

Universal Access and Service Guidelines for the Electronic Communications Sector in SADC

First Edition: March 2002

Second Edition: March 2011

Third Edition : March 2021

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1 INTRODUCTION

1.1 Background

The Southern African Development Community (SADC) Protocol on Transport, Communications and Meteorology ("The Protocol") and the SADC Telecommunications Policies and Model Bill provide the basis for the harmonisation of policy and regulation across the broad Information and Communications Technologies (ICT) sector, which lays the foundation for integrated ICT development across the region. The dynamism and speed of technological development in the ICT sector create both challenges and opportunities, which require further harmonisation of policy, particularly policy for Universal Access and Service (UAS).

Technological convergence in the ICT sector progressively brings together services, applications and content that were previously distinguished as telecommunications, broadcasting and Information Technology (IT), and thus requires an increasingly integrated approach. The development of ICT infrastructure and services can no longer be seen as a goal in isolation but is integrally linked to the implementation of development strategies for both individual countries and across the region as a whole. It forms a basis and provides an essential tool to strengthen interventions in education, health, housing, agriculture, governance and etc.

Ensuring affordable access to information and communications for everyone is a key enabler to improve the quality of lives and livelihoods through facilitating social and economic development, by providing opportunities for learning and digital health; for the acquiring and sharing of information and knowledge; for entrepreneurship and commercial activities; and security and governance. Widespread and affordable access to ICTs is also a key to promoting social inclusion, and to bringing the benefits of development to the marginalised and disadvantaged members of the societies, including the poor, unemployed, women and disabled.

The purpose of these Guidelines is to assist and guide SADC Member States in their efforts to update and more effectively implement their own national policy guidelines and interventions for Universal Access (UA) and Universal Service (US) in the ICT sector. These Guidelines also intend to serve as a model for harmonisation of UA and US policies in the region. These Guidelines further intend to create greater certainty in the policy and regulatory environment for SADC countries. These Guidelines furthermore intend to promote good governance as indicated in the SADC Protocol, and to reinforce the need for good governance practices across SADC for government, regulators, operators and Small, Medium and Micro Enterprises (SMMEs).

1.2 Objectives of the Guidelines

The objectives of the guidelines are to:

a) To achieve the universal rollout and delivery of affordable, equitable, quality, and efficient ICT infrastructure as well as electronic communication services with the aim of bridging the digital divide and extend the access to unserved and underserved areas in the region;

b) Promote Public Private Partnerships (PPP) in order to stimulate entrepreneurship and encourage the greater participation of SMMEs and Non Governmental Organisations (NGOs);

c) Stimulate increase in both local and foreign investment in the ICT sector;

d) To mobilise resources in order to effectively implement the UAS policy;

e) To empower and engage the disadvantaged people and communities, including the people with disabilities, in UAS policy formulation;

f) To undertake public education and awareness in order to enhance the usage of electronic communications services by communities; and

g) To stimulate increase in demand, uptake and use of new and advanced ICT services including stimulation in increase in the usage of e-government services and e-commerce.

Abbreviations and Acronyms

The following abbreviations and acronyms have been used throughout this document:

CRASA	-	Communications Regulators' Association of Southern Africa
DSL	-	Digital Subscriber Line
FTTH	-	Fibre to the Home
HSDPA	-	High-Speed Downlink Packet Access
ICT	-	Information and Communications Technologies
ICT4D	-	ICT for development
ICT4E	-	ICT for education
IT	-	Information Technology
LLU	-	Local Loop Unbundling
Mbit	-	Megabit
MNO	-	International Telecommunication Union
NGOs	-	Non-Governmental Organisations
NRA	-	National Regulatory Authority
PPP	-	Public Private Partnership
QoE	-	Quality of Experience
QoS	-	Quality of Service
SADC	-	Southern African Development Community
SMME	-	Small, Medium and Micro Enterprises
USO	-	Universal Service Obligation
WLAN	-	Wireless Local Area Networks
CDMA	-	Code Division Multiple Access
HSDPA	-	High Speed Downlink Packet Access
PWD		Persons living with Disability

Definition of Terms

Terms for entities used in this document are defined as follows:

