers to "under-serviced areas". Telkom's licence has firm targets for roll out and "priority customers," and the Telecommunications Act refers to "needy people" that has been well researched by Aki Stavrou in a report to SATRA. South Africa's existing definition (Partnership for the Future, May 1997), Department of Communications) is: "Universal Access is defined as living within 30 minutes travailing time of a telephone, Universal Service is more than 50% of economically eligible households with a telephone and service for 24000 priority customers." One of the aims of this process is to bring together the different definitions used in South Africa.

However, this process should not be seen as an academic process leading to a dictionary definition. As the International Telecommunications Union states in their World Telecommunications Development Report, 1998: "technology that theoretically provides telecommunications access from anyplace on the surface of the Earth is already available. Universal Access is now not so much an engineering or supply-side problem but rather a regulatory and policy challenge."

South Africa certainly has the wealth and the political commitment to meet the longer-term goal, the provision of telecommunications service to all households in South Africa. The question is whether there is the will to combine the public and pivate sector resources available to provide Universal Access early in the 21 Century to all South Africans. Rather than it being a process to produce a document, it should be seen as using the drafting of a document to support the co-ordination of a national effort to meet the targets set.

Universal Service and Universal Access measure different things, and require different policy measures to promote, The longer-term goal would be to provide telecommunications service to all households in South Africa, but realistically this will not happen for many years. Universal Access is a realisable goal within a few years.

3. UNIVERSAL ACCESS

3.1 Background information - status quo in SA

Universal Access refers to everyone in the country having a telephone they can use within a 'reasonable' distance. This can be seen as an intermediary stage to Universal Service, which refers to people having a private phone at home or at work.

The latest reliable figures for this come from the 1996 Census, reported on in November 1998. The statistics published give figures for households and not individuals. There are 9 059 571 households in South Africa (excluding hostels and institutions). The overall figure for Universal Access is 81 .6%. Below are the figures for provinces and 'racial groups'.

SA Overall	**81.6%**	**SA Overall**	81.6%
E Cape	54.8	African / Black	75.4
N Province	69.3	Coloured	94.3
KZN	80.0	Indian / Asian	98.7
NW	80.6	White	99.1
Mpumalanga	85.4		
N Cape	87.8		
Free State	88.4		
Gauteng	96.0		
W Cape	97.0		

These figures clearly refer to basic voice telephony and not other information and communication services. Also, it must be remembered that these figures are over two years out of date and it is likely that the current figures are higher.

The International Telecommunications Union (ITU), in their, World Telecommunications Development Report (1998) refer to many different national definitions of Universal Access, some based on distance to a phone or a phone per certain number of population. They suggest that Universal Access is a more realizable goal for many developing countries than Universal Service and that a definition for Universal Access should serve as an achievable national target and focus on implementation within 5 years.

3.2 Discussion from the Public hearings

3.2.1 Right or privilege

From the discussions there was a near unanimous consensus that the ability to have access to a phone should be regarded as a right for all South Africans. The Bill&rights makes reference to 'freedom of expression' (clause 16) and 'access to information' (clause 32) were mentioned, as were the targets in the Reconstruction and Development Programme (RDP).

There was great agreement also that being able to make an emergency call (e.g. to the tier or police) should be considered a right, irrespective of the ability to pay.

3.2.2 Basic telephony targets for Universal Access

At the public hearings there were many suggestions made, ranging from - a telephone within 100m of people, up to 5 kilometres distance. The majority view was that distance should be used as the target and not traveling time, as traveling time can be very different for different people (e,g the old or disabled people). Other views expressed include:
- within walking distance 30 minutes in rural areas
- 15 minutes in urban areas
- a payphone for every township of 7000 people.

Targets should be based on the self-defined need of the community and not by a national formula.

Most subm-ions suggested some difference between rural and urban areas. Another suggestion was to base it all on population - e.g. 1 phone access point for every 100 households in urban or rural areas (though clearly the distance would be less in more densely populated urban areas).

