

# **SOUTH AFRICAN BROADCASTING CORPORATION**

## **NATIONAL RADIO FREQUENCY PLAN** 2017



# ***PRESENTATION OUTLINE***

- Introduction
- The SABC
- Process and Procedure in Spectrum management
- Misleading digital migration timelines
- Protection of the VHF/UHF TV bands
- TV White Spaces
- SAB/SAP allocations
- STLs
- 2300 – 2450 MHz
- 3600 – 4200MHz
- Recommendations



# INTRODUCTION

- The SABC welcomes and appreciates the Chairperson's invitation to participate in this public discussion and to contribute to the intended amendment on National Radio Frequency Plan
- The SABC supports the Chairperson's intentions to keep the plan current and in the interest of orderly spectrum management.
- SABC thanks the Authority for the opportunity to make this oral representation to further substantiate its submission.
- The SABC is obligated by the Broadcasting Act to provide radio and television programming that informs, educates and entertains and to make such programs available through out the country
- Such unique obligation requires adequate RF spectrum and protection
- The SABC will largely confine its presentation to areas which are of concern to the business of the public broadcaster.



## Vision



*SABC inspires change through enriching, credible, relevant and compelling content that is accessible by all*



## Mission

*To educate, inform and entertain all audiences accessing SABC services.*



## Values

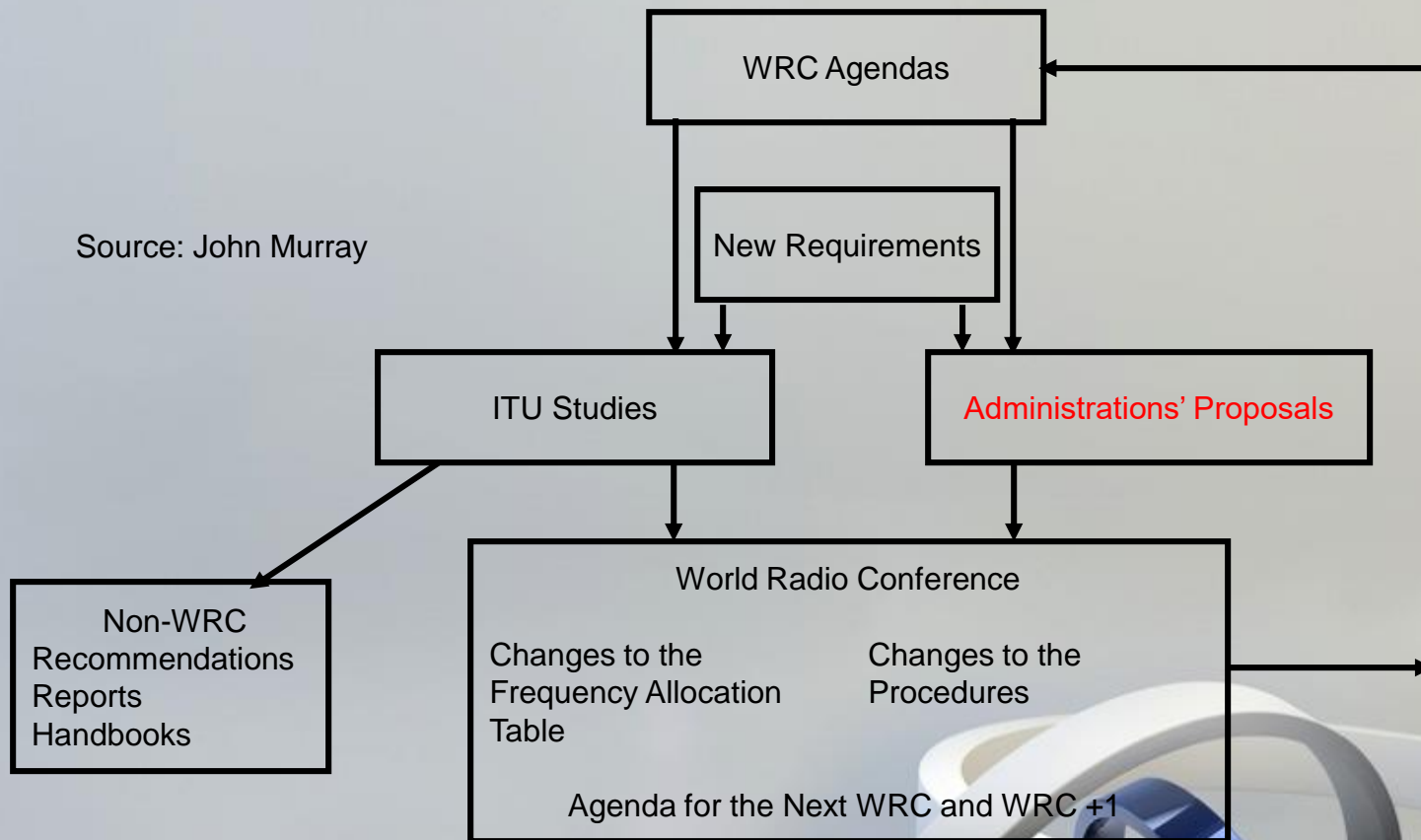
*Conversations and partnerships, Restorations of human dignity, Building a common future*



