



**NAB WRITTEN SUBMISSION
TO THE ICASA DRAFT FREQUENCY MIGRATION
REGULATIONS AND FREQUENCY MIGRATION PLAN
12 October 2012**

1. INTRODUCTION

- 1.1. The National Association of Broadcasters (“the NAB”) is the leading representative body of South Africa’s broadcasting industry. It aims to further the interests of the broadcasting industry in South Africa by contributing to its development. The NAB members include:
 - 1.1.1. Three public television broadcasting services, and eighteen sound broadcasting services of the South African Broadcasting Corporation of South Africa (“the SABC”);
 - 1.1.2. All broadcasting commercial free-to-air and subscription television licensees;
 - 1.1.3. 15 Commercial sound broadcasting licensees;
 - 1.1.4. Both major licensed signal distributors (electronic communications network service operators), namely Sentech and Orbicom;
 - 1.1.5. Over 30 community sound broadcasting licensees, and one community television broadcasting licensee, namely Trinity Broadcasting Network (“TBN”)
- 1.2. On 17 August 2012, the Independent Communications Authority of South Africa (“ICASA”) published the draft Frequency Migration Regulations (“the draft regulations”) and Frequency Migration Plan (“the draft plan”) in Notice 606 of 2012, in Government Gazette No. 35598. Interested persons were invited to make written representations on the draft regulations and draft plan by 28 September 2012. The closing date was subsequently changed to 12 October 2012. The NAB welcomes the opportunity to submit its written representations.

- 1.3. Hearings are scheduled to take place from 31 October to 2 November 2012 and the NAB hereby requests the opportunity to make oral representations at the oral hearings.
- 1.4. The draft regulations and the draft plan contain proposals which will have potentially devastating implications for the future of broadcasting in South Africa. For this reason, the NAB will not address the Authority on detailed technical matters, but will confine its comments to fundamental issues of principle which are of concern to all its members. Individual members of the NAB may make representations which are more detailed and technical in nature.

2. BACKGROUND AND CONTEXT

- 2.1. Terrestrial broadcasters currently provide television services to over 31 million South Africans. Of these 31 million South African television viewers, terrestrial free-to-air television is the sole source of education, information and entertainment for over 26 million South Africans¹.
- 2.2. Broadcasting has tremendous socio-economic, developmental and cultural significance, but this is not captured anywhere in the drafts published by the Authority. Broadcasters make a unique contribution to the development, protection and promotion of the South African identity, culture and character. In addition, broadcasters stimulate a dynamic local production industry. Broadcasters generate jobs directly in production and post-production companies, through casting and crewing agencies, in equipment-hiring companies, through set design and manufacturing companies and prop suppliers, but also indirectly in supporting industries such as the hospitality industry in catering firms and hotels, and the transport industry.

¹ SAARF AMPS ® 2011 Six Months, Adults Aged 15+ (July 2011 – December 2011).

- 2.3. To ensure that South Africans continue to receive broadcasting services which inform, educate and entertain, it is vital that the Authority considers a balanced approach to radio spectrum use in South Africa. While broadcasters are well aware of the need to bridge the digital divide, and bring electronic communications services to all South Africans, it is possible to achieve this in a way which takes into account the value of broadcasting and accommodates the future spectrum needs of the broadcasting sector.
- 2.4. The future needs and technological advancements in broadcasting are totally absent from the draft regulations and draft plan - or rather, the Authority appears to already have come to the conclusion about the future needs of the broadcasting sector without any discussion with broadcasters or any studies.
- 2.5. It is not clear to what extent the Authority has contemplated the impact of the worldwide evolution from Standard Definition (SD) to High Definition (HD), and the ongoing development of new television technologies such as 3D TV and Super High Definition (SuperHD). Has adequate provision been made for South Africa's broadcasting sector to keep abreast of these developments? When one considers that using DVB-T2 and MPEG 4, a single DTT multiplex can deliver 32.5 MB/s and that a single HD channel (which is not sport) will require at least 7 MB/s – it becomes clear that broadcasting will require substantially more spectrum in the not-too-distant future.
- 2.6. In addition, spectrum plans must accommodate the creation of additional multiplexes for DTT in order to introduce new broadcasters, expand the channel offerings and to finally address the issue of adequate compensation to existing analogue broadcasters for the creation of the digital dividend.
- 2.7. The broadcasting industry will continuously strive to provide improved services to the public. In the absence of any studies, it is impossible to assess the impact of the Authority's proposal to simply take 700 MHz band away from broadcasting.