From the many oral submissions, there emerged twin targets - getting a phone within the reach of everyone (normally defined as with 2km, or at least one per settlement as soon as possible; and at a later stage achieving a higher target of a phone within 1 km in rural areas and within 200m of all people in urban areas.

There was no real consensus on which form of phone access point would be appropriate in different renditions. Whereas most Universal Access will probably be provided through payphones, there are also telephone bureau's, telecentres, phone shops and dial-inn's and more. However, there was general agreement that wherever possible these different initiatives should be co-ordinated so that there is at least phone service in all areas, which was seen as a higher priority than promoting competition between different services in the same area.

Several times problems with phonecards were expressed. Great frustration is caused when phone cards are not sold near cardphones and many people asked for compatibility between the cards of the different operators (any card can be used for any operator). Also several times the suggestion that any public phone installation should be at minimum two phones - a coin phone and a card phone. The point of card phones being, generally, less vandalised was appreciated by most people though problems of vandalism and poor maintenance and repair were cited time and again.

3.2.3 More Advanced Services – telecentre type services

There was great support for telecentre-type facilities being established. Clearly a full telecentre is more costly than a payphone and so there will be

fewer. A telecentre will usually offer additional services such as* (sending and receiving), photocopying; computer use and Internet access (though the exact services will vary with the model, finance and the needs of the community served).

The general feeling expressed that within the foreseeable future (e.g. 5 years); all communities in South Africa should have something like a telecentre.

While the Universal Service Agency Telecentres were frequently mentioned (as this was a USA public hearing), other centres offering similar services are included in this category. Some recommended all Multi-Purpose Community centres be made telecentres and also telecentres could be built around schools, libraries as well as phone shops and other centres.

Many people said that the primary objective should be to provide service to the community and not individual profit. However, many others said economic sustainability was the key to success of these centres and the spirit of entrepreneurship should be harnessed.

3.24 *Under-Serviced Areas*

Without a workable definition of under-serviced areas, there can be no workable definition of Community Service Obligations. In South Africa there are two definitions of under-serviced areas in the tehmmuni-ions context. The first definition resides in the Telkom licence. This definition defines a township and a base line of 50% of households with telephone service. The 50% penetration as a 'yard-stick' raises a question of what 'yard stick' is used for rural areas? Moreover this definition is so generous that positioning of community service telephones is flexible and the objectives of these services could badly be satisfied.

The second definition is found in the National Cellular Telecommunications Services licence for Vodacom and MTN. The under-serviced area is defined as a city, town, township, shantytown, location, village, human settlement or any part thereof as prescribed by the Postmaster General from time to time but in any event the areas are listed in the Implementation Timetable. This is based on locations nominated by the cellular operators, which could be subjective. Moreover, this definition is too broad and cumbersome to be used and satisfy the objectives of community service telephones. During the public hearings there was a call for a uniform definition of under-serviced areas. From the discussions the main definition suggested were defining it on teledensity (e.g. areas with a teledensity of less than 2 - i.e. less than 2 telephones per one hundred people) or defining it by household penetration (the percentage of houses that have a telephone).

3.2.5 Technologies: Bade Telephones o r Information and Communications Technologies

There was unanimity from the operators that the actual technology to be used for any particular service should not be defined and this is accepted. Our definitions should be technology neutral.

However, there was a view strongly expressed at all the public hearings that while basic voice telephony was the most important target, access to other ICTs must also be promoted.

Computers, networks such as the Internet and related technologies were seen by all speakers as being important in the future development of South Africa. If they are not considered by this process, we would be failing in our task and a new round of Universal Access definitions and projects would be required in the near future.

Many supported the view that access to these services should be provided at telecentre-type sites, including phoneshops and post-offices. It was suggested that all households should be provided with an e-mail address by 2005, with access through a telecentre, post office or similar centre.

For this to be useful, a major programme of stilling is required throughout the country (possibly based at telecentres). Them is a high demand for 'Information Literacy' training.