'Broadband' means Internet access with a high capacity, 1 mbit/s or more in one or both directions (SADC Definition). Fixed broadband is implemented through technologies such as Digital Subscriber Line (DSL), cable modem, Fibre to the Home (FTTH), metro ethernet, Wireless Local Area Networks (WLAN), etc. Mobile broadband is implemented through technologies such as wideband Code Division Multiple Access (CDMA), High Speed Downlink Packet Access (HSDPA), CDMA 1xEV-DO, etc

'Convergence' means a term used to describe a variety of technological and market trends in the ICT sector involving the blurring of previously distinct lines between market segments such as cable television, telephony and Internet access, all of which can now be provided through a variety of different network platforms

'Collocation' means facility-sharing in which the incumbent operator houses communications equipment of competitive operators to facilitate connectivity to end users

'Customer' means a person who receives and pays for an ICT service over a period of time under an agreement with or pursuant to terms and conditions established by the operator with approval of the National Regulatory Authority

'Data communications' means digital transmission of information usually between computers

'Persons living with Disability' means persons who due to their geographical location or unfavorable economic situation; had been previously excluded or had no service and access to electronic communication; who is a woman; a young person; and who is living with some form of permanent disability.

'Dominant operator' means a regulatory classification of an operator that has the largest market share in a given market segment or that is otherwise able to exercise significant market power in the same or other market segments

'Harmonisation' means the dynamic process of establishing mutually complementary policies, legislation, rules, standards, practices or

systems between member states on the basis of agreed minimum requirements

'Incumbent operator' means the existing operator in a market when it is opened to competition

'Infrastructure or Network' means an integrated system of facilities, which comprise the facilities, used to provide one or more info-communications services

'Interconnection' means the physical and logical connection of two (2) operator networks thereby allowing customers of one (1) network to connect with customers of the other, or to access services provided from the other

'Interface' means the technical characteristics that allow two (2) operator networks that are interconnected to understand the technical operation of the other in order for services to interoperate across the interconnection boundary

'Internet' means Interconnected global networks that use the Internet protocol

'Interoperability' means the technical features of a group of interconnected networks, which ensure end-to-end provision of a given service in a consistent and predictable way

'Local Loop Unbundling' means the process of requiring incumbent operators to open the last mile of their legacy networks to competitors

'Non-discrimination' means a condition by which an operator, engaged in the provision of ICT services, shall not apply less favourable technical and commercial conditions on any competitor than what it would apply to itself, its subsidiaries or its affiliates in delivery of services.

'Next-generation Network' means a broad term for a certain kind of emerging computer network architectures and technologies. It generally describes networks that natively encompass data and voice (Public Switched Telecommunications Network' (PSTN)) communications, as well as (optionally) additional media such as video.

'National Regulatory Authority' means a public authority or government agency responsible for exercising autonomous authority to monitor and regulate the provision of ICT infrastructure, services and content in the public interest and in accordance with a defined legal and policy mandate

'Number portability' means the ability of a customer to transfer an account from one service provider to another without requiring a change in number

'Operator' means an entity that provides ICT infrastructure, networks, services or content

'Pay or Play' means a mechanism whereby licensees may opt to fulfill their Universal Service Obligations (USOs) through implementation of approved universal access and service projects or contributions to agreed financial mechanisms

'Period of Exclusivity' means a period of monopoly whereby an operator(s) is given conditions to provide certain services

'Public Access Point' means

'Public Switched Telecommunications Network' means a fully interconnected and integrated system of telecommunications consisting of various means of transmission and switching, utilised to provide basic telephone services to the general public

'Public Telecommunications Services' means telecommunications services provided to the general public or to a class of persons so as to be generally available

'Quality Of Service' means a measure of network performance that reflects the quality and reliability of a connection. QoS can indicate a data traffic policy that guarantees certain amounts of bandwidth at any given time, or can involve traffic shaping that assigns varying bandwidth to different applications. (align to QoS Guidelines)

'Resale' means the offering to users or customers for profit of ICT services obtained from another ICT service provider.

'Subscriber' means any person who subscribes to the service or any part thereof, provided by an operator

'Tariffs'means any charges raised by an operator for ICT infrastructure, services or content

'Telecentre' means a public place where people can access computers, the Internet, and other digital technologies that enable them to gather information, create, learn, and communicate with others while they develop essential digital skills

'Electronic Communications' means emission, transmission or reception of information, including without limitation, voice, sound, data, text, video, animation, visual images, moving images and pictures, signals or a combination thereof by means of magnetism, radio or other electromagnetic waves, optical, electromagnetic systems or any agency of a like nature, whether with or without the aid of tangible conduct but does not include content service.

