State of Broadcasting and Digital Migration in the Region
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Introduction

The International Telecommunications Union (ITU) set June 2020 as the deadline for developing countries to have fully migrated to digital terrestrial transmission. This date has come and gone and countries in Southern Africa are still at various stages of the digital broadcasting migration process.

The initial deadline had been June 2015 and almost all the SADC countries failed to switch off all analogue television transmission except for Mauritius and Tanzania. This is a direct contrast to the performance of most countries in Europe and the developed countries which managed to fully migrate to digital terrestrial transmission (DTT) and achieve analogue switch off (ASO) before the June 2015 deadline.

Most countries in the region and beyond adopted a phased approach to the digital broadcasting migration (DBM) process and modernisation of the infrastructure was synchronised with consumer awareness and acquisition of receive gadgets, the set top boxes (STBs). Digital broadcasting migration hinges on three pillars and these are:

- Infrastructure
- Content
- Consumer awareness and set top boxes

It should be noted however that some SADC countries have made good digital broadcasting migration progress and are in the final phases of the process. Others are struggling due to various factors, chief among them being financial constraints and lack of urgency to comply with the ITU timelines. It is also unfortunate that the Covid-19 pandemic that hit the world from the beginning of the year 2020 also negatively impacted the progress of digital broadcasting migration programs as resources had to be channelled towards fighting the pandemic.
Overview of digital broadcasting migration

The digital broadcasting migration is a costly process for both the governments and citizens. There are costs for digital production equipment, transmission equipment and decoders or digitally enabled television sets. It is anticipated that the benefits derived from the digital migration process far outweigh the costs involved. The transition from analogue to digital transmission impacts television viewers, media companies and existing television channels in varying degrees.

Generic benefits of Digital Migration

Digital broadcasting enables utilisation of the scarce frequency spectrum far more efficiently than analogue technologies. Consequently the first benefit is the freeing up of valuable radio frequency spectrum that is used for analogue TV transmission. The freed space is referred to as digital dividend\(^1\) and has been earmarked for mobile broadband.

The migration to digital broadcasting creates opportunities for the development, use and wide dissemination of local content. This advances the expression and the efficient communication of the knowledge and experience of all communities and nations. The creation and use of local content contributes to the integration of people from all walks of life. Digital migration therefore creates avenues for media freedom and content creation which subsequently ensures access by media practitioners to diverse information and views. This is also beneficial to ordinary citizens who are also guaranteed of further access to information. Access to information is also important for exercise of rights for purposes of promoting transparency and accountability and more broadly good governance.

Technical benefits of digital broadcasting

- the digital platform offers superior video and audio quality
- the efficient spectrum use allows different content providers to be carried in a single frequency channel. The same frequency channel that carries one analogue TV service can carry up to 20 standard definition TV services or 6 high definition services plus 20 radio channels.
- Digital broadcasting lowers transmission costs as the transmitters use a fifth of analogue power for the same coverage.
- Digital transmission infrastructure allows optimum utilisation of resources since content service providers share the same infrastructure
- The digital environment stimulates an increased participation in the broadcasting sector resulting from high demand for content and low investment start-up costs.

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\(^1\) www.itu.int
Digital broadcasting migration status in Zimbabwe

Zimbabwe has invested more than USD 40 million to this date towards upgrading its transmitter network and revamping of the studios.

Zimbabwe has so far mostly spent funds on establishing the infrastructure and this has not been synchronised with set top boxes acquisitions, consumer awareness and education. There is now a situation where the studios and the transmission network are digitally compliant but STBs are not available. At this moment Zimbabwe should be having dual illumination, i.e. both digital and analogue transmissions in all the transmission centres that have been equipped with digital transmitters. Digital broadcasting migration is not a technical issue but ultimately a behavioural change process among the public and a process that needs education and communication at its heart. World over two thirds of digital broadcast migration budgets go towards consumer awareness and acquisition of STBs. In Zimbabwe most effort has been put on infrastructure, the least important of the three pillars.

Zimbabwe Broadcasting Corporation television signal is already available on satellite on the DSTV platform and viewers are already accessing it digitally on the Digital Video Broadcast-Satellite (DVB-S) platform. Viewers are already getting the clear signal and that is one of the benefits of the DTT migration. Transmitting the signal terrestrially is not going to be good enough incentive to trigger the viewers to migrate to DTT. Exciting content is the key.

There are concerns already regionally that the DTT is turning out to be the platform for the people with low income levels since those who can afford to subscribe to the satellite pay platforms have continued to ignore the presence of the DTT platform.
Digital Broadcasting Migration Components in Zimbabwe

a. Content production infrastructure:
   i. TV studios- the plan is to have 6 studios at Pockets Hill, Mbare, Montrose, Gweru, Masvingo and Mutare.
   ii. Content gathering equipment (OB vans, DSNGs, flyaway kits)

b. Signal processing equipment:
   i. National high definition TV head end (multiplexer) is at Pockets Hill
   ii) Satellite uplink facility for signal distribution and gap filling on DVB –S2, Ku band platform. The satellite uplink has dual purpose, firstly it is the primary distribution channel of all TV and radio services to the 48 transmitter sites and a direct to home DTH link on DVB-S2 platform to all viewers who might not get reception from the 48 transmitter sites and any other additional sites that might be added in future.

c. Digital terrestrial transmission network:
There are 48 transmitter sites dotted throughout the country. There are 24 backbone sites and 24 gap fillers. Zimbabwe like most SADC countries adopted the DVB-T2 transmission standard, the standard used in Europe.

d. Digital Terrestrial Transmission reception.