3.2.6 Virtual Telephony

The issue of virtual telephony was raised several times, referring to a number leading to a messaging service that can be called by the subscriber to retrieve their messages (such as Telkom's Voicelink service) this could be useful to provide Universal Access to incoming calls, in the main). However, objections were raised to this due to the provision of a lower level of service to the majority of the population. Another suggestion was for virtual telephony to be made available to homeless people.

3.3. PROPOSALS

3.3.1 Right to Access a Telephone for Emergency Calls

Universal Access to telephony (via a payphone or other phone point) should be considered a right for all residents of South Africa.

The ability to make an emergency cell or a call to the operator from these 'phone points' should be a right and not based on the ability to pay, i.e. the call should be free.

3.3.2 Basic telephony – Medium term Universal Access targets

The South African targets for Universal Access should be a working phone accessible 24 hours a day
> Within 1 km in rural areas
> Within 200 m in non-rural areas

This should be achieved by the year 2004 (within 5 yearn).

3.3.3 Basic telephony - Short-term targets

By the end of the year 2 000 South Africa should achieve Universal Access for close to 100% of the population. Through payphones or other phone points to all:
> Main target–phone within 2km of all population
> Minimum target - of 1 phone per village (3204 villages in SA).

3.3.4 Basic telephony – Quality standards

For the above access to be meaningful, quality standards must also be met:
- Hours of access. Community Service telephones should be available:
  - . 24 hours a day, 7 days a week (Class A)
  - . 12 hours a day, 7 days a week (Class B)

- Security. Measures should be taken to ensure security for the phones, such as them being based within people's property (though at accessible sites, such as an outside wall).

- Repairs and maintenance. Public access telephones should be working 95% of the time, * reported faults repaired within 1 week by the relevant operator.

3.3.5 Cellular Coverage

By the end of the year 2001, there should be cellular network coverage over all the territory of the Republic of South Africa, by all cellular operators.

3.3.6 Telecentre Type Services

Every community should have access to some centre with ICT facilities such as fax, photocopying, computers, and the Internet. These can be provided through USA telecentres or other models. The target for this should be to have a telecentre-type centre in each community (villages, townships, farm community and other) within five years, by 2004.

All communities should have access to advanced Information and Communication Technology (ICT), primarily through telecentre-type sites many of these can be based at schools, libraries and other existing centres. A range of models of telecentres from basic phone-shops to elaborate Multi-Purpose Community telecentres is being planned. The Universal Service Agency has just completed drawing up a Telecentre Implementation Plan.

3.3.7 *Co-ordination of Universal Access Projects*

There is a need for better co-ordination of projects to achieve Universal Access throughout the country. Currently, some areas are being provided access by several operators while many other areas have no service at all. For the next three years (until the end of 2001), all Universal Access efforts should be focused on providing a level of service to all areas of the country - explicitly requiring co-ordination and not competition.

It is proposed that all projects to benefit the Universal Service Fund (USF) or be recognised as a Community Service Obligation (CSO) should be submitted for approval to the Universal Service Committee established by the Universal Service Agency and SATRA). This committee will ensure that there is full geographical coverage, and will refuse approval of projects aimed at areas already served. There will be nothing to stop telecommunications developments in these areas that are already served; however these initiates will not receive funding from the USF or recognition as a CSO.

3.3.8 *Under-serviced Areas*

There is a need for a unified definition of 'under-serviced area' for co-ordination in the sector. An under-serviced area is any township, village, location, and isolated homestead which is considered to be a place where disadvantaged communities or individuals reside and accessible telephone services with Universal Service and Access, is not readily available. The basic standard for defining an area as under-serviced will be where the percentage of households having penetration is less than 10%.

"Township" means a piece of land or settlement, whether surveyed as such and/or established in any informal manner, predominantly inhabited by communities historically discriminated against on the basis of race with a household penetration of less than 10.

"Village" means a community located in a rural and/or disadvantaged area with between 100 and 1 999 inhabitants which is without a telephone line and/or with a household penetration of telephones of less than 10%.

"Location" means a community location with a household penetration of telephones of less than 10%.

"Isolated homesteads," means a community located in an informal settlement, compound and private or commercial farmland with a household penetration oft-ones of less than 10Yo.