'Transparency' means requires that network operators will make publicly available either the interconnection agreements or reference interconnection offers.

'Universal Access' means the availability, affordability and accessibility of good quality electronic communication services, including access to free emergency service, to the general public through public access points.

'Universal Service' means the availability and affordability of essential electronic communication services, regardless of geographical or physical location, with due regard to people with disabilities.

'**Universal Access and Service'** means an umbrella term, loosely covering both universal access and universal service

'Universal Service and Access Fund' means a fund into which contributions from operators and other sources are paid for the purpose of providing basic and advanced ICT infrastructure and services to underserved areas, communities or individuals who cannot afford such services on their own, in the pursuit of the goal of universal access and service

'Universal Service Agency' means an institution recommended to be established under either the Ministry or the Regulatory Authority to design universal service strategies and policies and monitor their implementation

'Universal Service Obligation(s)' means mandatory stipulations imposed on operators / licensees, requiring, inter alia, network rollout or service provision to under-serviced areas and communities

2 PRINCIPLES FOR UNIVERSAL ACCESS AND SERVICE

2.1 Introduction

The basic principles underlying these guidelines are:

a) Availability

b) Affordability

c) Accessibility

d) Sustainability

e) Quality of Service (QoS)

2.2 Availability

The principle of availability allows for assurance that essential electronic communication services are easily and readily accessible by all users including persons with disabilities, at all times and without geographical discrimination.

2.3 Affordability

Affordability ensures that prices for electronic communications services allow the majority of the population to use the services and ensuring products are tailor made to cater for a wide range of clients. The price of the service should not be a factor that limits use of the services.

2.4 Accessibility

The principle of accessibility ensures that all customers of electronic communication services are treated in a non-discriminatory manner with respect to the price, service availability and quality of the service, in all places.

2.5 Sustainability

The principle of sustainability allows that the ICTs are provided in line with the US and UA objectives which should be managed and maintained so that their sustainability is ensured.

2.6 Quality of Service

The Principle of Quality of Service ensures that the ICT services provided under the universal service and access programs should have the same quality as those provided in more serviced zones.

3 CONSIDERATIONS IN POLICY AND REGULATION DEVELOPMENT

The development of policies or regulations for UAS should consider the following:

a) A clear and meaningful distinction must be drawn between Universal Access (UA) and Universal Service (US), both in terms of definition and in terms of policy objectives and implementation;

b) Targets and deliverables must be clearly specified and measurable, specifying which Information and Communications Technologies (ICT) infrastructure, services and applications must be provided, and identifying target beneficiaries;

c) The ongoing convergence of ICT networks and services must be catered for and provision must be made for the full range of services beyond fixed and mobile telephony to include the Internet, broadband and broadcasting;

d) Technology neutrality and interoperability must be entrenched so as to allow provision of multiple services over the most appropriate platform and in order to facilitate innovation in the provision of services and the delivery of content; and

e) Periodic review of Universal Access and Service (UAS) parameters, objectives, principles, scope, targets, obligations and milestones and must be done in consultations with critical stakeholders.

4 VARIETY OF STRATEGIES AND POLICY MECHANISMS TO PROMOTE UNIVERSAL ACCESS AND SERVICE

A multi-pronged approach, adopting a variety of strategies and policy interventions to achieve UAS is necessary, including amongst others:

a) The introduction and strengthening of competition with liberalisation of appropriate market segments, including, amongst others, Customer Premises Equipment (CPE), Internet Service Provision (ISPs), data communications, Value Added Networks (VANS), Local Loop Unbundling (LLU), number portability, international gateways, undersea cables and wholesale fibre;

b) The strengthening of regulatory reform measures to ensure an independent and effective legal and regulatory framework, including firm and consistent regulation to ensure the effectiveness of interconnection, collocation, rights of way, infrastructure sharing and open access;

c) The imposition of universal service obligations (USOs) upon designated licensees, such as, inter alia, network rollout or service provision to under-serviced areas and communities, provision of specified services such as free emergency calls, or contributions to the Universal Access and Service Fund (UASF);