Set top boxes or DTT decoders are required to receive the digital signal. Many countries which successfully implemented the DBM put up policies to make the set top boxes affordable and easily available with a lot of consumer protection measures. It is a zero sum game to transmit the signal when consumers do not have receive gadgets. The project coordinators in Zimbabwe, the Broadcasting Authority of Zimbabwe (BAZ) requested for 400 thousand set top boxes way back in 2015 and no funds have been availed this far.
### Table 01: Status Of Digital Broadcasting Migration Components In Zimbabwe

<table>
<thead>
<tr>
<th>DMB COMPONENT</th>
<th>STATUS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTENT PRODUCTION</td>
<td>Studios at Pockets Hill and Montrose have been refurbished and are digital compliant. Studios at Mbara, Gweru, Mutare and Masvingo still pending</td>
<td>It is important that studios in the regional centres are established to achieve decentralisation of local content production. Effort and resources have been put to capacitate independent local producers to create content that will feed into the vast space that is created by the digital migration process. The digital platform is extremely thirsty for content.</td>
</tr>
<tr>
<td>TV SIGNAL PROCESSING</td>
<td>Head end and satellite uplink were installed at Pockets Hill</td>
<td>The national DTV head end (multiplexer) has capacity to handle 12 high definition TV services and 6 national radio services. The head end enables aggregation and multiplexing of TV services from various broadcasters to be achieved. It also performs subscriber management, electronic program guide, encryption of TV services for those who may offer pay TV services.</td>
</tr>
<tr>
<td>Digital Terrestrial Transmission Network</td>
<td>13 out of the 25 new towers have been constructed. 18 sites out of the 48 transmission sites have already been equipped with DTT equipment and test runs have successfully been carried out.</td>
<td>Despite the massive deployment of the transmission equipment, still consumers are not yet accessing DTT services. It has mostly been technical activity behind the scenes and that does not excite consumers.</td>
</tr>
<tr>
<td>DTT RECEPTION</td>
<td>No set top boxes have been made available to the viewers to this date. There hasn’t been any clear position as to how the set top boxes are going to be made available and affordable to viewers. There is no policy on creating safety nets to cater for the disadvantaged members of society who may not afford the receive gadgets. This will perpetuate the urban/rural digital divide. There are no consumer awareness campaigns and it is as if nothing is happening at all. Technical standards for set top boxes have been specified.</td>
<td>Several countries in the region introduced subsidies on STBs to make them affordable to the majority. South Africa has policy to supply about 5 million free STBs to households that earn less than R3200 per month. Zambia, Swaziland, Tanzania and Namibia subsidised the STBs. Botswana provided no subsidies.</td>
</tr>
</tbody>
</table>
Digital broadcasting migration status in Tanzania

Tanzania successfully completed migration from analogue to digital transmission in 2015. More than 50 analogue transmitters were switched off nationwide and the analogue network was carrying 13 TV services. Tanzania was far ahead of many African countries in terms of availing diversity of players broadcasting space even in the analogue transmission era. Public broadcasters had monopolies in quite a number of countries in the region. These countries include Zimbabwe, Angola and Botswana.

The analogue switch off (ASO) was done in phases starting with the capital city Dar Es Salam and was followed by other highly populated urban centres.

3.1 Digital Terrestrial Transmission business model adopted in Tanzania

The introduction of digital terrestrial transmission in 2010 changed the business model of the terrestrial platform. It created two entities.

- Signal distributor/multiplexer – whose mandate is to build and operate transmission and distribution network for Broadcasters, both free to air and pay TV
- Content service providers CSPs – (broadcasters) – focus on content production
3.2 Revenue Model of Digital Terrestrial Transmission

Content service provider source of revenue is as follows:

- TV advertising - free to air operators get most of their revenue from advertising revenue. Competition is stiff and it has been a challenge for many operators to sustain and grow revenues given that the advertising cake is now being shared by many players when it has not grown correspondingly.

- Airtime sale

- Subscription fees for end users for subscription to the TV bouquet and value added services.

- Signal distributor source of revenue is mainly transmission fees to the content service providers.

The working relationship between the signal distributor and the content service providers is defined by statutes.

3.3 Regulatory Framework

The licensee was assigned frequency spectrum resources to fulfil the licence obligations nationwide.

One third of multiplexing capacity to be for free to air (FTA). The rest is for pay TV services and value added services. New licence category of content aggregator was introduced to stimulate pay TV industry.

The Multiplexer MUX (signal distributor) licence scope was to achieve the following:

- To utilise spectrum resource inherited from the analogue era for provision of broadcasting services in the country
- To ensure that Tanzania as a sovereign state owns broadcasting infrastructure for use by local TV channels
- To strengthen and ensure sustainability of own infrastructure for provision of broadcasting services
- To ensure universality of broadcasting services using own infrastructure

Digital Terrestrial Transmission Achievements in Tanzania

- Local free to air TV channels increased from 13 to 34. This significantly increased diversity and reach to all segments of the population. Each operator would identify a market segment where they would appeal best thereby facilitating access of information across the board.

- Terrestrial TV population coverage increased from 14% in analogue era to more than 50%. The rest of the country is covered by satellite direct to home DTH. It is evident that the digital
broadcasting migration facilitated universal access to information. National coverage of only 14% to more than 50% on the terrestrial platform was very significant. The 100% access was achieved through the satellite platform.

- The DTT industry has increased employment from activities from call centres, DTT receiver dealers and content developers. The pay TV has grown significantly and immensely benefitting local artists.

**Regulatory Thrust**

There is need to achieve interoperability of receivers from different service providers by deployment of conditional access modules. Currently one has to get separate decoders to access different services from the different service providers but once the CAM system is deployed then one uses one decoder to access TV channels from all service providers. The thrust is to create competition based on content and not on technology.

**Post DTT Challenges in Tanzania**

- Set top boxes are not yet interoperable, currently one buys several STBs to access all services from the different content service providers (CSPs).
- Sustainability of free to air channels is at risk, most CSPs want to convert their channels to pay TV channels due to decrease in commercial adverts.
- Most broadcasters are unable to pay the transmission fees, they are failing to break even and finding it difficult to sustain operations.
- DTT network cannot practically be rolled out to achieve 100% geographical coverage. There still remains a significant lot who will continue to get services from satellite DTH.
Digital Broadcasting Migration Status In Botswana

45 sites throughout the country have been equipped with digital transmitters. All the analogue transmitters in the northern region have been switched off.

Network coverage

- The digital transmission coverage is intended to replicate the analogue coverage and
- Digital transmitter stations will be changed after confirmation of reception on the ground.
- The state Broadcaster is currently running an 8 channel multiplex and 6 services are on air; BTV1, Access TV, Khuduga HD, Now TV, France 24, BTV2 trial,

4.2 Set Top Boxes

- There are 500 000 analogue TV households in Botswana and
- Digital TV households are yet to be verified. 325 000 STBs are needed to effect national analogue switch off –NASO.
- Independent commercial dealers are mandated with the supply of the STBs.
• 6 companies were approved by the Botswana Communications Regulatory Authority (BOCRA) but only 3 are selling the decoders to the public.

• To protect the consumers and make sure quality STBs are supplied 24 months warranty on the STBs was imposed on the suppliers by government.