- 2.8. It is for these reasons that the NAB has consistently argued that it is incumbent upon the Regulator to determine the future spectrum needs of the broadcasting industry before any decision can be taken on re-farming any portion of broadcasting spectrum. As it stands, ICASA seems to have already concluded that broadcasters must vacate 700 MHz band without any analysis of the future needs of the broadcasting industry.
- 2.9. The NAB cautions the Authority against proceeding with a proposal which has such far reaching consequences without having conducted a single study to determine the future needs of broadcasting. The re-farming of broadcasting spectrum will be irreversible.

3. THE INTERPRETATION OF THE WRC-12 RESOLUTION

- 3.1. Resolution 232 of the World Radio Conference of 2012 (“WRC-12”) resolves as follows:
- 3.1.1. To allocate the frequency band 694-790 MHz in Region 1 to mobile services on a co-primary basis with other services to which this band is allocated on a primary basis;
- 3.1.2. That the allocation will be effective after WRC-15; and
- 3.1.3. That WRC-15 will specify the technical and regulatory conditions applicable to the mobile service allocation, taking into account the ITU-R studies.
- 3.2. The resolution continues by inviting the ITU-R to study the spectrum requirements for the mobile service and for the broadcasting service in this frequency band. The resolution lists a range of other matters requiring further study before the allocation on a co-primary basis becomes effective.

- 3.3. The resolution does not require the wholesale migration of broadcasting services out of the band 694 – 790 MHz. Rather, it paves the way for a sharing arrangement between broadcasting and mobile broadband on a co-primary basis, in instances where cost considerations warrant the deployment of mobile broadband in bands below 1GHz (rural and/or sparsely populated areas).
- 3.4. More importantly, the technical and regulatory conditions applicable to any allocation to mobile services will only be determined at WRC-15 after studies have been conducted, which studies must consider the spectrum requirements for broadcasting services.
- 3.5. The NAB is not aware of a single study, which has been conducted to determine the future needs of broadcasting services, and how much spectrum will be required to accommodate these needs. Yet, the Authority has proceeded with a plan which requires broadcasters to vacate the 700 MHz band on the basis that this is somehow required by Resolution 232.
- 3.6. The NAB requests that the Authority immediately commence a study to determine the future needs of the broadcasting sector. Without this study, the Authority cannot know the implications of its current proposals. Resolution 232 will only become effective after WRC-15 – there is accordingly no prejudice to any mobile services if a few months are taken to properly understand the consequences for all stakeholders affected. On the other hand, proceeding without the required studies will result in substantial prejudice to broadcasters.

4. PROCEDURE FOLLOWING WRC-12 RESOLUTION

- 4.1. The basic principles of spectrum management require the Authority to have published an updated draft table of allocations for comment following WRC-12. The Authority has not implemented this step, but instead has gone straight to

publishing a migration plan which is very unorthodox, particularly when the relevant WRC resolutions do not propose a migration of existing users.

- 4.2. The Authority has not explained why it failed to publish a revised table of allocations. In any event, the NAB is of the view that this can be remedied by withdrawing the current draft regulations and plan and proceeding with the publication of the table of allocations as required.

5. SPECTRUM LICENSING

- 5.1. Currently radio frequency spectrum in the band 790MHz to 862MHz and in the band 694MHz to 790MHz are allocated to terrestrial broadcasting services and have been assigned to existing television broadcasting service licensees. The Authority is proposing that these licensees relinquish this spectrum and that it be allocated and assigned to telecommunications operators.
- 5.2. The release of the band 790MHz to 862MHz is generally referred to as Digital Dividend 1, whilst the release of the band 694MHz to 790MHz is referred to as Digital Dividend 2. It is thus the existing television broadcasting service licensees which are relinquishing highly valuable and sought after spectrum, and which are both creating Digital Dividend 1 and Digital Dividend 2.
- 5.3. However, the draft regulations and draft plan do not propose that in return for having relinquished this spectrum and created this dividend, these existing broadcasting services be compensated in any way. The regulations also do not permit broadcasters to be compensated for the costs of these migrations.
- 5.4. The Authority's approach appears to be based on the assumption that spectrum licences are currently only valid for a year and that users have no rights at all to the spectrum which has been licensed to them. This assumption is not correct.

