

**ICASA HEARING ON
LONG TERM SPECTRUM
2022
SABC**

AGENDA

- **INTRODUCTION**
- **SABC'S RESPONSE TO QUESTIONS:**
 - MOBILE
 - Question 18
 - BROADCASTING
 - Question 30
 - Question 31
 - PROGRAMME MAKING AND SPECIAL EVENTS
 - Question 35
 - SATELLITE SYSTEMS
 - Question 40
- **CONCLUSIONS/RECOMMENDATIONS**

PRESENTERS

- Fikile Skosana
- Frank Awuah

INTRODUCTION

- The SABC supports the Authority's intentions to conduct inquiry into the long-term views of spectrum requirements for the various services in the country.
- As the only public broadcaster within the Republic of South Africa charged with a specific mandate set out in Chapter IV of the Broadcasting Act No. 4 of 1999.
- The Public Broadcasting Service Charter not only obliges the SABC to provide radio and television programming that informs, educates, and entertains; but further states that these are to be made available throughout the Republic.
- This places a unique obligation on the SABC that requires adequate radio frequency spectrum and protection in order to fulfil this mandate.
- The SABC will largely confine its submission on the spectrum outlook document to areas which pertain to its business as the public broadcaster.

Question 18

What are your views on reallocating the following bands for IMT over the next years?

List of possible future IMT bands (please supplement or delete as your organisation considers reasonable):

- 450-470 (20MHz)
- 617-698 (70MHz)
- 1 427-1 518 (91MHz)
- 1 710-2 025 (315MHz)
- 3 300-3 400 (100MHz)
- 3 400-3 600 (200MHz)
- 3 600-3 800 (200MHz)
- 4 800-4 990 (190MHz)
- 24 250-27 500 (3250MHz)
- 37 000-43 500 (6500MHz)
- 45 500-47 000 (1500MHz)
- 47 200-48 200 (1000MHz)
- 66 000-71 000 (5000M)

MOBILE

- The SABC is in support of the bands identified for IMT services except that the suggestion of the following 3 bands cannot be supported – i.e. the bands 450 – 470MHz; 617 - 698MHZ and 3 600 – 3 800MHz.
- The Corporation has extensive Broadcast ancillary equipment such as wireless microphones and in ear monitors in the band 450 – 470MHz band and holds licenses to that effect. The current licenses include:
 - 454.050 MHz
 - 454.225 MHz
 - 454.825 MHz
 - 454.900 MHz
 - 464.550 MHz
 - 464.525 MHz
 - 469.900 MHz

MOBILE

- It should be noted that changes in the band is very costly.
- It requires purchasing new equipment all together.
- For this band to be allocated to IMT, the Authority must note of the complexities and costs of migrating services.
- The other 2 bands (617-698MHz) and (3 600-3 800MHz) are respectively under consideration in the WRC 23 under agenda items 1.5 and 1.3. These bands are currently being used for DTT and broadcast signal distribution networks services respectively.
- They cannot be suggested for IMT services ahead of the WRC 23.
- This will be pre-empting the outcome of the WRC 23.

Question 30

What will impact on the demand for these services/applications in the coming 10-20 years? What is the realistic demand for these services in the next 10 to 20 years? Are there adequate spectrum allocations for Broadcasting services in South Africa?

- Broadcasting transmissions is evolving towards 5G technologies.
- The Evolved Multimedia Broadcast Multicast Services (eMBMS) and
- Further Evolved FeMBMS is the standard towards 5G technologies.
- 5G is a point-to-multipoint interface used for mobile services but designed to improve the efficiency in the delivery of broadcast and multicast services.

BROADCASTING

- With eMBMS, up to 60% of the capacity may be allocated to broadcast services.
- FeMBMS enables 100% of the transmission capacity to be used for broadcasting services.
- These technologies will be deployed in the 470 – 694MHz bands.
- The Chair Person has yesterday mentioned that there will be no change in the allocation of 470 to 694MHz for DTT
- We thank the Authority for the support

Question 31

How much spectrum should be maintained for terrestrial broadcasting in the band 470MHz to 694MHz in the next 10 to 20 years?