**Awareness campaigns**

• Communication strategy is in place and is being implemented throughout the country and generally the public is now aware of the DTT migration.

• There is need to have more awareness on use of proper receive antennae as a lot of viewers are not using proper receive aerials, they are using hangers, nails or wires as aerials.

• ASO rehearsals were carried out at Gantsi and Maun and the desired results were achieved.

• The DTT migration call centre is operational and consumers can make inquiries on all matters that affect them.

**Challenges**

• Most urban viewers have not found reason to migrate to DTT from satellite. All services available on DTT are also available on satellite and they will continue to be available on the DTH platform.

• The DTT is becoming the platform for the poor. The middle and high income households are using the pay satellite platform DSTV.

• There has been very low uptake of STBs by the consumers.

• There is limited assembly capacity in Botswana and the consumers are few and there can't be any economies of scale given the small national TV households.

• Companies that were approved by BORCA to supply and distribute STBs are lobbying government to give them tax rebates, provide subsidies on the gadgets and market protection for a specified period because of costs involved.

• Government on the other hand insists that it is constrained to provide subsidies, tax rebates and market protection.

• Botswana chose the Japanese transmission standard, Integrated Services Digital Broadcasting Terrestrial (ISDB-T) when the rest of the SADC region chose the DVB-T2 European standard. DVB-T2 STB prices are coming down significantly. They were more than USD 50 five years ago but they have come down to less than USD 20 of late.

• The low uptake of STBs is linked to lack of exciting content and a lot of investment is required to produce relevant and appealing local content.
Digital broadcasting migration status in Angola

Angola is the only other country in Africa outside Botswana which adopted the Japanese standard ISDB-T in 2018 moving away from the DVB-T2 European standard adopted by the whole SADC region.

DTT Migration Road Map for Angola
Digital broadcasting migration status in South Africa

South Africa’s digital migration process started way back in 2001 and the government initially announced that it would be completed by 2011. One deadline after the other has been missed while the country remained in desperate need of broadband spectrum which will be freed by the conclusion of the digital broadcasting migration process. Lack of continuity in the Ministry of Communications has been sighted as one of the reasons that stalled progress. Over the last 12 years the Department of Communications has been superintended by 12 ministers. Releasing the high demand spectrum digital dividend 1 (698- 790 MHz) and digital dividend 2 (790- 862 MHz) is key ingredient for the country’s growth plans through future investments in mobile broadband. In the absence of digital dividend spectrum mobile operators had to re-farm spectrum and build significantly more towers at great expense to provide high speed broadband services. This consequently increased mobile data prices. Mobile operators have committed to data price cuts when additional spectrum is allocated to them, therefore digital migration is a key component in lowering data prices.

The frustration of the industry is exacerbated by lack of coherence on statements issued by the various ministers of communication over the years.
Table 02: Statements on Digital Broadcasting migration by Communications Ministers

<table>
<thead>
<tr>
<th>MINISTER</th>
<th>TIME</th>
<th>STATEMENT ATTRIBUTED TO MINISTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivy Matsepe Casaburri</td>
<td>June 2008</td>
<td>The digital migration process was on track to meet deadlines</td>
</tr>
<tr>
<td>Siphiwe Nyanda</td>
<td>October 2009</td>
<td>The government was on track to reaching full digital migration by November 2011</td>
</tr>
<tr>
<td>Siphiwe Nyanda</td>
<td>October 2010</td>
<td>South Africa was on track to begin migrating to digital television broadcasting in 2011</td>
</tr>
<tr>
<td>Dina Pule</td>
<td>May 2012</td>
<td>November 2011 deadline missed</td>
</tr>
<tr>
<td>Siyabonga Cwelin</td>
<td>July 2014</td>
<td>The final broadcasting digital migration policy would be published by the end of the month. This did not happen</td>
</tr>
<tr>
<td>Faith Muthambi</td>
<td>August 2015</td>
<td>Digital migration programme on track (even after missing June 2015 deadline)</td>
</tr>
<tr>
<td>Ayanda Dlodlo</td>
<td>August 2017</td>
<td>There was no intention to delay the process to complete the digital migration process by December 2018</td>
</tr>
<tr>
<td>Mmamoloko Kubayi-Ngubane</td>
<td>December 2017</td>
<td>The new deadline of June 2019 was fixed, and South Africa had to meet it</td>
</tr>
<tr>
<td>Mmamoloko Kubayi-Ngubane</td>
<td>January 2018</td>
<td>Promised she would deliver migration on time if given enough resources</td>
</tr>
<tr>
<td>Nomvula Mokonyane</td>
<td>October 2018</td>
<td>A new deadline for analogue switch off was set at July 2020</td>
</tr>
<tr>
<td>Stella Ndabeni Abrahams</td>
<td>December 2018</td>
<td>December 2018 deadline missed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>July 2020 analogue switch off date not cast in stone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>June 2019 deadline missed</td>
</tr>
<tr>
<td>Stella Ndabeni Abrahams</td>
<td>February 2020</td>
<td>The Department of Communications outlined its plans to fast track digital migration by the end of 2021</td>
</tr>
<tr>
<td></td>
<td></td>
<td>July 2020 deadline missed</td>
</tr>
<tr>
<td>Nomvuyiso Ratyi</td>
<td>September 2020</td>
<td>South Africa would only complete digital migration by 2022</td>
</tr>
<tr>
<td>Stella Ndabeni Abrahams</td>
<td>September 2020</td>
<td>Government still planning to complete digital migration process by the end of 2021</td>
</tr>
<tr>
<td>Stella Ndabeni Abrahams</td>
<td>December 2020</td>
<td>End digital migration programme by March 2023</td>
</tr>
</tbody>
</table>

8 https://techcentral.co.za/digital-migration
Digital Broadcasting Migration Framework and Status in South Africa

Conclusion of the broadcasting digital migration is 5 years behind schedule in South Africa.

Digital Migration Road Map in South Africa

Network and Household Migration Status

- The digital transmission network is fully operational across the country, 88% of households are covered by the terrestrial network and 12% by satellite –DTH
- South Africa has been in dual illumination from 2006
- Satellite coverage has full national reach and provides gap filling for the 12% that can’t be reached by the terrestrial network.
- It is extremely expensive to terrestrially cover the 12% it is only economical to cover it through satellite
- There are 13.2 million TV households in SA and approximately 7 million are already accessing digital TV services through existing pay and free to air –FTA digital satellite platforms

9SADC post DTT workshop 2020
• Households that earn less than R3 200 are set to get STBs for free upon registration. The government subsidy program targets to supply free decoders to about 5 million households.

