GO DIGITAL

SOUTH AFRICA

the doc

Department:
Communications
REPUBLIC OF SOUTH AFRICA

The Department of Communications (DoC) developed the Go DIGITAL South Africa leaflet to educate, inform and create awareness about the broadcasting digital migration

1. BACKGROUND

The Go Digital South Africa is a catchphrase for digital migration process in South Africa. TV technology has been in South Africa since 1976. TV originally started as black and white, and then evolved to colour pictures. The apartheid system made it possible for white people to own more TV sets than any other race in the country. After 1994, the country introduced legislations that ensured broadcasting services that represented all South Africans, regardless of their race or economic status.

Today, 13-million households in South Africa own TV sets and watch programmes that are broadcasted in their own languages. Government continues to ensure universal services and access to information by providing broadcasting services through the current digital migration process that promises to enhance diversity and information access especially for the previously marginalised citizens of South Africa. The government will subsidise five million poor TV-owning households with free set-top boxes (STBs).

2. WHAT IS DIGITAL MIGRATION?

Digital migration is the switch or migration from analogue to digital signals. In short, it is a process of moving from analogue to digital broadcasting for TV and radio. South Africa will start the migration with TV, and radio will follow later.

2.1 Analogue

Before 1990, the broadcasting of sound and video through airwaves was done by analogue signals. Although the method worked well, it used a lot of space in the frequency spectrum. Both TV and radio are allocated valuable spectrum. This means a different and unique frequency is allocated for each radio and TV service. This is a very spectrum-inefficient method of delivering multi-channel services.

2.1.1 Current scenario:

Both TV and radio channels are allocated frequencies depending on the geographical location.

- For example, Metro FM is a national radio station. In Gauteng it is accessed on FM 92.4mhz but in Durban, Cape Town, and/or any other place in the country, the same radio station is accessed on a different frequency. Effectively that suggests that there is a waste of frequency spectrum.
- Each of the TV channels is also allocated a unique frequency per area. Therefore, to some, it means limited access and lack of variety of TV channels.
- The quality of your TV picture is dependent on the position of an antenna and the distance between the TV and local transmitter.

- In the analogue signal transmission method, one can only have one radio or TV service per frequency allocation. Both analogue and digital TV transmission generally use the Ultra High Frequency (UHF) or Very High Frequency (VHF) bands.

2.2 Digital

Digital broadcasting started after 1990, where sound, video, text and still images could be transmitted in the form of binary digits i.e. ones and zeros. This digital type of technology allows information to be compressed, thus saving radio spectrum.

DTT is the Digital Satellite TV, but uses ground-based (terrestrial) digital transmitters to distribute the signals to your home.

Digital signal transmissions will benefit all of us.

- For each unique frequency in analogue to transmit 1 x TV service we can now transmit more than 15 standard definition TV services with digital transmission.
- Digital is highly spectrum efficient. In the same geographical area, all TV transmitters can operate on the same frequency without interference. After analogue switch-off, a huge portion of valuable spectrum will be released back to the Independent Communications Authority of South Africa (ICASA). This spectrum will be allocated to mobile operators to enhance their service offerings to the public.
- End-users will require an STB to convert the analogue signal to digital for their TV sets in order to receive the enhanced digital TV picture. No new TV set is required.

TV programmes are distributed by terrestrial, satellite and cable transmissions. In South Africa we are currently using digital satellite and soon we will use digital terrestrial. Cable delivery is now via Internet Protocol (IP TV-internet) but this is very limited due to bandwidth access and constraints currently.

2.2.1 Definition of terrestrial and satellite TV

- Satellite TV broadcasting uses a satellite, which is an orbit above the earth. The broadcasting signals are sent to the satellite, which in turn beams the signal back on earth, and viewers receive the signal through a satellite dish. This type of service is called Direct to Home (DTH).
- Terrestrial TV uses a network of terrestrial (ground-based 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 TV signals across the country. If you are within an area covered by a transmission tower it will enable you to receive broadcast services within your area.

3. THE BENEFITS OF DTT:

3.1 The DTT process promises more channels (also broadcasting in indigenous languages) and more programmes such as sports, education, health, children, parliamentary, entertainment, music, etc.

3.2 Access to all free-to-air channels of quality picture and clearer sound for all citizens, irrespective of their geographical location, race and economic status.