3.3.9 *Accessibility of Telephone Cards*

Where a cardphone is used as a Community Service telephone, it is incumbent on the operator concerned to ensure ready availability of the cards to potential users of the CS phones. Commercial arrangements, which ensure

that the cards are available to the sellers, are inherent in the adoption of this technology and are the responsibility of the operator installing a cardphone as a Community Service telephone.

3.3.10 Accessibility of Community Phones

Accessibility of a community telecommunication service, provided by whatever technology or products, involves a service, which is available 24 hours a day, 7 days a week.

3.3.11 Obligations of Operators

All telecommunications operators should have quantified and measurable targets set for community service obligations and contribute to the Universal Service Fund. The levels of both CSOs and USF contributions to be set by SATRA.

3.3.12 Considerations for people with disabilities

Statistics from the last census indicate that about 7% of the population are disabled. Operators should make provisions for people with disabilities in the following ways:
- Compatibility of all types of digital phones with some designs of hearing aid
- Development of fully integrated video text telephones by use by profoundly deaf people more used to sign language and lip reading
- Provision of text phones and other forms of specialist telephone equipment on terms which reduce their effective cost to the user to that of a conventional phone
- Unrestricted text user help scheme.

3.4 Universal Access and Women

The Telecommunications White Paper and Act clearly aims to address the inequalities of the past by emphasising the following:
- making access to communication more equitable
- equalising gender relations and drawing previously denied groups of people into the sector not only as recipients but as active participants.

The Act makes particular reference to the "promotion of the empowerment and advancement of women in telecommunications".

Telephony, an enabler of economic growth and therefore the promotion of Universal Access and Service would impact on the rural women of this country who are traditionally worst affected by poverty.

The SATRA commissioned DRA Development Report indicated that about 35% of all South-n households, are headed by women - the poverty rate amongst these being in excess of 60%. Yet a 31% poverty rate is recorded for w-headed by men.

The report further indicates that at least four factors contribute to these statistics:

- Female headed households are more likely to be in the rural areas where poverty is concentrated
- Female-headed households tend to have fewer adults of working age
- Female unemployment rates are higher
- The wage-gap between male and female earnings persists.

The average income in these households is about one-third that of male-headed households.

The positive impacts of telephone access to women in rural areas could be enormous - direct benefits of being connected to health and emergency services.

Social and economic projects combined with telecommunications access can facilitate localised economic growth by allowing people to gain information of market prices, order goods and services. If capitalised upon, such initiatives could have a tremendously positive impact on the lives of women.

International studies demonstrate that aid to women goes considerably further than aid to men and that benefits are more widely felt by the family.

The USA, in its telecentre programme requires that at least half the nominees identified from communities to manage its telecentres, are women. However, while this is welcomed, steps must be taken to ensure ownership by women, in all Universal Access and Service initiatives by government and/or the private sector.

4. UNIVERSAL SERVICE

4.1 Background

The purpose of Universal Service is to ensure that the part of the population, which would not receive essential telecommunications service under normal market conditions, has access to those services. Universal Service provision is required primarily to cover those citizens who can not afford essential service.

Universal Service is an issue in many European and North American countries, with Universal Service figures of over 30%. Hera the main considerations are around usage related costs as opposed to the network. Universal Service is seen to have 3 elements: availability, accessibility and affordability. In South Africa, currently the main focus is on extending the network into areas currently with no service. However, there is a major issue for people who had a service and are now not subscribing due to high costs (this is known as churn), so affordability is also important in South Africa.

The Universal Service Agency was established to promote access to telecommunications throughout South Africa. The main project the Agency has embarked on is the establishment of telecentres. However, there are many other initiatives from the public and private tier - Phoneshops, dial-inns, phone kiosks, Schoolnet, Muti-purpose Community centres as well as public payphones. The national goals can be a mix of different elements; for example, China has a policy of One family, one telephone, in urban areas and a telephone in every village by the year *2000.*

Do we still mean only voice telephones when w talk of Universal Service? There are a wide range of other services now such as digital lines, tone dialling, broadband, fax/modem capacity, operator services, directory enquiries, call line identification, emergency services Itemised billing, call forwarding, multiparty lines and voicemail.