• As at March 2020 only 1 109 965 households had registered to get free STBs. A massive 3 590 035 were yet to register. More than 400 000 STBs and antennas from the initial batch of 1.5 million were still piled in warehouses across the country waiting to be given to qualifying registered households and the target of 5 million households was still way off.

Analogue Switch Off and Digital Dividend Spectrum licencing

• 18 high power analogue sites have been switched off

• The Square kilometre Array (SKA) region in the Northern Cape has been cleared from all analogue transmissions

• Policy direction was published in July 2019 to enable the regulator to begin licencing the 700-800 MHz dividend spectrum

Household connection Approach to achieve Analogue Switch Off by 2021

Phase 1: to complete installations for existing subsidy stock through local government collaboration. The local government has been mandated to carry out the following tasks:

• Registration of qualifying households

• Distribution of STBs

• Installation of STBs and antennas

• Post installation support

a. Phase 2: A combined industry wide participation and direct government limited procurement through:

• Promotion of mass decoder availability and integrated digital TVs

• Implementation approach based on early digital dividend spectrum release

• Supplement with existing commercial products
Table 03: DTT Migration Challenges and interventions employed

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unavailability of decoders</td>
<td>Facilitate the market for generic DVB-T2 decoders</td>
</tr>
<tr>
<td>2. Mass communication and national DBM program awareness</td>
<td>Establish a concerted drive in collaboration with all key and critical stakeholders. Drive DTV messaging between suppliers, broadcasters, consumers and align communication to the national digital migration rollout plan.</td>
</tr>
<tr>
<td>3. Slow uptake of subsidised STBs</td>
<td>Expedite subsidised decoder installations to conclude distribution and installation of government subsidy program</td>
</tr>
<tr>
<td>4. Broadcast network configuration</td>
<td>Sentech the signal carrier to optimise network to cater for all households in an equitable manner.</td>
</tr>
<tr>
<td>5. Viewer support</td>
<td>Walk in centres being established in localities to directly serve communities. Expanding the local municipality base on registration, installations and first line support</td>
</tr>
</tbody>
</table>

6.6 Key elements causing Digital Broadcasting Migration delay in South Africa

- Encryption debate took too long to be resolved and therefore delayed specifications of STBs
- The high decoder production costs affected availability and affordability of decoders
- Fundamental deficiencies in project management lead to accountability gaps and disjointed implementation
• Poor visibility of the public broadcaster to lead migration awareness had a bearing on consumer buy in
• Lack of consensus due to private broadcasters’ influence based on their commercial interests and not national interests.

Policy conflict in Digital TV rollout in SA

SABC is looking to a digital future that is less reliant on the DTT network. SABC sees its future as a multiplatform, multichannel public service provider and plans to make use of direct to home (DTH) satellite television technology to pursue its digital strategy. It would therefore rely less on the DTT network. The CEO announced that SABC had plans to acquire an over the top streaming platform as an interim measure. Sentech the signal carrier in South Africa has to date spent more than 10 billion rands on the DTT infrastructure and SABC is its main customer. If SABC abandons the DTT network for other platforms then it spells disaster for the DTT network because SABC has always been the flagship of the DTT project.

Digital broadcasting migration status in Zambia

Table 04: Overall Progress

<table>
<thead>
<tr>
<th>Item description</th>
<th>Percentage completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Transmission network, 70 transmitter sites, DTV centre, customer service centre, NOC and DRC</td>
<td>98%</td>
</tr>
<tr>
<td>2. TV production, consists of 4x 5 channel studios, 1x 2 channel studio, 8x 3 channel virtual studios, 3x OB vans</td>
<td>77%</td>
</tr>
<tr>
<td>3. Civil works, existing studio renovation, provincial studio buildings, NOC building</td>
<td>80%</td>
</tr>
<tr>
<td>4. STB and satellite decoders supply to consumers</td>
<td>100%</td>
</tr>
</tbody>
</table>
• Zambia has to date supplied 1 million set top boxes to consumers and 250,000 satellite decoders to those consumers who cannot be covered by the DTT network. The DTT migration was well planned and executed.

POLICY FRAMEWORKS PUT IN PLACE TO INFLUENCE DTT MIGRATION

Countries in the region put in place policies to facilitate smooth implementation of the digital migration. In some countries digital migration was handled at the highest level of cabinet and digital migration policies were produced. Such was the case with Zambia, Malawi and South Africa. Some countries like Zimbabwe, Mozambique only took the path of gazetting statutory instruments to define the digital migration trajectories.

Policy outcomes

The policy outcomes converge across nations and are as follows

• Proper coordinated transition from analogue to digital broadcasting
• Increased production and accessibility of high quality local content
• Increased fair trade among players in the broadcasting industry
• Increased distribution of TV signals for all broadcasters
• Increased efficiency in utilisation of the frequency spectrum (digital dividend 1 and digital dividend 2)

Policy priority areas

• Protection of the local broadcasting industry from domination by foreign players who have massive financial muscle
• Rural access to bridge the rural urban digital divide
• Establishment of public signal distributor to allow infrastructure sharing
• To put in place financing mechanisms, DBM is capital intensive
• Coordinate public awareness of the DTT migration process
• Production of high quality local content

The key guiding principle on which the policies were developed was the commitment by governments to facilitate a smooth and cost effective digital migration to achieve the following:

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10 Digital Migration Policy Zambia
11 Digital Migration Policy Malawi
12 Digital Migration Policy South Africa
• Get citizen participation in national economic, social and political issues
• Access to information
• National empowerment
• Promotion of competition in the broadcasting sector
• To liberalise airwaves
• Enhance rule of law

Policy objectives
• Develop digital broadcasting market structure and licensing framework
• To define national technical standards to ensure interoperability, economies of scale and safeguarding universal services
• To provide framework for content development and regulation in order to promote diversity and create jobs
• To develop and provide guidelines for the establishment and operation of signal distributors.
• To provide a time frame and schedule of digital transition in order to undertake orderly switchover and analogue switch off.
• Ensure local media houses are promoted to increase local content
• Require signal distributors to adopt common technologies for devices to be used by the public to access DTT services
• Ensure regulators develop and implement tariff and universal access guidelines by ASO date.

