

BROADCOM INTERNATIONAL cc

CK1994/24488/23

Broadcasting, Communications & Satellite Systems

P. O. Box 15809, LYNN EAST, 0039

Republic of South Africa

* Tel: 012 819 1301 * Fax: 086 670 9408

Email: broadcom@iafrica.com



ICASA

350 Witch-Hazel Avenue

Eco Point Office Park

Eco Park

Centurion

8 January 2021

FOR ATTENTION:

Mr. Dana Ndumiso (Project Manager)

Send by email: ndana@icasa.org.za

DRAFT DIGITAL SOUND BROADCASTING SERVICES REGULATIONS, 2020

Broadcom International would like to thank the Authority for the opportunity to providing it with our submission on the draft regulation and also formally request the opportunity to participate at oral hearings to be held in respect of Digital Sound Broadcasting (DSB), should it be scheduled.

We attached herewith our submission for your consideration.

Sincerely,

Mr. Chris Joubert
CEO, Broadcom International cc
Mobile: 074 101 3741
Email: Broadcom@iafrica.com

Attached: Broadcom submission, document BSI-08/01/2021

Attention: Mr Ndumiso Dana
Email: ndana@lcasea.org.za

8 January 2021

Dear Mr. Dana

DRAFT DIGITAL SOUND BROADCASTING SERVICES REGULATIONS, 2020
SUBMISSIONS BY BROADCOM INTERNATIONAL cc

1. INTRODUCTION

- 1.1. Broadcom International, based in Pretoria South Africa is a systems engineering company active in the radio broadcast engineering field. We offers a range of services that include; Turn-key system implementation, SW, MW and FM Transmitter equipment, AM Antenna engineering, as well as Technical and Maintenance support services; to commercial, community and national broadcasters in the SADC region.
- 1.2. Broadcom International in partnership with Radio Pulpit conducted a 10kW DRM trail broadcast on AM 1440kHz from its Kameeldrift East transmitter site north of Pretoria, which was done during the period 2014/2015. Broadcom and Radio Pulpit with assistance from Sentech prepared the DRM Test Report ⁽¹⁾.
- 1.3. We refer to notice 639 published in Government Gazette No. 43900 dated 13 November 2020, Icasea published its Draft Digital Sound Broadcasting Services Regulations (the Notice) the submission date that was extended by Notice 721 published in Government Gazette No. 44000 dated 15 December 2020 to 8 January 2021.
- 1.4. Broadcom thanks the Authority for the opportunity of providing its submission and formally requests the opportunity to participate at its oral hearings to be held in respect of Digital Sound Broadcasting (DSB), if any.

2. BROADCOM's SUPPORT TO THE DSB EFFORT

- 2.1. Broadcom International has been a leading supporter of DSB technology in South Africa and is excited about the possibilities of implementing digital sound broadcasting services.

¹ http://www.drmsa.org/wp-content/uploads/2019/08/SEN_RFN_REP_MEASM_DRM30_RADIO_PULPIT_FINAL_REPORT_V1_04.pdf

- 2.2. The main benefits to commercial and community broadcasters includes improvement in sound quality, particular in case of MW signals which hamper listener growth, as well as new commercial opportunities offered by DSB associated multimedia content.
- 2.3. For broadcasters that wanted to expand their coverage, particular commercial and community of interest-based broadcast operators can increase coverage and reach through the use of Single Frequency Networks that will release a digital dividend through optimal spectrum usage and DSB energy savings. Typically coverage can be extended by re-using existing licensed spectrum, which will allow servicing of larger proportions, and in the case of DRM (given the expanded geographic coverage potential of DRM relative to DAB) will signal a possible end to spectrum scarcity and an end to sound quality concerns that have in particular plagued MW transmission.
- 2.4. It is for this reason that Radio Pulpit and Broadcom International, and later supported by Sentech, initiated and implemented the DRM test program, and through various extensions thereto, carry out, at own cost, the first and successful DRM test transmissions in South Africa. The results of this joint test program have been made available to Icasa⁽¹⁾. Broadcom International is justly proud of the work that it has done in being a driving force for DSB in South Africa.
- 2.5. Broadcom has been active in attending and has delivered presentations at several conventions in South Africa and other SADC countries promoting DSB technology.
- 2.6. Broadcom has install and commissioned fully DRM30 equipped stations in South Africa and Botswana. Both these stations have been operated as part of a various test phases broadcasting DRM on the MW band.