In short focusing simply on voice, till not bring South Africa into the Information Age. So the scope of the services we are discussing also needs to be defined in this process.

The ITU makes suggestions on these steps in addressing Universal Service:

Definition : Develop an appropriate definition of Universal Access and Service.
Information : Collect the relevant statistics regularly.
Targets : Establish targets preferably, in the licence conditions.
Affordability: Ensure affordability.
Funding **mechanism**: Especially relating to cross-subsidy and the US Fund.
Technology : For example, Wireless-local loop makes access cheaper
Monitoring : Important to monitor progress and en-targets.

4.2 PROPOSALS

4.2.7 *Directory and Emergency Services Free*

The provision of basic voice telephone, including access to directory and emergency services, at an affordable price to households who request it regardless of where they live.

4.2.2 *Special Provisions for the Disabled*

Measures must be taken to cater for people with special needs or disability in the provision of telephone service. Currently only basic telephone services qualify as Universal Service, as they are regarded as essential for full participation in most of the developing countries.

4.2.3 *Value-Added Services*

However there are a number of services associated with basic telephony which are necessary for customers to be able to make full use of the service: directory enquiries, information about services and prices, itemised billing, call barring and malicious call control services. These services may help the customer to avoid high telephone bills and filtering of undesirable calls.

4.2.4 *Basis for Universal Service*

The criteria for Universal Service provision shall be availability, accessibility, and affordability to all members of the household.

Availability:	There should be nation-wide coverage of telephone service, wherever and whenever required. Means should be made to achieve geographic parity. All houses should be fitted with telephone plugs/points by year 2004, which will have the capabilities of providing advanced telephone services such as call waiting and call forwarding.
Accessibility:	All users should be treated alike therefore there should be no discrimination in terms of price, service, quality, irrespective of location, race, sex or religion. Telephone gadgets should be provided to cater for people with disabilities such as: Compatibility of all types of digital phones with some design of hearing aids. Development of fully integrated videotext telephones for use by profoundly deaf people more used to sign language and lip reading; Provision of text phones; Provision of short access network dialling codes for text users for emergency calls directory services; and The provision of all bills and other forms of printed customer information in Braille, large print and on tape.

Affordability: Telephone service should be priced so that most users can afford it. The provision of affordable services should be such that people are kept on the network permanently.

4.2.5   *Community Owned Telecommunications Co-operatives*

Participants in the public hearings unanimously supported the view that Community Owned Telecommunications Co-operatives be established to provide household access to telephones - Universal Service.
The project may be piloted with telecommunications operators as possible partners in the pilot stage. The first pilots could be established as early as the end of 1999.

5. ECONOMIC ISSUES

5.1 Background

The study, undertaken by DRA development, shows that in South Africa, 36% of all households fall under the minimum Household Subsistence Level (HSL). The HSL for an urban family of five (two adults and three children) in March 1997 was calculated to be a fraction over R1050 per month, or translated into an expenditure par adult equivalent to R340. The HSL for rural households, of an equivalent household, is approximately 25%. However, rural households tend to be about 20% larger, thus the difference is considerably increased.

At the core of any Universal Service policy lies the issue of affordability, which defines what proportion of the population, can afford to enter, maintain and use the telecommunications network. The study, mentioned above, identified five groups of telecommunications users in South Africa.

- Group 1 – Current telecommunication users, who can afford the national aggregate price and are supplied with their requested bundle of telecommunications services.

- Group2 - Current telecommunications users, who can afford the national aggregate price and are supplied with their requested bundle of telecommunications services, but are spatially located such that the cost of delivery exceeds what is paid by the subscriber.

- Group 3- Current telecommunications users who are supplied with their requested bundle of telecommunications services, but cannot afford to either maintain and/or maximize their utilization.

- Group 4- Potential telecommunication users who can afford the national aggregate price, but are not currently supplied with their requested bundle of telecommunication services.