Set Top Boxes and consumer protection
It is critical that consumers are protected and have guaranteed access to information. Policies were put in place to make sure the consumers were not taken for a ride:
• Regulators developed mechanisms to ensure compliance to type approved STBs
• STB dealers are registered and licenced to only trade in type approved gadgets
• STB dealers to establish wide sale points and ensure consumers acquire the gadgets at a competitive and fair price.
• Ensure that all free to air channels are accessible on all STBs across signal distributors
• Promote consumer awareness on access and utilisation of STBs and digital broadcasting systems in general.
• To put mechanisms to provide STBs to the underprivileged. South Africa to provide 5 million free STBs to poor households, Namibia, Zambia and Swaziland subsidised the STBs, Zimbabwe and Botswana offered no subsidies, Zimbabwe has not even started selling STBs to consumers.

**Digital Broadcasting Migration and Human resources development**

The digital TV migration redefined the media industry and the skills needed realignment to suit the new digital era demands. Governments and media industry had to ensure that there is adequate human capacity development in relation to DBM. The vast capacity created by the digital migration requires a lot of content. Quality exciting content is key to the success of any content service provider. The following measures were therefore put in place:

• Facilitated review of curriculum in tertiary education to incorporate issues of digital terrestrial television
• Reviewed the existing curricula in higher education institutions that deal with creative arts to enhance content development
• Refresher courses carried out for technicians, engineers, producers and other media practitioners
• Funding was provided by governments for local content creation e.g. Zim Digital project. The quality of the content that is coming out of the initiative still needs a lot of polishing to appeal to the consumers. The Zimbabwe Film School, and other local universities now offer Film and Theatre Arts studies in line with the thrust to create quality local content.

**Stakeholder roles for successful dbm**

**Governments/regulators**

• Putting enabling legal framework for smooth implementation of DBM across ministries
• Provide financing for the project from internal resources and Public Private Partnerships
• Separation of content service provision from signal distribution so that broadcasters compete on content and not on delivery platform.
• Create safety nets for the disadvantaged in society by way of subsidies, and tax concessions on the STBs.
• Issue licences to competent content service providers and not based on political dynamics so that genuine pluralism of players and diversity of content is attained.
• Create even playing field for new entrants, private broadcasters and public broadcasters
• Protect local broadcasters from possible foreign dominance
• Conduct massive public awareness on DBM before ASO
• Enforce minimum of 12 months guarantee on STBs to protect consumers.
Private Sector
- Supply STBs at reasonable price to consumers
- Supply quality STBs and ancillary equipment for best reception
- Have full back up services for transmission hardware supplied
- Provide adequate skills transfer to local technical staff
- Partner government in PPPs in a win-win arrangement

Content service Providers – Broadcasters
- Air exciting relevant content. The content should offer highly desirable benefits that go far beyond what is obtainable through the existing analogue services for consumers to be triggered into spending money on STBs. The content must be enriching and appealing.
- Pay content producers fairly and on time
- Accommodate divergent national views
- Give balanced coverage to all political actors

Signal Distributors
- Provide uninterrupted transmission
- Maintain transmission charges to broadcasters low for broadcasting business to remain viable
- Coordinate proper installation of consumer receive equipment for best reception
- Properly operate call centres to deal with reception concerns
- Establish effective remote monitoring to detect breakdowns in transmission as they occur
- Should establish STB service centres easily accessible to consumers

Civic Society
- Conduct public awareness on DBM to complement government efforts
- Conduct educational programs on consumer protection on STBs

Consumers
- Develop taste for local content.
- Appreciate the DBM project and embrace it
• Develop culture of paying for broadcast services and demanding quality service provision.

Factors that inhibited digital broadcasting migration in Southern Africa

• Lack of financing tops the list. Zimbabwe had planned to finance the DBM project through an off budget facility from proceeds of digital dividend. The frequency spectrum was offered to Netone at a discounted price of USD 200 million. The mobile operator failed to raise the funds and the frequency spectrum has not been offered to anyone to this date.

• Lack of enthusiasm and interest from the consumers. Even after providing free STBs to poor households in South Africa there is still low uptake of the STBs.

• Lack of exciting content and consumers have not found compelling reason to migrate to the digital platform. If this is not solved then the DTT network will become a network for the poor. The middle and high income consumers will remain hooked to satellite pay platforms like DSTV which has content that appeals to all tastes.

• Unavailability and affordability of STBs. The majority of consumers cannot afford the STBs and if governments do not provide subsidies.

• Hassling and tussling over interoperability and encryption of the set top boxes between government and private players as was the case in South Africa. Private players’ position was driven by commercial interests while government’s concern was to have some control mechanism that would not allow supplied free STBs to be sold across the borders

• Delays by some countries to finalise on choice of transmission standard to adopt. SADC as a region adopted the DVB-T2 standard in 2012 but Botswana later changed to adopt the Japanese standard in 2014 and Angola also changed to the ISDB-T standard as late as 2018 and Angola is just at the planning stage of implementation.

Digital broadcast migration and exercise of rights

Digital broadcasting is a developmental issue aimed at enhancing people’s right to information, thereby enabling them to make informed choices and decisions on issues that affect them. This also enables them to participate meaningfully in the socio economic development of the country. It is also an issue that deals with information and Communication Technologies (ICTs) which are widely recognised as key drivers for socio economic and cultural development. The diverse content service providers present divergent views on national issues and all viewpoints are accommodated and thoroughly interrogated. Opening up airwaves ordinarily should bring the following benefits:

• an educated and informed nation
• a productive and innovative nation
• a compassionate, just and caring nation

13 http://techzim.co.zw/2016/07/
• an open, democratic and accountable nation
• a moral and tolerant nation
• a united and proud nation
• raised inspiration
• broadened national political and policy dialogue and cohesion
• help change strong held attitudes and values
• widen horizons for citizens
• enforce social norms

Access to information is a basic human right and freedom of information is contained in the Freedom of Information Bill that was passed by the Zimbabwean Parliament as a way of repealing the repressive Access to Information and Protection of Privacy Act [Chapter 10:27]. Digital migration is therefore seen as aiding the fulfilment of the rights of Access to Information and Freedom of Information, at least in theory. What remains to be seen is whether in practice, even after migrating, the rights and freedoms will be upheld.