3. WHERE ARE SOUTH AFRICA ON THE DSB PATH

- 3.1. DSB test broadcast have been done or is still underway with no real clear vision where we are going. It has been more than 6 years since the DRM tests in 2014/2015 were completed with substantial investment and infrastructure presently standing redundant. We are disappointed at the slow pace at which DSB implementation is been done and we are concerned that the market proposition for DSB, perhaps particularly DRM, may be waning if broadcasters are not allowed onto DSB platforms.

3.2. As ICASA must be aware, numerous market commentators have sounded the alarm about the viability of DSB in the presence of online streaming and other audio services.

3.3. There are undoubtedly DRM success stories - India for example, and more recently the major network penetration in China, Russia and Indonesia. However India's successful move to DRM was enabled by active lobbying of car manufacturers in India to encourage the installation of DRM receivers as a standard feature in cars aimed at that market and ensuring that DRM receivers are affordable for its population. Sadly, despite the obvious need for such encouragement in South Africa as noted in the DRB Policy Directive, DSB receivers (particularly DRM enabled ones, and specific multi-standard receivers), are not:

3.3.1. mandated as a standard feature in new cars,

3.3.2. being manufactured locally,

3.3.3. available to consumers at prices that are affordable,

3.3.4. muted drive to be enable DSB reception on mobile multimedia devices; and

3.3.5. muted mandate for DRM capable receivers (multi-standard) and allowing a flood of DAB+ only receivers onto the market.

3.4. It must also be said that digital audio technology has, quite simply, taken a different turn as a result of the internet access where mostly the young and to larger extend now the older users have taken to online streaming services. Car manufacturers recognizing the demand for smart-phone compatible audio is adapting accordingly to ensure these features are standard in newer models.

4. WILL DSB FIND TRACTION? IN SOUTH AFRICA

4.1. Spectrum scarcity, audio quality, new multimedia content, large area coverage and free-to-air reception are obviously the biggest drivers of radio in general and will in particular support the transition from analogue to digital sound broadcasting.

4.2. It remains to be seen which way South African audiences take. In Europe experience has shown reluctance on the part of audiences to move to DSB. On the other hand, both India and China have embarked on ambitious DRM roll-outs. These are issues that regulators and operators cannot impose. Audience take-up of DSB is dependent on market forces – particularly, the availability of excellent content, convenience, and affordability.

4.3. Broadcom welcomes the fact that ICASA considers that existing sound broadcasters can migrate onto two DSB platforms (DRM and DAB+), as is clearly drafted in the wording of

the Notice. However, merely being entitled to do so does not mean that all broadcasters will or could afford themselves of the opportunity.

- 4.4. ICASA should give serious consideration to allow, encourage and support early movers to establish permanent DSB presence on-air in order to facilitate receiver take-up, as it is clear that without DSB services being on-air, and very importantly to be on-air for extended (permanent) periods, receiver's take-up will not happen.

5. COMMENTS ON DRAFT REGULATIONS

- 5.1. Section 4 (3): ICASA should consider extending the mentioned period of two year (2) to a longer period, we propose 3 year, or even possibly 5 years. In the current primary and secondary markets there already exists a large and diverse mix of existing broadcasters in operation that may take-up DSB and by extending the period will encourage and allow early movers to have a better opportunity to recover migration costs and reap some benefits. In particular for migration to take place in DRM30 and for some DRM+ operations, consider that the time period to establishment new facilities (ie. to find suitable sites/EIA//upgrade etc) may take quite long (can be more than 2 years), not to mention the associated expensive costs, all which reduce motivation for early movers to benefit and be able to gain DSB dividends.
- 5.2. Section 5: Multi-Channel Distributor for DSB Services. This section is clear and acceptable and it is our understanding that it refers to and in particular applies to DAB+ migration. However we would like to have more clarity regarding Single-Channel Distribution for DSB services as it may be applicable to DRM30 and DRM+ migration candidates. Since DAB+ migration demands that new spectrum (Band III) is to be utilized our understanding fits; however for DRM30 and DRM+ digital standards these are applicable to existing spectrum allocations. Here those broadcasters have the option, based on a technology neutrality standpoint and equal access to migrate, that they should have the choice to do either a hard migration, or migrate on a time share basis (certain hours) using their licensed spectrum allocations alternatively they should have the option to apply and be allocated additional spectrum in the same spectrum category to implement DSB migration; and ICASA must find processes to support these broadcasters equally without additional burden.
- 5.3. To take the above notion further for some DRM30 and DRM+ candidates, we want ICASA to consider the fact that those broadcasters, and again I refer in particular to the

