



**Policy and Regulatory Affairs**

Radio Park Henley Road Auckland Park 2092.  
Private Bag X1 Auckland Park 2006 Johannesburg  
Gauteng South Africa.  
Tel +27 11 714-3708/3927 Fax +27 11 714 4508  
e-mail : [Moilwap@sabc.co.za](mailto:Moilwap@sabc.co.za)  
[www.sabc.co.za](http://www.sabc.co.za)

12 October 2018

Mr Manyapelo Richard Makgotlho

Project Leader

ICASA

Block B, Pinmill Farm

164 Katherine Street

Sandton

2146

E-mail : [rmakgotlho@icasa.org.za](mailto:rmakgotlho@icasa.org.za)

Dear Mr Makgotlho,

**SABC SUBMISSION TO ICASA ON A NOTICE INVITING COMMENTS REGARDING THE  
DRAFT RADIO FREQUENCY MIGRATION PLAN 2018**

Attached hereto for your attention, please find the SABC's submission on the Draft Radio Frequency Migration Plan 2018.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Philly Moilwa', is written over a horizontal line.

**PHILLY MOILWA  
GENERAL MANAGER:  
POLICY AND REGULATORY AFFAIRS**



## **SABC WRITTEN SUBMISSION TO THE INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA**

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### **ON THE DRAFT RADIO FREQUENCY MIGRATION PLAN 2018**

**12 OCTOBER 2018**

**South African Broadcasting Corporation SOC Limited:** Registration Number: 2003/023915/30

**Non-Executive Directors:** Mr B E Makhathini (Chairperson); Ms K T Kweyama; Mr M Markovitz; Mr J Matisonn; Mr D K Mohuba; Mr K Naidoo; Mr J H Phalane; Mr V Rambau; Mr M G Tsedu

**Executive Directors:** Mr M T Mxakwe (Group Chief Executive Officer); Mr B C Maroleng (Chief Operations Officer); Ms Y van Biljon (Chief Financial Officer); **Company Secretary:** Ms L V Bayi

## **1. Introduction**

- 1.1. The SABC would like to thank the Independent Communications Authority of South Africa (“the Authority”) for the opportunity to make submission on the draft Radio Frequency Migration Plan 2018 (“the draft migration plan”). The SABC supports the Chairperson’s intentions to manage the nation’s scarce natural resource (the radio frequency spectrum) efficiently for the benefit of all South Africans. The SABC welcomes and appreciates the Chairperson’s invitation to submit enquiries and contribute to the intended objectives in the migration plan.
  
- 1.2. The SABC is 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. Currently, the SABC provides 5 TV Channels and 18 Radio Stations.
  
- 1.3. The SABC will nevertheless largely confine its submission on this draft migration plan to areas which are of concern to its business as the public broadcaster and will further substantiate this initial submission through oral hearing scheduled from 25 to 26 October 2018.

## **2. General Comments**

- 2.1 It is to be noted that migration is a costly exercise for Operators. Imagine new sets of equipment are purchased for operations in a particular band. This operation now needs to migrate to another band. If the equipment are unable to be tuned to the new frequency range, it will require the purchase of completely new sets of equipment for operations in the new band. In this view, the 5 years-time frame for migration seems to be too short to guarantee returns on investment before new equipment are to be purchased. A time frame of between 8 and 10 years will be more appropriate as most of the equipment have a life span of about 10 years. During this time frame a duly licenced spectrum user or the incumbent operations in the band should be protected against interference.

### **3. Comments relating to the specific frequency bands of which migration is being considered**

#### **3.1 694 – 854MHz (digital dividend bands)**

##### **3.1.1 Analogue Television Switch Off**

This band consists of the 2 bands which are generally referred to as the digital dividends 1 and 2 (DD1 and DD2). The switching off of analogue television transmissions has begun. In the Square Kilometre Array (SKA) area, all the analogue television transmissions have been switched off and the Authority has been notified in this regard. Nevertheless the migration process has been laboured with series of problems including:

- The unavailability of set top boxes in the commercial space for viewers who do not qualify for government guaranteed STBs. This is estimated to be about 9 million TV household viewers.
- The lack of intensive public awareness campaigns. Countries like the UK and Australia who has been successful with digital migration has cited public awareness campaign as one of the most important exercises that needs to be implemented on an on-going basis throughout the migration period.
- The lack of adequately resourced call centre

It is therefore important to note that the slowness in the migration process is beyond the grasp of the Corporation alone. It has become a national setback. In view of this, it is important for its television services in this band to be protected against interference until migration has been successfully completed.