In order to establish that, interviews and conversations were held with purposively sampled key informants in the media sector who included representatives of media organisations, journalists, media lecturers, media students and those who work in broadcasting. Websites of the Government of Zimbabwe, media organisations and SADC were also visited in order to get more information on television digital broadcasting migration and the intended outcomes in terms of access to information and freedom of information.

The migration to digital is not an overnight process. It is a lengthy one involving signal distributors, regulators, governments and people (consumers). As far as consumers are concerned, almost all television sets in Zimbabwe are still analogue receivers and consumers may not have the means to purchase digitally relevant ones. This may pause problems when it comes to the right of access to information because there is a barrier in terms of how that information is accessed and millions will be left out.

It is also apparent that the pressure to go digital in Africa has connections to European interests and may have little or nothing to do with the African market itself. Freeing up airwaves in Africa is not demand-led. Thus, the first problem of access to information and freedom of expression in Zimbabwe in particular, is the lack of awareness by the consumer on what digital migration is and the place of the consumer in that process. This may mean that digitalisation is coming to many African countries in which access to information and freedom of information are not given. The question therefore is that besides the technical aspect of frequencies and bandwidths, what exactly is the problem that digital migration is trying to solve? Access to information? Freedom of information? This has led some to conclude that, “in many ways, digital migration – especially in regard to analogue radio in
Africa, but also with analogue TV – is a solution in search of a problem."14

Another argument that has been offered in favour of digital migration has to do with what is called signal swamping, which basically is cross-border interference of signals. The question posed then is if that is a serious problem in Africa to warrant a digital migration cut-off date of 2015 as initially set by ITU, why is it that five years later many African countries are still lagging behind in terms of digital migration and there does not seem to be any serious issue with that? In fact, millions of African citizens are yet to receive analogue television signals.

Then there are others who receive spill-over signals without receiving their own countries’ signals, or those who welcome spill-over signals as alternatives to their countries’ tightly controlled broadcasting. The spill-over content itself may not provide much of a choice. Their right to accessing information is yet to be remotely fulfilled. This is probably why many African countries have assumed a lackadaisical approach to digital migration, or have pointed at Africa’s perennial problem of funding constraints. This means that the question of rights may be too advanced in such a scenario and may need to be problematised.

The question therefore, is, what is the place of rights in this scramble from analogue to digital, a scramble which is largely a response to this digital hype and not really because of a serious obligation to do so on the part of African countries?

The fulfilment of the right of access to information and freedom of information may not depend entirely on digital migration but on other factors. Such a focus broadened the scope of this position paper so that the question is not only about how digital migration would help the advancement of the right of access to information and freedom of information in SADC and Zimbabwe, but also a question of whether this right was in fact being fulfilled during the analogue period. Thus, digital migration is not the magic wand; human behaviour before and after digital migration is. But such observations could not be made without research, hence, the key informant interviews that anchor this position paper.

It is also obvious that what digital television portends is an enhancement of people’s digital behaviour. Because there is more content which people can interact with, they have the ability to choose. Which means the choice of what they can actually watch is not channelled from the supply side. They cease being passive recipients and become interactive consumers of content. As they receive content from television, they can personalise it, add more to it, and send it out to others. This means the consumer is also playing the role of having freedom to create information and pass it on. Thus, digital migration should also be understood in the context of the complete digital world itself (not just television) where television content can be re-created, edited and sent. Thus, in terms of this whole digital world, what have been the experiences of Africans so far? Have their governments allowed access to information and freedom of information? Will digital migration improve the relationship between Zimbabweans and their government?

All these questions were important to consider to bring awareness of what is at stake in the context of digital migration and the way the interview questions were supposed to be phrased and couched.

Methodology

This was a qualitative paper informed by an exploratory research design that was meant to unearth various sentiments concerning implications of and the interrelationship between digital television broadcasting migration and the exercise of the right of access to information and freedom of information in Zimbabwe and the SADC region. The study purposively and conveniently sampled 10 respondents who are in the media fraternity for semi-structured interviews. These included personnel from non-governmental and governmental media organisations from SADC countries in general and Zimbabwe in particular, media and journalism lecturers, former and existing editors in media houses, students, and academics. Documents were also accessed from the websites of various media organisations. In line with COVID-19 safety guidelines, the semi-structured interviews were carried out on various communication platforms which included e-mails, WhatsApp, Zoom and telephone calls. Where possible, some of the respondents were physically visited but the guidelines of physical distancing and wearing of masks were strictly adhered to.

Discussion of Findings.

The issue of regulatory authorities was cited in one interview. The concern was that migrating to digital in an environment where analogue frequencies were not opened up because of the need to control citizens’ access to and freedom of information will not mean that governments would abandon such a default setting. According to the statement of one respondent,

Generally, digital migration was expected to open up more frequencies for radio and TV licenses. It was assumed (perhaps erroneously) that this will lead to increased freedom of expression. But that postulation is flawed because regulatory authorities in SADC countries still decide who gets the license and when and where they can go on air. So theoretically, yes, digital migration opens up spaces for increased freedom of expression but in practice, freedom of expression is curtailed by several legacy and policy impediments. 15

From the statement above, it is feared that many SADC governments' regulatory policies and behaviours in the analogue era have shunned a multiplicity of broadcasters with state-owned entities playing lord over frequencies and information. There is therefore no direct link between digital migration and governments abandoning such a tight control (for hegemonic purposes) of the broadcasting industry. In fact, it is not just in the multiplicity of TV stations that we see respect of access to information and freedom of information; it is also in the programming that happens on that one TV station. Does the national broadcaster represent multiple interests? Is impartiality represented in broadcasting regulations? If so, is it enforced? Such a concern is echoed by Hills who observes that,

... It is possible for governments to legislate in such a way that the edicts of ‘accuracy and impartiality’ come to mean that no opposition or criticism of government can be aired. In six Southern African Development Community countries, there are surviving colonial laws preventing

15 Semi-structured interview with a media practitioner from Namibia held on 14/12/2020.
criticism of the state and governments under pressure may seek to target the broadcaster or journalists for airing criticism however balanced that criticism may be. Again, it is commitment from government to openness and debate that is necessary.16

Partisan broadcasts and skewed reporting lead to polarity and threaten national peace. Thus in a scenario where the most overriding issue when it comes to access to information and freedom of information is Government's reluctance to entertain any debate, there is no evidence that such openness and debate will be entertained once digital migration is achieved.