d) The definition of a range of universal access and service financing mechanisms, including the establishment of UASF;

e) The introduction of a mix of complementary and innovative supply-side interventions to roll out ICT infrastructure and extend ICT networks, and increase funding for access interventions in order to meet UAS objectives and targets, including through Pay or Play mechanisms, spectrum award obligations; tax incentives, the introduction of Public-Private Partnerships (PPPs), and measures to facilitate community participation;

f) The introduction of a mix of complementary and innovative demand-side interventions to stimulate demand for access to ICT infrastructure and networks and promote uptake of ICT services, including the development of public access points, school connectivity projects, the promotion of e-health, e-agriculture and e-government, and support for the development of local content and applications.

5 VARIETY OF MECHANISMS TO FINANCE UNIVERSAL ACCESS AND SERVICE

a) The law establishes a variety of financial mechanisms to support provision of UAS, including incentives and subsidies, PPPs, government funding, and the establishment of a UASF.

b) The law provides that funding or subsidies provided must be targeted and determined and delivered in a manner that is transparent, non-discriminatory, inexpensive, and competitively neutral.

c) The law establishes a clear and explicit funding arrangement to support UAS, sourced from sector revenues, the government budget or donor agencies, with contributions paid in at reasonable intervals, preferably annually.

d) Rate setting above cost on some wholesale services to provide "support" for UAS may be considered, provided that such cross subsidies are competitively neutral, and the services or infrastructure receiving the support are clearly specified.

e) Implicit funding for UAS interventions through inter-operator compensation fees, access deficit charges and other indirect sources may be considered.

f) The application of preferential or discounted tariffs for achieving good quality access in respect of schools, clinics, telecentres or other community access points or for users with disabilities, including access to emergency services, may also be considered.

g) Where funding is given to operators or projects to extend ICT infrastructure and increase access to services, this must be done on a 'smart subsidy' basis to encourage market entry and facilitate the initial rollout of infrastructure and services, rather than to create long-term dependency on such funding.

6 THE ESTABLISHMENT AND GOOD GOVERNANCE OF A UNIVERSAL ACCESS AND SERVICE FUND

The factors highlighted below are in line with the recommendations emanating from UASF Toolkit for SADC and Member States are encouraged to develop National Operating Manual for UASF.

a) The law provides for the establishment of UASF as one of several methods of financing UAS interventions, with such a decision informed by an analysis of the market realities and a public consultation process with stakeholders.

b) The law clearly identifies who is responsible for the management and operation of the UASF, preferably the regulator, and ensures the independence of this entity through clear regulatory provisions.

c) Contributions to the UASF are based on a percentage of revenues of all applicable operators, paid at reasonable (preferably annual) intervals, supplemented by contributions from alternative and collateral sources.

d) Financial and activity reports of the UASF are publicly available, preferably on the web site of the fund.

e) The UASF is audited annually, and the audit reports are publicly available.

f) The expenditure of funds prioritises public schools, public access points, telecentres, Small Medium and Micro Enterprises (SMMEs), co-operatives or other projects and interventions, subject to a carefully-researched needs analysis.

g) Competitive bidding is used as the basis for selecting and tendering for individual projects and interventions.

7 QUALITY OF SERVICE (QoS)

The UAS projects should be implemented in accordance to the minimum QoS standards that have been set by the National Regulatory Authorities (NRA).

CONCLUSION

These policy guidelines in respect of universal access and service for SADC seek to achieve widespread and equitable access by all in the region to ICT infrastructure and services in line with the objectives of The Protocol.

These policy guidelines are presented to the Member States so that the regional policy harmonisation process will be strengthened and be conducive to attracting local and foreign investment, thereby facilitating the creation of resources for the development of ICT infrastructure and services and content, thus fostering socio-economic development across the SADC region. These policy guidelines also seek to foster the effective application of the SADC Protocol directives on the separation of functions between policy, regulation and operations, by strengthening good governance practices and promoting competition.

Member States are recommended to scrutinise their respective legislation in the light of the policy guidelines.

SADC is therefore recommended to monitor country progress in the implementation of these guidelines on an ongoing basis.

These guidelines should be read together with SADC Guidelines on ICT Consumer Protection; SADC Guidelines on QoS; and SADC Model Radio Frequency Spectrum Policy.

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