- In answering to the ITU's questionnaire in 2021, ITU-R BT.2302, South Africa provided that 224MHz will be required for Broadcasting in the band 470 – 694MHz.
- The situation is still the same since last year.

Question 35

What will impact on the demand for these services/applications in the coming 10-20 years? What is the realistic demand for these services in the next 10 to 20 years? Are there adequate spectrum allocations for PMSE services in South Africa?

- The SABC has have microwave systems such as RF cameras and helicopter links which are used for News and Sports broadcasts and the Corporation holds licenses to these services. The frequencies are:
 - Bike to Helicopter links (shared) 4410 – 4490GHz
 - Helicopter to tower (shared) 2315 – 2384GHz
 - Point to point (shared) 7GHz
- These equipment and systems support programme making.

PROGRAMMME MAKING AND SPECIAL EVENTS

- In the next 10 years, it is predicted that there will be more content making.
- The 7 Mux plan which has been developed by South Africa, coordinated with neighbouring countries and registered at the ITU creates a significant number of channels.
- There are 5 more multiplexers to be created on the DTT platform.
- These muxes are to be filled with channels and in turn the channels are to be filled with content.
- In view of the above not only does the Corporation request that this equipment is to be protected but also more spectrum are to be made available to meet the growing needs of content creation.

Question 40

Which applications and allocations will require the most frequency spectrum demand in the following frequency bands?

- C-band
- Ku-band
- Ka-band

C-Band: Because of its high resilience to heavy rain, signal distributors depend on the C-band for delivering TV programming to its various terrestrial transmitters especially in tropical areas such as Africa. This is a mission critical operation for the Broadcasting signal distribution as many viewers rely on this platform indirectly. As more transmitters get connected via fibre, this requirement for C-band back hauling will reduce. This is a major undertaking with a huge upfront cost imperative for initial infrastructure layout and it will be deployed over several years.

SATELLITE SYSTEMS

- Ku – Band: As the analogue switch off process is intensified more South Africans which did not receive TV programs in the analogue situation because terrestrial networks could not reach all corners of the South African landscape, now gets connected via the DTH platform.
- We also use Ku-band services for our contribution links from OBs to studio using SNG vehicles in areas where fibre connectivity is not available or cost-effective.

SATELLITE SYSTEMS

- The SABC recently signed a five year lease for Ku-band lease and we have invested in 15 SNG vehicles for our TV and Radio contributions from remote areas.
- This also serves as our backup in case of a critical loss of our National Metro Ethernet WAN connected over the fibre network.
- The need to allocate more spectrum to alleviate the congestion in this band is very critical

CONCLUSIONS/RECOMMENDATION

- The identified bands 450-470 (20MHz) are unsupported for IMT usage
- He SABC holds license in this band
- Deployed extensive Broadcast ancillary equipment in this band
- It needs to be noted that migration is costly
- The other 2 bands (617-698MHz) and (3 600-3 800MHz) are respectively under consideration in the WRC 23 under agenda items 1.5 and 1.3.
- These bands are currently being used for DTT and broadcast signal distribution networks services respectively.
- They cannot be suggested for IMT services ahead of the WRC 23.
- This will be pre-empting the outcome of the WRC 23

CONCLUSIONS/RECOMMENDATION

- Broadcasting transmissions is evolving towards 5G technologies
- FeMBMS enables 100% of the transmission capacity to be used for broadcasting services.
- These technologies will more likely be deployed in the 470 – 694MHz bands.
- Reallocating this band for IMT service use will more likely stifle the expansion of the Broadcasting industry
- PMSE is becoming more important especially when we start seeing the implementation of the 7 Mux plan
- The SABC holds licenses which are being used for PMSE
- Protection of these bands are being requested
- More spectrum is also to be allocated

CONCLUSIONS/RECOMMENDATION

- The ASO has elevated the importance and usage of Ku-band
- DTH usage is on the increase
- Ku-band will require adequate protection

THANK YOU