# SPECTRUM MANAGEMENT PROCESS

## WRC

Source: John Murray



- **ADMINISTRATION'S PROPOSALS**

- The Shareholder organises the National Preparatory Working Group (NPWG)
- The NPWG drafts our Country's proposal on each Agenda item of the WRC
- Cabinets adopts or approves the Country's proposal
- The Proposal is then sent to the ITU as input to the WRC
- Outcome of WRC results in changes to the Table of Frequency allocations which is presented to Cabinet for approval
- ICASA then updates the National Radio Frequency Plans in line with the outcome of the WRC and Cabinets approval
- There are certain items which has been included in this draft National Frequency Plans of which we seek clarity
- The details will be explained further in this presentation

## ***MISLEADING DIGITAL MIGRATION TIMELINES***

- The only migration timeline that is known to the Corporation is the ITU timeline in Resolution 224 which was taken at the WRC -12.
- Country missed the deadline of 16 June 2015
- No knowledge of another agreed timeline especially in the SADC.
- The Authority is being requested to clarify this statement “analogue television to migrate to digital television in line with SADC timeline”.

# ***PROTECTION OF VHF AND UHF TV BANDS***

- The progress of the Broadcast Digital Migration (BDM) has been slow and challenging.
- Some of the challenges do not only include the availability of set top boxes (STBs) in the retail space
- Restacking of the frequencies to below 694MHz.
- The cost estimates as well as the availability of technical expertise to carry out the restacking exercises were articulated in the JSAG meetings over two (2) years ago
- It is therefore important to emphasise that the Corporation, while it is committed to migrate to digital platform, still has analogue television transmissions in the bands 174 – 238 and 246 - 254 and 470 – 854MHz and adequate protection in the interim is still required especially in the band 694 – 854MHz.



## ***TV WHITE SPACES***

- The Cooperation has earlier on expressed its objection to the introduction of TV White spaces in this band especially ahead of successful BDM.
- The risks in this case need to be pointed out that digital to digital migration might result in massive changes to any such implementation.
- It is also important to express that the Corporation does not support the introduction of mobile TV White Spaces devices in the 470 -694MHz
- Such devices present some forms of interference which are difficult to detect and control.
- Further and separate engagements on the introduction of TV White Spaces are required
- Further discussions on the TVWS devices ability to sense TV signals, wireless microphones signals and a whole lot of other technical requirements

