Digital Terrestrial Television

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Acronyms, Terms, Definitions and Frequently Asked Questions
1. What is DTT?

DTT stands for digital terrestrial television (or digital terrestrial transmission). It refers to the broadcasting of terrestrial television in a digital format. Currently, terrestrial broadcasting in South Africa is broadcast in an analogue format. The country is in the process of planning and implementing migration from analogue to digital broadcasting.

2. What is the difference between terrestrial television and satellite television?

Terrestrial television uses a network of transmission towers to relay the signal across the country. Each transmission tower has a specific area of coverage, and it is the network of coverage that provides television signals across the country.

The broadcast signal is sent to the various towers and if you are within the area covered by a tower, then you will be able to receive the broadcast services via a terrestrial aerial which is usually placed on your roof or on your television set (depending on how strong the signal that you are receiving is).
Satellite television broadcasts uses a satellite in the sky. The broadcast signal is sent to the satellite and you receive a signal via a satellite dish. A single satellite usually covers a large area (for example the PAS 10 satellite covers the whole of Africa).

3. What is the difference between analogue TV and digital TV?

In analogue TV, one channel (such as SABC 1) uses a dedicated frequency to broadcast. This is because of the large amount of bandwidth the analogue signal requires. In digital, however, the signals can be compressed – this will therefore allow for more channels to be broadcast in the same bandwidth as one current analogue channel uses. SABC estimates that up to 8 new video channels can be provided in the same bandwidth as one analogue channel.

4. Why are we migrating from analogue to digital?

The main reason for the migration is to release valuable RF spectrum (bandwidth) which can be used for other services, eg:
Broadband mobile services. Spectrum is scarce, and hence making more efficient use of the spectrum available is necessary if more telecommunications and broadcasting services are to be made available on a terrestrial basis.

South Africa also co-ordinates its frequency plans with other countries to ensure that there is no interference between various countries. Currently analogue broadcasting is protected from interference, but this protection will stop by 2015. It is therefore necessary to complete the migration before 2015.

5. Has this been done elsewhere around the world?

Yes – all countries around the world will do the migration to DTT to ensure ongoing co-ordination and protection from interference. Examples of countries that are advanced in their migration process include United Kingdom, New Zealand, Sweden, United States, France and Mauritius.

6. What is a Set Top Box (STB)?

The STB is a device that will decode the digital signal to enable the channels to be
displayed on your television set. This STB will plug-in to your TV set. It is also often referred to as a decoder.

7. Why do I need a STB?

Although you will be able to receive the signal through your aerial, without the STB you will be unable to display the digital services on your television set. The STB decodes the digital signal received via a standard aerial antenna and supplies the TV set with a video signal.

8. Will I need a satellite dish to receive DTT?

Yes - Certain regions in the country, eg: parts of the Northern Cape, will receive DTT broadcast via satellite. This is to prevent RF interference with the SKA project.

9. Will I need a new aerial to receive DTT?

It is unlikely that most current viewers of SABC or eTV will require a new aerial to receive DTT. However, some viewers may require new aerials, or may need to upgrade existing aerials. In some instances aerials may have to be adjusted.
10. Will I need any other additional equipment to receive DTT?
You will need to have a DTT STB (also referred to as a decoder). This DTT STB is not the same as the Multichoice satellite STB or the current MNet STB.

11. Where can the STB be purchased?
At this stage the STB is not yet available in the market for purchase. It will most likely be available at most major retail outlets in the country.

12. If I have five TV sets in the house, will I need five STB’s?
Yes – if you want each TV set to individually view different channels at the same time.

13. Will I need to pay a subscription fee every month like DSTV?
No – the purchase of the STB is a once-off cost. There will be no monthly subscription cost to receive the free-to-air services offered by SABC, eTV and other free to air broadcasters. However, you will still have to continue paying your TV license.
14. **Will this migration only affect SABC?**

No – the migration will affect eTV, MNet and other community and regional broadcasters as well.

15. **What are the benefits of digital TV?**

With digital TV you will have access to more channels on a free-to-air basis. This will be in addition to the current free-to-air services offered by SABC and eTV. SABC intends to make available a range of new public services, including not only new TV channels, but also other interactive services such as games and information services.

Other benefits include a better picture and sound quality, access to an Electronic Programme Guide (EPG) on your television screen which allows you to view your TV guide on your TV screen. You will also be able to receive additional information and interactive services on your television set such as games, information services, weather services, radio, etc.

16. **Will I need to buy a new television set to receive DTT?**

No – most current analogue television sets
will be able to receive DTT. You do not need a high definition (HD) TV, LCD TV or Plasma TV to receive DTT.

However, you will still need to purchase a set-top box to receive DTT. A TV that is “digital ready” or “HD ready” does not mean that it can receive DTT without a DTT STB.

17. **Will there be high definition TV on DTT?**
Yes.

18. **How does a person establish whether their TV will be compatible to the STB?**
The TV set must have audio and video inputs or alternatively must have a RF input (used to connect the TV aerial to), or alternatively a HDMI input.