- Group 5- Potential users currently lacking services, who are located throughout the country, who are unlikely to afford a telephone either now or in the foreseeable future.

Current levels of poverty and the scenario outlined above clearly indicates that in South Africa, even a basic telephone is likely to be beyond the reach of most households.

Affordability is central to the concepts of Universal Service and Universal Access. Conventional studies have often overlooked the challenge of expanding telecommunications to rural areas due to a false belief of this being uneconomic. These studies have only considered outgoing traffic rather, than the benefit to the network as a whole and incoming traffic.

Most marginal users are kept off the network due to usage related costs. Household users subscribing to telephone services often get on to the

network based on the belief that they can afford these services and later fall off the network due to an inability to settle the complete bill. This is known as churn.

Telkom recently stated that 3 out of 4 households in rural areas are disconnected on a monthly basis due to a lack of affordability.

Universal Service packages are expected to increase the access of telecommunications. Below are some of the options as suggested in the previous draft document and during provincial public hearings:

5.1.1 Pre-paid phones

Users pay in advance for the telephony service, similar to the pre-paid electricity system.

Such a system reduces many entry barriers; yet, the per unit charge is higher than that of the poet paid system. This appears to be a contradiction especially, as the very people that such a system is aimed at, fall within the low-income bracket.

Telkom is currently piloting the use of pre-paid telephones. Increased availability of the phone is dependent on the results of the pilot project.

Therefore, pre-payment options are aimed especially at people who are hampered by entry barriers, such as, poor-it records and installation.

5.1.2 Flexible billing system

High rentals with lower call usage charges or lower rentals with higher call usage charges, are bolting options available to the user. Selection of either of these alternatives would be based on the users-c needs.
These options are offered by the incumbent cellular operators and should be available by all current operators and entrants.

5.1.3 Three tiered Universal Service Package

A Universal Service package implies that users remain on the network indefinitely. This should at least be subject to the payment of an initial minimum fee with demotions to lower levels of service upon failure to pay the complete bill.

Payment of the complete bill would entitle the subscriber to the full bouquet of services, such as, local, national and international outgoing calls, directory services, etc.

Conversely, non-payment of the account or pert thereof would result in access to a lower level of service. Initial failure to pay would result in the blinking of national and international ails. Subsequent failure to pay would then result in the termination of local calls.

In spited lower levels of service the subscriber would always have access to emergency calls, operator out-going calls and incoming calls.

5.1.4 Low user schemes

Discounts would be available to users with lower levels of usage. Usage below a specified limit a month should be eligible for discounts.

5.1.5 Wholesaling of tariffs for Small Medium and Micro Enterprises (SMMEs)

SMME's such as teleshops, telecentres and telephone bureau should be entitled to discounted rates from the various operators to ensure that end-users especially in disadvantaged communities are provided access to telephony at lower rates.

Pre-paid systems, flexible billing, universal service packages such as the three-tiered package mentioned above and low user schemes are each aimed at achieving Universal Service and reducing the rate of churn.

While Telkom is affected most by churn, it recently reported that in spite churn resulting from a subscriber's inability to pay, is high, it is not the key reason. It reported that 60% of 550 disconnection requests, recently analyzed, cited relocation rather than the inability to pay.

5.2   PROPOSALS

5.2.1 Reduce entrance barriers

Connection to the Public Switched Telephone Network (PSTN) through Telkom is subject to installation costs, the purchase and rental of the terminal equipment and a maintenance contract.
Once the infrastructure has been rolled out actual costs of adding a new subscriber is minimal, to the operator. Therefore, installation costs should be eliminated. Free installation for all subscribers should be for requirement of the incumbent and entrants.

5.2.2 Life-long connection to the PSTN network

Each individual subscriber adds benefit to the network. Even if a subscriber only receives calls, income is generated tithe PSTN operator, either-h calls generated from another subscriber on the PSTN network or through interconnection.

Interconnection is the agreement between the operators allowing each other to connect to their respective networks, therefore, allowing subscribers from one network to call someone on another network.

Furthermore, disconnection from the network costs the operator. Operators should rather prevent outgoing calls from that subscriber instead of disconnecting that parson or household from the network.