5.5. The three existing terrestrial television broadcasting service licensees, namely the SABC, etv and M-Net, each have 15 year individual service licences, by virtue of regulation 4 of the Regulations regarding Standard Terms and Conditions for Individual Broadcasting Services Licences. These licences were converted in late 2008/early 2009 and will run until late 2023/early 2024. Furthermore, those licensees would have a legitimate expectation of their individual service licence being renewed for a further 15 years, unless they had materially and repeatedly failed to comply with the applicable legislation, regulations and their licence terms and conditions.

5.6. Regulation 15(2) of the Radio Frequency Spectrum Regulations provides:

"Unless otherwise specified in regulations, an ITA or in the licence, a Radio Frequency Spectrum Licence will remain valid from 01 April until 31 March the following year and is thereafter renewable by payment of the prescribed annual licence fee in terms of these regulations."

5.6.1. Similarly, regulation 9(1) of the Radio Frequency Spectrum Regulations provides -

"Renewal of a Radio Frequency Spectrum Licence is performed on an annual basis by payments of the prescribed annual licence fees ..."

5.7. The provisions set out above establish the conditions for renewal of a spectrum licence, namely payment of the annual licence fee. In essence, the regulations provide that provided a terrestrial television broadcasting service licensee timeously pays its prescribed annual licence fees in respect of its spectrum licence, its spectrum licence will run from year to year for the duration of its broadcasting service licence – for present purposes for 15 years, and this scenario will continue upon the renewal of the broadcasting service licence.

- 5.8. These provisions create a legitimate expectation that spectrum licences will be renewed upon payment of the prescribed annual fee. What the Authority is proposing is the expropriation of the rights of the existing terrestrial television broadcasting service licensees to use the spectrum licensed to them – essentially for 15 years and any renewals. Not only should these broadcasters be compensated for the costs associated with the migration, but more importantly, they ought to be compensated for the expropriation of their right to use the radio frequency spectrum licensed to them.
- 5.9. The Authority is well aware that the current proposed allocation of spectrum capacity to these existing broadcasting services in terms of the DTT Regulations is commercially inadequate for those licensees. However, the release of the Digital Dividend 1 and 2 will allow the Authority to allocate additional capacity to each of these broadcasters.
- 5.10. We refer to the report which the Digital Broadcasting Migration Working Group submitted to the Minister of Communications in November 2006, in which it was stated :

"When migrating television broadcasting service licensees from analogue transmission networks to digital transmission networks, each licensee should be left, after it surrenders its analogue frequencies to ICASA, with at least sufficient frequencies to establish a single digital transmission network with similar coverage to its existing analogue broadcasting service."

6. PROPOSALS ON BROADCASTING SPECTRUM

6.1. BROADCASTING IN THE UHF BAND

- 6.1.1. There have been no studies to understand the future spectrum needs of the broadcasting sector. Notwithstanding this, the Authority has published a draft plan which requires broadcasters to vacate the band

694-790 MHz on the basis that this is required to ensure consistency with ITU regulations.

- 6.1.2. Resolution 232 provides for the allocation of the frequency band 694-790MHz on a co-primary basis with mobile services. Importantly, the resolution does not require broadcasters to vacate this band and it is therefore not correct that the proposals to migrate broadcasters out of this band are required to ensure consistency with ITU regulations as updated by WRC-12.
- 6.1.3. Furthermore, this resolution will only become effective after WRC-15. Accordingly, there is no prejudice to any mobile services if the Authority conducts the required studies to determine the spectrum requirements of the services using this band. Not only are these studies essential to determine the appropriate technical and regulatory conditions, they are critical to ensuring that the future needs of the broadcasting sector have been adequately provided for.
- 6.1.4. The Authority has not indicated to broadcasters why these studies have not been conducted and what prejudice would arise, if any, if the Authority were to take a few months to better understand the spectrum requirements of the broadcasting sector before proceeding with any proposals.
- 6.1.5. These studies will also permit the Authority to explore alternatives to the complete removal of broadcasting from the 700 MHz band, for example the possibilities of a sharing arrangement with spatial or geographic separation to avoid interference – an alternative which has not even been explored by the Authority.
- 6.1.6. Given that the WRC-12 resolution focuses on the deployment of mobile broadband below 1GHz in instances where cost considerations warrant

such a deployment (rural and/or sparsely populated areas), a 'co-primary' allocation with geographic separation to avoid interference is possible.