independent operators, will have to carry the cost for this migration on their own and will not be able to benefit or have tax payers financial support to offer DSB migration as other DSB platforms may enjoy, which may give some mux operators a leap-start to reap commercial gains early on.

- 5.4. Section 8: Licensing of DSB Services. This section is clear in terms of licensing requirements and process as it related to DAB+ migration candidates. However we would like to have more clarity on the requirement and the process as it relates to DRM30 and DRM+ migration candidates.
- 5.5. Financial model comments: We have our reservation regarding costs as relates to DSB migration (dual illumination). We want to support, following discussion we had with Radio Pulpit their suggestion that a costing study and model be undertaken and be addressed before the publication of the final regulations introducing DSB. This costing model should be conducted via deliberations spear-headed by ICASA and involving: commercial and community broadcasters, government, DOC, the Media Development and Diversity Agency and the Universal Service and Access Fund which is also available to fund the roll-out of broadcasting services such as DSB in terms of the Electronic Communications Act, 2005.
- 5.6. Affordability comment: We must draw attention to the fact that community broadcasting sector has long experienced affordability constraints with regards to signal distribution costs with the DOC having had to step in to cover broadcasting signal distribution expenses for numerous community broadcasters over the years. It is inconceivable that community broadcasters would be able to pay for dual illumination in an environment when the cost recovery from audiences and current market constraints are evident.
- 5.7. Equal Access comment: We also want to draw ICASA attention to the fact that community broadcasting to a large extend serve marginalized proportion listeners and typically in more rural settings where the implementation of DSB technology could make a substantial impact. Here wide area coverage platforms like DRM30 could be used to disseminate other information (back-ground data transmission) in addition to the front audio content that could serve the communities with social support and information on a broadcast and free-to-all basis. If community operators are involved in this ICASA in conjunction with DOC should take the lead to leverage the digital dividend offered by DSB in rural settings and find definitive, clear and substantial ways to support those undertakings and roll-out plans.

5.8. Cross Platform Access comment: We want ICASA to provide more clarity on the position regarding cross platform access to DSB operators. The draft regulation is silent on allowing broadcasters access to more than one DSB platform/channel simultaneously. We acknowledge that this may be an additional cost burden to have multiple illumination points but we suggest this should be left to market forces and affordability to determine or limit this.

The nature and design of the new DSB technology allows services to be linked across different platforms and the specifications allows selection of a broadcast service by NAME where the actual operating frequency become irrelevant for tuning purposes.

This will allow a listener in a metropolitan setting tuned to his service of choice (which may be on a DRM+ or DAB+ platform) and as he should travel outside the metropolitan area, it may be possible to be able to continue to receive his program of choice as he travels into a more rural setting, only if the same service is available on a DRM30 platform (which could be MW or SW) or possibly on a different (in a next town) DRM+ or DAB+ transmission point (like a closed or even dislocated SFN) and vice versa. The specification also includes analogue (MW) services fitted with AMSS technology to be included into the proposed automatic service protocol where the network communicate service options (alternative same service sources) to the receiver in advance who will select the best signal at any time between those that are received by the receiver at that location.

It is our submission that broadcasters are allowed to operate on multiple DSB platforms and not be limited by geographical anchors (transmission points) but rather be allowed to serve interest / listeners group dispersed over extended areas by leveraging the benefits and the digital dividends (service improvement, spectrum and energy efficiency) offered by DSB technology.

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