Universal Service packages such as th-tiered levels of service, prepaid options, low user schemes and flexible billing packages must be introduced by operators, incumbents and entrants.

Life-long connection would also address the issue of churn.

5.2.3   Tariff affordability

5.2.3.1   Flat rates for local calls

Recent revised pricing structures by the PSTN operator has resulted in higher local call charges and has made access to services more expensive.

Flat rates for local calls will increase access to this service. Therefore, for a single amount subscribers should be entitled to unlimited local calls. For instance, the amount currently being levied for line rental could be commuted to a flat fate for local calls.

Separate individual charges should be levied for national and international calls.

5.2.3.2 Wholesale tariffs for SMMEs

Lower tariffs should be available to SMMEs ass result of significantly higher volumes of traffic generated from that line. These services often cater for disadvantaged communities in under-serviced areas and as such addresses Universal Access.

Therefore, lower rates charged to these enterprises would result in lower costs to the end user, hence public telephony, Universal Access, could be more affordable.

6. ORGANISATIONAL ISSUES

6.1 Partnerships

Because of the immense task facing South Africa and in particular the Universal Service Agency, a strategy was devised to ensure access of telecommunication and information services for everyone in the country A new paradigm was adopted which saw the Universal Service Agency playing a more facilitatory role. This was a result of the Universal Service Agency's limited life-span (tire 1997-2001) and shortage of staff.

Partnering with various local and international establishments became a necessity to facilitate and expedite the effective deployment of Telecentres. New and innovative ways, focussing on various types of Telecentres to meet the divergent needs of various communities are presently being undertaken. These include a document outlining basic guidelines in forming partnerships has been drafted. So far, several partnerships have been formed.

6.1.1 Mini Telecentres

This is a one-person shop providing a telephone, fax/Email and word processing services. This consists of:

. 3 telephone lines;
● personal computer;
● 3 in 1 (printer, scanner and copier);
. fax machine;
. metering device; and
. cabinet

6.1.2 Standard Telecentres

Community organisations or individuals can run these Telecentres with the help of two Telecentre managers, Services depend on the size of the structure that is provided. These include:

● 6 to 10 telephone lines
● 4 to 8 personal computers
● printer
● scanner
● copier
. fax machine
● overhead projector and screen

6.1,3 Multi Purpose Community Cen-

Partnering with already existing community centres, which are already providing varied services, based on outlined needs. A study conducted through funding from a partnership with the international Developmental and

Research Council found that there are already MPCC's countrywide. A Conference was held in November last year, which among other things resolved to co-ordinate and merge the efforts of these community based centres by adding the telecommunications and information systems aspect to them.

6.2   Monitoring of Community Service Obligations of Operators

6.2.1 Background

The South African Telecommunications Act (103 0f 1996) provides the summary of objectives for the regulation and control of telecommunications matters in the public interest.

They include:
- Promote Universal Service and affordable telecommunications services, including advocacy to raise awareness of telecommunications
- Increase the provision of telecommunications services through network rollout and infrastructure provision
- Promote the innovative development of telecommunications -- responsive to consumer/user needs
- Ensure the needs of local communities and areas are taken into account in relation to the provision of telecommunications services
- Ensure the special needs of disabled people are taken into account
- Support-omit empowerment within the telecommunications sector

If operators are not obligated to provide statistics there may be no primary source of data with which to measure developments within the telecommunications sector.

6.2.2 PROPOSALS

Operators in terms of their licence conditions must be obligated to furnish regular reports on its performance against its established Community Service Obligations.   \

A Universal Service Committee consisting of members from the USA, SATRA and all operators should be formed. Periodic meetings of the Universal Service Committee, which would enjoy representation from all stakeholders, to discuss progress and difficulties experienced during the implementation process and have an advisory capacity.   \

This could be complemented by regular on-site audits by the Regulator in conjunction with the Universal Service Agency.

Such measures would enable the Regulator to keep the Universal Service Obligation under effective review and adopt the measures necessary to encourage rural telecommunications projects.

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