# ***SAB/SAP ALLOCATIONS***

- The Corporation supports the use of this band for Services Ancillary to Broadcasting and Services Ancillary to Program making (SAB/SAP) only if each use is coordinated and licenced. The band needs to be protected for digital terrestrial broadcasting use and hence making the band licence free could result in an uncontrolled interference that will be difficult to trace and resolve. In UK, “site” licence is required for SAB/SAP devices in the band from 470-694MHz
- The SABC supports licence-free SAB/SAP devices in the frequency bands 863 – 865 MHz, 1785 – 1805 MHz and 1880 – 1900 MHz. The band 863 – 865 MHz has already been allocated in the draft plan. However, the bands 1785 – 1805 MHz and 1880 – 1900 MHz have been allocated to Mobile and Fixed services on Primary basis. The Corporation is seeking for a secondary allocation for the SAB/SAP services in these bands and on non-interference and non-protection basis and as license exempt bands.
- These allocations are in line with some of the European countries - in Germany, these bands 1785 – 1805 MHz and 1880 – 1900 MHz are used as licence exempt for wireless microphones.

## ***STATION TO TRANSMITTER LINKS***

- Station to Transmitter links (STL) is a very integral part of Broadcasting services.
- For many years the links have been accommodated in the UHF TV band on license exempt basis.
- However, this draft plan has been silent on this service.
- The Authority is being requested to clarify the STL allocations.

## **2300 – 2450 MHz**

- The Corporation has been licenced to use this band for its Television Outside Broadcasting (TVOB) and Electronic News Gathering services.
- However, this band is unusable due to congestions
- An alternative band for this service will be required
- The Authority has been notified of this situation and the Corporation is looking forward to a feasible resolution.

MHz

SABC

## ***3600– 4200 MHz***

- The sharing of the sub-band (3600 – 3800 MHz) between Broadband Fixed Wireless Access (BFWA) and Very Small Aperture Terminal (VSAT) was not a decision of the WRC-15 as the draft plan has indicated
- This is another misleading statement from the Authority. A position of “no change” to this band was adopted as a National position as well as at the WRC-15.
- The draft plan also proposed that VSAT system migrate out of the band to the Ku band.
- The VSAT system is used for managing the distribution network

## **3600– 4200 MHz CONT'D**

- Also It is important to stress that the C-band is used by Broadcasters for distribution of signal from the Signal Distributor's uplink facility to the various terrestrial transmission sites.
- A loss of signal at a terrestrial transmission site or anywhere in the transmission path can mean millions of viewers being affected.
- The Ku band cannot be used for such important site management and signal distribution functions due to its high susceptibility to attenuation especially the typical heavy rainfalls that are experienced in South Africa.
- A network of fibre links to the various terrestrial transmission sites is also not feasible due to the high financial cost involved.

## ***3600– 4200 MHz CONT'D***

- Research has shown that it will cost R12bn to lay fibre network to cover all the Sentech's terrestrial transmission sites.
- This band is not only used by Broadcasters. There is a serious misconception that the band is hardly used in South Africa.
- There are other Government departments including department of Minerals Resources, Air Traffic Navigation Services etc that use this band for mission critical operations.
- Besides, this draft plan cannot be the “place” for such a proposal to be introduced. A proper consultation with the Users of the band should have been conducted before being introduced in this draft Plan.



# CONCLUSIONS

- Clarity is required for the new SADC Digital Migration Timelines
- Adequate protection is required for analogue TV in the VHF and UHF bands
- The Corporation require an urgent re-allocation for its TVOB operations as the band 2300 – 2450MHz which it has currently been licenced for is rendered unusable due to congestion
- The introduction of TV White Spaces in the band 470 – 694MHz is unsupported as this can result in interferences that are difficult to trace and control especially during the restacking process. There are technical and regulatory considerations that need to be taken into accounts
- C-band (part of) is used by Broadcasters for signal distribution and site management functions. This was not WRC-15 decision. Therefore the sharing of the sub-band (3600 – 3800 MHz) with BFWA is unsupported.





# THANK YOU