The Corporation is concerned that its analogue services are slowly losing protection before analogue services have completely been switched off due to the Authority's media comments on the imminent licencing of the DD1 and DD2.

In Australia, the auction of the 700MHz band was completed and the winner was announced in May 2013. However, the frequency was only licenced in January 2015. The revenue raised by

auctioning of the digital dividend was utilised to cover some of the costs needed for digital migration. This trend also applies to other developed Countries as well.

The SABC therefore submits that the timelines for the bringing into use of the digital dividend spectrum should only take place after Analogue Switch Off (ASO) and the successful implementation of Broadcast Digital Migration (BDM) process even if the bands are licenced beforehand.

### **3.1.2 Digital TV Migrations**

It should be noted that there are still digital TV transmissions which are currently operating in the digital dividend bands. The migration out of this band will be more complicated and costly.

Firstly the transmissions are to be migrated to a seven mux plan. This plan consists of seven (7) frequency assignments per broadcast location and is based on a large province-wide single frequency networks (SFNs). There are some concerns with regard to the stability of large SFN networks and the Corporation has recently made submissions to the Authority through its Joint Spectrum Advisory Group (JSAG) requesting that a pilot migration be done to confirm if digital television transmission networks will be stable in a large province-wide SFN. The cost of the pilot will be about R31m.

Secondly digital to digital migration will necessitate that radio frequency (RF) equipment (transmitters and combiners) have to be retuned at various transmission sites. This is a highly specialised area and there are not many experts in the country who can implement this. The alternative is to purchase new RF equipment which are already tuned to the correct frequencies to replace the old once at each transmission site. This can be done with minimum disruptions to viewers as the old equipment can be replaced with the new once within a short time period. Retuning the RF equipment can take a couple of days per site which will result in major disruptions to viewers. A combination of the two scenarios where new RF equipment are purchased for high impact sites and retuning are done at smaller sites, one at a time, is most probably the optimised solution, taking costs into consideration. Further discussions are needed on the costs of such imperative exercises.

### **3.1.3 STL and Wireless Microphone Migrations**

The Corporation currently has about 20 (twenty) Station to Transmitter links (STL) that are operating in the 694 – 854MHz frequency band. These links support SABC's 18 plus one radio broadcast networks. There are also a good number of wireless microphones which are operating in the 734 to 776 MHz frequency range currently in use at the SABC's studios. Even though ICASA has proposed frequency bands for migration of STL links and wireless microphones, it is important to note that these migrations will have serious financial implications especially when the financial viability of the Corporation has recently been called to question. In view of this we request a longer time frame and protection against interference for the implementation of these migrations.

### **3.2 2300 – 2450 MHz (TVOB links)**

As a background, the Corporation has been licenced to operate its microwave links in the band under discussion. However, it has found this band to be unusable as it has also been licenced to Telkom (SA) and other operators countrywide. This has had serious negative effect on its operations. The Authority has been alerted to this problem and applications was made for alternative frequency bands although it was declined.

It is therefore a welcome relieve for the Authority to consider migrating outside-broadcasting links to 1518 – 1559 MHz band. The Corporation has done its research and confirms that migration to this band is feasible. The Corporation further request that 40 MHz be reserved for use for outside broadcasting due to its sensitivity and noise free environment needed to link its programs to the studios.

## **4. Recommendations**

- The Corporation submits that Analogue broadcasting transmissions be protected against interference while it is in the process of migrating to frequencies below 694 MHz together with its self-help transmission sites. The slow pace of the migration process has been a collective national shortcoming. It is important therefore that digital dividend bands are not licenced and the frequencies are not brought to use while ASO and BDM process have not been successfully completed to the detriment of the Corporation.

- Purchasing new transmitters especially for high impact sites as opposed to retuning all transmitters to new frequencies will be a striking balance between cost and disruptions to viewers. Further discussions are still needed on the costs of migrating digital transmissions frequencies below 694 MHz.
- Migrating outside broadcasting links to 1518 – 1559 MHz band is welcome and supported. A 40 MHz spectrum will be needed to support the Corporation's sensitive and noise free environment needed to link its programs to the studios.