The concern highlighted above is also echoed by one of the respondents, a Media and journalism student at a local university in Zimbabwe, who pointed out that,

For example, recently in Zimbabwe the Broadcasting Authority of Zimbabwe granted licences to six players. An analysis of the ownership patterns of the licensed players points to a system where those that are linked to the state are given licences. For example ZTN is owned by ZimPapers where government is the biggest shareholder; the other licenced stations belong to individuals linked to the ruling elite. It would therefore be folly to assume their content will be very different from that of ZBC TV which has been traditionally touted as the government's propaganda mouthpiece.17

The concerns above potentially mean that digital migration is not synonymous with an enjoyment of the right of access to information and freedom of information, at least as far as the case of Zimbabwe has demonstrated. What will likely happen in the case of Zimbabwe, especially working with the recent case of the granting of broadcasting licenses by the Broadcasting Authority of Zimbabwe, is that we will have a multiplicity of TV stations with no diversity.

A conversation with a radio editor from Zimbabwe unveiled the following:

A multiplicity of channels and no diversity! Governments in the SADC region are not about to grant citizens full enjoyment of the right to access to information and freedom of information. As we have already seen in Zimbabwe, the latest round of television broadcast licenses have been granted on a partisan basis. While digital television migration presents a lot of opportunities for station owners, content producers and consumers among others, Zimbabwe and the SADC region might not get to enjoy these benefits should they continue with their approach of wanting to control and maintain a stranglehold on the media.18

Thus, digital migration may be opportunistically used as an example of plurality while the rights of access to information and freedom of information continue to be violated.

There are many digital content creators in SADC. In the case of Zimbabwe, because of the constriction of television broadcasting space, many content creators opt for the internet. There is therefore a palpable awareness of the limitations that bedevil television broadcasting and there is no indication that such limitations can be dealt with simply through digital migration. A conversation with one content producer who posts politically satirical skits on YouTube supported the view that the internet is actually more alternative than digital migration.

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17Semi-structured interview with a Media and Journalism student at a local university, held on 15/12/2020.
18Semi-Structured interview with a radio editor from Zimbabwe, held on 14/12/20.
The internet is No-Man’s-Land. I mean, I have created my own YouTube account and started posting stuff and people started following me and reposting my stuff, downloading the videos and posting them on other social media platforms like Facebook and WhatsApp. Where is the regulator in that? Because for me, if the national broadcaster cannot be pluralistic, how do we know that the government that controls the national broadcaster will become pluralistic because of digital migration? How many journalists have been arrested or abducted for merely posting vital information on Twitter concerning government shenanigans? They arrested Hopewell Chin’ono twice, didn’t they? 

Do you think such a government will ever allow access to information and freedom of information just because of the so-called digital migration? 

However, even though analogue broadcasting has been beleaguered by governments’ restrictions on citizens’ right of access to information and freedom of information, there is expectation that digital migration may consequently make SADC governments run out of reasons not to democratise broadcasting space once the requisite advantages of digital migration are in motion. However, there is no evidence that governments will change their tactics just because digital migration has made them run out of reasons for restricting media freedoms. 

Section 61 (3) of the Zimbabwean Constitution is currently not being enjoyed by Zimbabwean citizens to the extent that even community broadcasting stations are finding it difficult to acquire licences. It is not obvious that once digitalisation occurs such hurdles will disappear. 

Zimbabwe Association of Community Radios (ZACRAS) expressed its concerns concerning the hurdles encountered in registering community radios. In a congratulatory statement to the recently appointed board of the Broadcasting Regulatory Authority, ZACRAS expressed how it looks forward to an environment in which restrictions are done away with. 

The fact that ZACRAS indicated that the licensing of community radios is a longstanding dream that should be fulfilled in a non-partisan and non-discriminatory manner means that all along the process may have been partisan and discriminatory leading to it being an unfulfilled dream. The setting up of the Broadcasting Authority of Zimbabwe Board, just like digital migration, does not necessarily mean that this partisan and discriminatory approach will end. 

Digital migration will lead to more TV channels, thus widening the public sphere. While this is true, studies have shown that the public sphere is elitist: certain voices have more hegemony over others. The media has widely been used to disseminate elitist information and influence the formation, expression and consumption of public opinion. The role of gatekeepers and tastemakers become clear here. The public sphere is therefore not a level field. This sentiment was echoed by a final year media student from Zimbabwe who observed that:

While digitalisation may also widen the public sphere, enabling people to discuss the issues of concern and leading to the formation of a public opinion, not everyone is going to have access to the public sphere as it appears to be elitist.

19The investigative journalist, Hopewell Chin’ono, was arrested on trumped-up charges and incarcerated twice. 
20Semi-structured interview with Zimbabwean content creator, held on 14/12/2020. 
21The board comprises Ambassador Bornface Guwa Chidyausiku, Tendai Karonga, V-MakamureNduna, Vimbai Nyakudya, Chief Mahikwa, Oliver Mandipaka, Rodney Mazyewe, Victoria Spiwe Mamvura, Jonathan Mapinda, Audrey Chihota and Jennifer Chakanyuka. 
22Semi-structured interview with a final year Media and Journalism student from a Zimbabwean University.
This may mean that even with a multiplicity of channels, television can still disseminate information that carries agendas that are elitist and are not meant to give the citizen freedom of choice as far as which information to consume/not consume is concerned.

Earlier on in this paper, a question was asked: digital migration is appearing as a solution to which problem? The implication is that digital migration is coming as a cure to the violation of citizens’ rights of access to information and freedom of information. Yet, as one respondent observed, this might not be the main reason:

The aim of the digital migration may not be as driven by social justice of universal access to information imperatives as possibly currently claimed, but rather by profit motives within the political economy within the media industry... In most cases the interest of the public is not of top priority because of the commercial aspect.23

This same sentiment is echoed by Berger who posits that “there is a grave lack of understanding about the First World character of the drivers behind the process, and their inapplicability to African conditions.”24 Berger’s observation points to a scenario where the benefits of digital migration are not clear-cut and are made to remotely suggest a democratic opening up of airwaves when, in fact, it has to do with first world countries looking for a market for gadgets, which is what Berger meant by “the First World character of the drivers behind the process”.