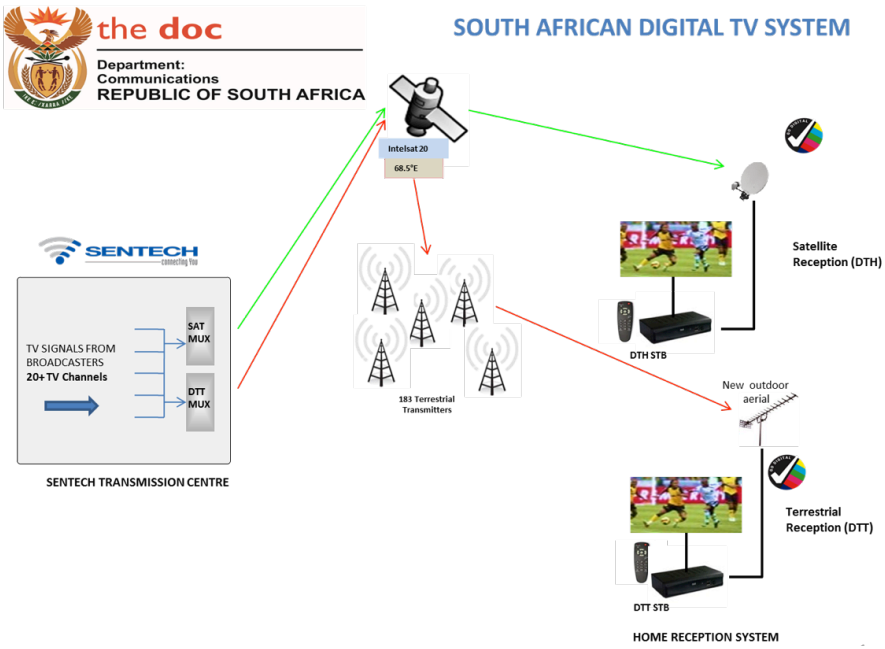
3.3 An on-screen Electronic Programming Guide with programme synopsis.

3.4 Parental guidance and control of programmes.

3.5 Disability services for hard of hearing and visually impaired (subtitles and large scripts).

4. BELOW IS A SIMPLE ILLUSTRATION, EXPLAINING DIGITAL MIGRATION;

1. The broadcasting centre is where the programmes are produced, in analogue or digital formats.
2. The signals are sent from the broadcast facilities to the SENTECH transmitter network nationally.
3. (a) DTH and (b) DTT STBs: a decoder or adaptor that enables an analogue TV to receive a digital signal broadcast.
4. (a) and (b) Represent TV sets on DTT and DTH that will give a clear picture quality, more choice of channels and other great services.



5. ACCESSING DTT BROADCAST

Viewers will have to acquire STBs to receive and decode the signals for display on the TV sets. Some viewers may require new TV aerials or adjust their existing ones for reception. The STBs are to be purchased or acquired through government subsidy.

6. STB INSTALLATION

The STB is a plug-and-play device, which is easy to connect using the supplied manual. Assistance from professional installers may be sought if needed. The South African Post Office (SAPO) will assist in this regard. This process will also create jobs.

7. ANTICIPATED DURATION OF THE DTT ROLL-OUT

The digital network roll-out to the public will begin around 2015. Tests and trials of the technology, services and infrastructure are currently underway.

8. BROADCASTING DIGITAL MIGRATION STAKEHOLDERS AND THEIR ROLES

- SENTECH is responsible for the country's digital broadcasting network (both terrestrial and satellite), in line with the Broadcasting Digital Migration Policy.
- This network will strive to ensure that every household in the country has access to digital TV.
- By February 2015, of 171 of the 178 DTT transmitter sites have been switched on to increase the total population coverage to 83,65% and the total geographic coverage to 54,52%. Gauteng, Free State, Limpopo, Mpumalanga, North West and KwaZulu-Natal have been completed and switched on.

- The Universal Services and Access Agency of South Africa's (USAASA) mission is to facilitate and maintain universal services and access to information and communications technology. It has the responsibility to disburse subsidised STBs to approximately five million TV-owning households that are considered needy and deserving.

- ICASA is responsible for regulating the telecommunications and broadcasting sectors.
- It will ultimately be responsible for the frequency planning and allocation and the issuing of licences for digital services.
- No new digital services can be launched without a licence or authorisation from ICASA.

- The SABC and eTV's role in the digital migration process is to facilitate the establishment of new services, migrating existing services (SABC1, 2, 3 and eTV) onto the digital platform and conducting education and awareness campaigns.

- M-Net currently operates a terrestrial pay-TV service using analogue technology. As an analogue broadcaster, M-Net will join other analogue broadcasters, SABC and eTV in ensuring that South Africa successfully completes the migration process.

- Since this requires a large distribution network, the DoC, SABC and USAASA will use SAPO's online distribution network (manual offices and retail postal agencies excluded) nationally.
- SAPO will process payments for the STBs, issuing of the Set-up boxes and pay the installers of the equipment.
- SAPO will also verify if the applicants' SABC TV licences are valid and up-to-date.

9. WHY IS IT IMPORTANT FOR THE COUNTRY TO GO FOR DIGITAL MIGRATION?

South Africa is not the only country going through digital migration process. In 2006, the International Telecommunications Union held a conference where it was resolved that all countries in Europe, Africa, Middle East and the Islamic Republic of Iran (region 1) should migrate from analogue to digital broadcasting services by June 2015. As one of the signatories of the treaty, South Africa is working towards a digital migration of 13 million TV-owning households.

10. INFORMATION

Please be on the lookout for additional DTT information such as digital network coverage schedule per area or province and the eligibility and distribution process of the STBs, which will be made available in due course.

For more information contact:

DEPARTMENT OF COMMUNICATIONS: DIGITAL MIGRATION PROJECT OFFICE (DMPO)
Enquiries: Mashuba Pula on 012 473 0061 or
Occasiah Mayisa on 012 473 0056.
Webpage: *www.doc.gov.za*
Email: *dtt@gcis.gov.za*

www.facebook.com/ GO DIGITAL ZA

www.facebook.com/ GO DIGITAL ZA