6.2. STUDIO-TO-TRANSMITTER LINKS IN THE UHF BAND

- 6.2.1. Most radio broadcasters use Studio- to- Transmitter Links ("STLs") to convey their stations output to the relevant transmitters. In Gauteng for example this is done on TV Channel 66, using digital technology in 2MHz blocks. This spectrum is located in the band which will form part of Digital Dividend 1.
- 6.2.2. When perusing the draft frequency plan, it would seem the authority has not made any future allocations for the migration of broadcast STLs out of this band. Historically, STLs were not given any regulated frequency allocations and consequently they have been operated on spectrum allocated for other uses and are not protected.
- 6.2.3. Any interference caused by the unregulated frequency use could have a detrimental impact on a station's operations and viability. STLs are not exempted in ICASA's RF equipment licence exemptions and should be properly regulated. The NAB recommends that spectrum be allocated for both digital and analogue STLs in the draft Frequency Migration Plan, as leaving the situation unattended would have a detrimental effect on licensed broadcasters.

6.3. SELF-HELP TANSMITTERS

- 6.3.1. The NAB has noted with concern that the allocations for self-help transmitters are not contained in the draft Frequency Migration Plan. Self-help transmitters provide isolated communities with access to TV

and radio services that they would otherwise not have received. These transmitters are licenced under the relevant broadcaster's spectrum licence but are paid for and maintained by the community concerned. The majority of these frequencies are located in the UHF frequency band.

- 6.3.2. A table of all licenced 'self-help' frequencies is contained in the 2008 Frequency Plan² and should also form part of the Frequency Migration Plan until such time as they are switched off, after the digital migration process.

6.4. BROADCASTING IN THE VHF BAND

- 6.4.1. The NAB welcomes the allocation of the frequency band 214MHz to 230MHz for T-DAB Services. However, the ITU RRC'06 Final Acts has allocated the band 174-230 MHz to broadcasting services, which include T-DAB services. We would propose that ICASA hold a separate process to determine the needs of both radio and television services in this entire band. This would assist in determining the amount of spectrum that each of these services would require to fulfill the immediate and future needs.

- 6.4.2. With regard to the L-Band allocations for T-DAB and S-DAB (1452MHz – 1492MHz), the NAB submits that the broadcasting industry would be in favor of relinquishing this spectrum for use by telecommunications services.

6.5. FIXED SATELLITE SERVICES IN THE C-BAND

- 6.5.1. The NAB has noted that the Authority proposes migrating VSAT services from the C-Band (3600-4200MHz) to the KU-band (10700-

² Terrestrial Broadcasting Frequency Plan 2008 published in government gazette 32728 dated 18 November 2009.

11700MHz) in order to use the 3600-3800MHz band for WIMAX or BFWA services.

- 6.5.2. Once again, this migration is not required by any ITU regulations. The ITU radio regulations have allocated this band on a shared basis to satellite and mobile (except aeronautical mobile services).
- 6.5.3. Not only is this migration not required, the NAB submits that it would be impractical and would adversely affect broadcasting systems in South Africa. Not all traffic carried in the C-band are VSAT services. Broadcasters also rely heavily on C-band for primary domestic network distribution (Sentech and M-Net) and primary international back-haul services (Orbicom and Multichoice).
- 6.5.4. The Ku-Band is not a viable alternative for broadcasting, this band is severely susceptible to adverse weather and implementing this change would result in frequent disruptions to broadcasting services.
- 6.5.5. Furthermore, satellite manufacturers and operators, manufacture satellites to operate in specific frequency ranges and the proposed amendment will be in conflict with international practice.
- 6.5.6. The NAB submits that fixed satellite services will require continued coordination and protection from terrestrial signals in the C-band in order to maintain reliable broadcasting systems in South Africa.
- 6.5.7. The Authority's proposals are not required and not viable. The NAB therefore recommends that ICASA reconsider the proposed reallocation.

7. CONCLUSION

- 7.1. South African citizens rely on broadcasting services for information, education and entertainment. While broadcasters support the need for greater access to broadband services, particularly in under-serviced rural communities, it is simply a reality that only broadcasters are currently able to offer a variety of video, audio and data services 24 hours a day for free or at a limited cost. The Authority should be cautious about interventions which run the risk of stifling real growth in the broadcasting sector – no doubt, greater numbers of South Africans have moved and will continue to move to over-the-top consumption of content. However, the high costs of broadband access and bandwidth constraints will mean that, by necessity, broadcasting will remain the platform of choice for a vast majority of South Africans for many years to come.
- 7.2. It is an issue of grave concern to the broadcasting sector that the Authority is proposing the migration of broadcasting services out of particular bands without any compensation or any consideration whatsoever of the impact which these proposals will have on broadcasting services. Under these circumstances, the Authority should not proceed with the draft regulations and the draft plan until the necessary studies have been conducted.