However, despite these challenges that will potentially affect the enjoyment of the right of access to information and freedom of information after digital migration, there is also a belief that digital migration will enable citizens to enjoy these democratic rights. While a Zimbabwean filmmaker expressed her reservations with the sincerity of the Zimbabwean government when it comes to granting citizens the right of access to information and freedom of information, she, as an article of faith, observed that digital migration may actually allow citizens to enjoy those rights:

The shift from analogue to digital broadcasting brings about pluralism in the media industries. It gives room for many media players to operate because digitalisation enables so many media channels to operate on one analogue spectrum. In other words, digitalisation necessitates the compression of many channels on a single spectrum. Pluralism is important because it brings about diversity because the audience will have the opportunity to receive information from a variety of media houses. It is also a constitutional right as stated in Chapter 4 section 61 of the constitution of Zimbabwe.25

Casting the benefits of digitalisation wider to the global context of inequalities, the respondent pointed out that Western countries have a hegemony on information dissemination that makes them disseminate not just information, but their biases, beliefs and values. “Digitalisation makes it easy for the Africans in the SADC region to access information from the African television channels that tell a story from an African point of view,” opined the respondent. In an age when satellite receptors are dominated by Western television channels because of the fact that Africa has fewer TV channels due to the limitations of analogue signals, the observation of this informant certainly deserves attention.

A lecturer at a local polytechnic also supported the idea that digital migration, if followed by sincere government policies on broadcasting,
may lead to the enjoyment of citizens’ rights of access to information and freedom of information in the following ways:

1. A wider reach to unserved areas;
2. Diverse content delivered to the public;
3. Establishment of pluralism by building an equitable, just, and people-centred information society (hosting more channels that will offer audiences a vast selection of content).
4. Provision of users with ways of becoming more directly involved in politics and contributing to social change.
5. The possibility of more channels which can include those in vernacular language.26

The fifth observation points to existing violations of indigenous minorities’ rights of access to information and freedom of information with English, Shona and Ndebele dominating broadcasting languages and the other languages being entertained in rare moments like five-minute news bulletins. Digital migration will potentially create possibilities of all languages that are recognised in the constitution of Zimbabwe being catered for.

The observation above resonates with concerns for those with disabilities or the differently-enabled who may fail to access information and enjoy freedom of information because of the restrictions forced on them by their disabilities.

Another respondent, who is a journalist with a local daily, said that SADC governments must come to the realisation that there are more benefits to be accrued from people having information than not having it. In the case of Zimbabwe, plurality can actually work in Government’s favour, especially now that the government wants to rally people behind its VISION 2030:

Digitisation and access to information are also critical in fostering development in the SADC region. The idea of the role of access to information can be reflected in the established SABA news which among other things was meant to utilise the media in promoting development. Now Africa has vision 2063 and here in Zimbabwe, the government set vision 2030, Transitional Stabilisation Programme (TSP) which will expire by 31 December 2020 and succeeded by the National Development Strategy 1 (NDS1) 2021-2025. Digitisation and access to information will assist in ensuring that people have access to information which may make them fully understand these blueprints and support them in order for targeted results to be realised.

However, this rests on whether SADC governments in general, and the Zimbabwean government in particular, trust plurality over repression, especially in a scenario where repression has hitherto proved to be effective in maintaining and strengthening repressive hegemonies.

The conclusion of this paper is that digital migration has perceived benefits in the context of the rights of access to information and freedom of information. The plurality that such a move promises can potentially enhance citizens’ enjoyment of the right to information and freedom of information. However, all of this depends on whether there is a link between digital migration and SADC governments migrating from repressive broadcasting policies that limit people’s access to information and

26Semi-structured interview with a journalism lecturer at a local polytechnic.
freedom of information to more inclusive, progressive and democratic policies. There is really no evidence that digital migration will affect the minds of those who run repressive governments except where (and this is a remote possibility) digital migration will force governments that have hitherto cited a crowded spectrum as the reason for repressive policies to change those policies.

For that reason, the following recommendations are made:

1. Digital migration should start with dialogue concerning what will happen after digital migration in terms of repressive policies that limit people’s rights of access to information and freedom of information.

2. Citizens’ rights of access to information and freedom of information should be central in discussions concerning broadcasting.
Conclusion

Several countries in the region have done fairly well in implementing the digital migration process within their planned time frames. The DBM project was given high priority in these countries and high commitment was demonstrated by committing enough resources to complete the projects. Even less resourced countries like Malawi and Swaziland completed their migration projects in impressive time frames. The delayed implementation of the DBM projects in countries like South Africa and Zimbabwe has dampened the enthusiasm that the process initially generated from the viewers. It is the experts’ view that countries that have not completed their digital migration processes by now may have missed the DTT bus. They may end up sending the DTT bus in the wrong direction if satellite direct to home –DTH becomes the main distribution platform.

SADC countries must conclude the migration process for citizens to derive the digital dividend benefits that arise from lower data tariffs. Digital broadcast migration will without doubt achieve plurality of content service providers. It is yet to be seen in countries like Zimbabwe if that will result in diversity.
APPENDIX A

DIGITAL TERRESTRIAL TRANSMITTER SITES IN BOTSWANA

NOTES:
1. National transmission network has 45 transmitter sites
2. Multiplex has capacity for 8 TV channels
3. 6 TV channels on air, BTv 1, BTv 2, Access TV, Khuduga HD, Now TV and France 24.
4. Botswana has 500 000 analogue TV households
5. Digital TV households yet to be verified
APPENDIX B

DIGITAL TV NETWORK COVERAGE IN MALAWI

NOTES:
1. DTT network coverage is 90%
APPENDIX C

DTT NETWORK COVERAGE IN SOUTH AFRICA MULTIPLEX (MUX) 1

NOTES:
1. MUX 1 has 88% national coverage
2. The remaining 12% is covered by satellite DTH
3. MUX 1 caters for Public Broadcaster and Community Broadcasters
4. The Public Broadcaster has 5 channels
APPENDIX D

DTT NETWORK COVERAGE IN SOUTH AFRICA –MULTIPLEX 2

NOTES:
1. Multiplex 2 caters for commercial Free To Air (FTA) and PAY TV channels
2. Mux 2 has 72% national network coverage
3. Commercial operators are eTV and GoTv
4. Commercial FTA has 4 channels
5. Pay TV has 15 channels
APPENDIX E

KINGDOM OF ESWATINI DTT NETWORK COVERAGE

NOTES
1. Kingdom has small geographical area but is mountainous
2. Network coverage at 72%
3. There is one multiplex with capacity for 20 standard definition channels
4. 7 channels on air