19. **Who are the various role players in the process and what are their specific roles?**

**The Broadcasters** - Terrestrial broadcasters need to migrate their services onto digital. The main affected broadcasters are SABC, eTV, MNet and community and regional TV stations. They will be responsible for establishing new services, migrating existing services (SABC1, 2, 3, eTV and MNet) onto

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**BSD** - Broadcast Signal Distribution

**BDM** - Broadcasting Digital Migration

**FTA** - Free To Air

**EPG** - Electronic Program Guide

**iDTV** - Integrated Digital Television

**MUX** - Multiplex

**SDTV** - Standard Definition Television

**SDTV** typically does produce better quality images than analog, but not as good as** **HDTV**.
digital, and will play a role in education and awareness. The broadcasters are the most affected parties in the process (apart from consumers) as they will have to manage analogue and digital services during the dual illumination transition period.

**Signal Distributors** - Signal distributors are responsible for rolling out the digital network infrastructure on behalf of broadcasters. The main signal distributor affected is Sentech, although other signal distributors could also be involved.

**Government** - is responsible for developing the policy for digital migration. They are also responsible for ensuring that funding is available for the subsidy or incentive, and for the development of a manufacturing strategy. The Department of Communications is driving this process on behalf of government and will work with other government departments such as the National Treasury and Department of Trade and Industry.

**ICASA** - is the regulator responsible for regulating the telecommunications and broadcasting sectors. ICASA will be ultimately responsible for the frequency planning and allocations and the issuing of licences for
digital services. New digital services cannot be launched without a licence or authorization from ICASA.

**Manufacturers** - they will be responsible for manufacturing the STB’s and to ensure that the boxes they develop are compliant with the SABS STB standard.

**Retailers** - the retail industry will play a role in ensuring that the STB’s are available for purchase by the public and to provide accurate information to consumers so that they can make the right choices when purchasing the STB’s. This includes other organizations such as the South African Post Office who will be responsible for the distribution of the subsidized STB’s.

**Consumers** - will be responsible for ensuring that they have the information they need to make informed choices and to ensure that they have the necessary STB’s before the analogue signal is switched off.

**DTT – RADIO**

**20. What does DTT mean to Radio?**

DTT is not in anyway a replacement for the current FM broadcasting but adds great value to the spectrum if it is included in the service
offering. DTT provides a plethora of opportunities for Radio in terms of generating new revenue streams. DTT can be used to provide coverage of existing FM services where these cannot be extended due to frequency congestion. Through its capabilities DTT can provide value-add services (e.g. Interactive Services, Teletext, Graphics, Traffic Information, Weather, Stock Markets and more) to existing radio service offerings. With the SABC radio services on the SABC DTT platform, all radio services will be available to all listeners country wide, as for television.

21. What are the implications of Digital Migration on Radio?

Digital Migration only affects analogue television. There are currently no plans to replace FM services, which will still be around for quite some time. Digital Audio Broadcasting (DAB) and Digital Radio Mondiale (DRM) are digital radio offerings that can be deployed by broadcasters. The SABC is currently developing a digital radio strategy which will inform how the SABC will deploy such services.
1. BDM - Broadcasting Digital Migration
   It refers to the policy process currently underway by the Department of Communications. The migration is in line with international standard and trends.

2. BSD - Broadcast Signal Distribution
   Broadcasting signals that are intended for general reception.

3. DTT - Digital Terrestrial Television
   It refers to the broadcasting of terrestrial television in a digital format. The digital signals can be received using a standard aerial for TV.

4. DVB - Digital Video Broadcasting
   Consortium of more that 300 organisations and manufacturers committed to making global standards for delivery of digital television and data services.
5. EPG - Electronic Program Guide
A guide showing programmes that can be displayed on a TV set using an STB. It displays the now and next programmes or TV schedule for a day or more at a time.

6. FTA - Free To Air
Television and / or radio services provided by broadcasters that does not require the viewer to pay a subscription fee to view the TV or radio services.

7. HDTV - High Definition Television
HDTV in widescreen format (16:9) provides the highest resolution and picture quality of all digital broadcast formats. Combined with digitally enhanced sound technology, HDTV sets new standards for sound and picture quality in television.

8. ICASA - Independent Communications Authority of South Africa
This is the Telecommunications and broadcasting industries’ regulatory body in South Africa.
9. iDTV - Integrated Digital Television
A TV set with a built-in DTT receiver which carries out the functions of a STB. Such a TV would not need a STB to display the free to air services now available.

10. MHEG - Multimedia and Hypermedia Expert Group
This is a group of experts that defines the model for the presentation of multimedia applications to the STB, and is used for interactive services and Teletext. South African broadcasters have adopted MHEG-5 as the standard for interactive services in South Africa.

11. MPEG - Moving Picture Experts Group
A group of experts, whose task is to develop and formulate compression standards. South Africa has to adopt MPEG4 as the compression standard for TV broadcasting in South Africa.

12. MUX - Multiplex
A system that combines more than one TV service into a digital stream on a single frequency.
13. RF - Radio Frequency
A signal that is used to carry all the information through the air towards the receiver or the STB. The signal is normally in electromagnetic waves which can create a conductive path through the air.

14. SDTV - Standard Definition Television
Is the basic level of quality display, and resolution for both analogue and digital. Transmission of SDTV may be either the traditional (4:3) or widescreen (16:9) format. SDTV typically does produce better quality images than that of traditional analogue TV. However, its images are not nearly as sharp as the images from high definition digital television.

15. STB - Set top box
A device that converts digital signals received either via a terrestrial means or via satellite to normal analogue video and audio for presentation on a normal television set.