

Prospects for digital audio broadcasting in South Africa

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1 Background

The authors submitted a comment to the Independent Communications Authority of South Africa (ICASA) in response to the call for comment in the Discussion Document on Digital Sound Broadcasting (DSB) that appeared in South Africa's Government Gazette No. 41534 of 29 March 2018. Consequently, the second author made an oral submission at the public hearings on this issue at the ICASA premises in Sandton on 13 July 2018.

In this document, we elaborate on the thinking in our submission in response to a request in this regard from Advocate Dimakatso Qocha, the Councillor who chaired the hearing. We still intend address ourselves only to Question 1 of the Discussion Document.

Is there a need for the introduction of DSB technologies in South Africa?

We are convinced that there is no compelling argument for the introduction of the technology in the way apparently requested by many in the industry. We do not however oppose the liberalisation of signal distribution or a technology (and content) neutral approach to spectrum management and tradeable broadcasting and spectrum rights. If these were introduced, broadcasters would be able to decide on a purely commercial basis when and if to introduce digital broadcasts and new entry to the market would be possible through the purchase of appropriate rights.

Opinions contained in this document are those of the authors and not of their employers, clients or any related natural or juristic persons. Neither has a personal interest in the broadcasting industry but both from time to time publish videos or podcasts online.

2 Seven reasons to postpone DSB

Our reservations about the proposed introduction of DSB fall in seven areas about which we provide further details below. We would contend that although DAB has advantages in certain areas over FM (notably power and spectrum efficiency), a switch-over is not merited if one considers the risks and costs involved.

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2.1 Limited gains

Although DSB has many advantages over analogue broadcasting, the gains from the introduction of DSB are (in our view) likely to be minimal and would be realised only many years into the future. The cost of a transition to DSB has to be weighed against the cost. The main advantage is the ability to accommodate more stations in the congested urban areas on the same spectrum. Use of this spectrum is currently dominated by SABC and Primedia stations. Indeed, the seven most widely listened to stations in the country are SABC vernacular stations (with Ukhozi FM at position 1 and RSG at position 7)¹.

According to a recent WorldDAB item on DSB in Australia², where DAB+ was launched in 2009, digital radio currently has 3,6 million listeners in that country. Australia has a population of 23,1 million (of which 65% has access to DAB+ broadcasts, according to the same report) which means that only 15,6% of the population actually listens to digital radio – nine years after it had been introduced. Were South Africa to be able to introduce DSB in 2019 and follow the same development as Australia, the country would reach that level of penetration only in 2028. We think that would be the optimistic case, since Australians buy new cars more frequently than South Africans and have a far higher disposable income and more urbanised population.

FM spectrum is congested in Gauteng but consumers in the city already have access to a range of similar media products such as podcasts and online music services. Broadcasters have indicated (at ICASA's public hearings) that they intend opposing the introduction of new stations on a DSB platform, at least in the medium term. There is ample unused medium wave spectrum that can be used for education, community and news broadcasting in South Africa. In the rural areas, FM can be used to relay more stations from the urban areas and possibly also foreign stations like the BBC World Service which is relayed³ on FM in many localities in Africa.

Even in Norway, analogue FM broadcasts will continue until 2021 at least⁴ for local stations. The country's parliament had decided on digitising broadcasts in 2007 already and despite this, daily radio listenership in some rural counties have dropped from 67,4 per cent to 58,5 per cent⁵ after the switching off of the national radio networks – despite local FM broadcasts continuing to be available. It has been reported in the UK⁶ that “74% of commercial radio listening on digital platforms is to existing analogue radio stations.”

In March 2017 in the UK, the BBC abandoned⁷ earlier plans to transition in full from FM to DSB. Without switching off the analogue FM network, and so freeing up the spectrum, DSB does not address the perceived problem of FM spectrum congestion.

2.2 Online already works

South Africa has many vibrant emerging online digital audio businesses that offer real competition to the established broadcasters. If consumers are switching to online media anyway, an expensive digital radio migration would be a fruitless exercise. Furthermore, even if a digital radio migration would be successful, it might be to the detriment of online audio providers, many of whom are South Africans

¹<https://www.iafrikan.com/2017/01/09/looking-into-the-south-african-radio-landscape/>

²<https://www.worlddab.org/country-information/australia>

³http://www.bbc.co.uk/worldservice/specials/1318_africa_radio_aw/bbc_relay_partners.pdf

⁴<http://www.medietilsynet.no/en/about-medietilsynet/digital-radio/>

⁵Ibid.

⁶<https://www.theguardian.com/technology/blog/2010/apr/12/dab-radio-problems>

⁷<https://www.bbc.co.uk/news/entertainment-arts-43458695>

who have invested in providing content to the local market. These include the podcasts Lesser Known Somebodies, Small Business MBA, Soccer Laduma Radio, Sound Africa and many others.

Streaming or downloadable audio can be received by all modern cellphones whereas DSB is available on very, very few. In 2016 it was already reported that 37% of South African were using their cellphones⁸ to listen to radio. To listen to DSB, consumers would be required to buy an additional device, and for some to decide whether to purchase a cellphone or a DSB receiver.

Audio content delivered over the Internet need not be expensive for consumers. In fact, it can be free. In the USA, T-Mobile is currently offering free data for audio streaming services⁹ and in Jamaica, the mobile operator Digicel has introduced zero-rated access to government services¹⁰. Indeed, Telkom Mobile has its LIT service¹¹ which allows zero-rated music streaming on various services.

There is nothing to prevent broadcasters from paying mobile operators to zero-rate their audio streams or, in fact, for the regulator to require the zero-rating of public broadcasting streams. Furthermore, cellphones are able to easily download audio content from free or cheap WiFi hotspots. Moreover, public subsidies can be used to pay mobile operators to 'zero-rate' access to preferred audio streams where there is a clear public benefit.

The best way to give the poor similar access to content as the better off is to ensure widely available and affordable Internet access. Also, as Richard Rudin,

Senior Lecturer in Journalism at Liverpool John Moores University, writes¹²

“podcasting may yet sound the digital death knell for traditional radio, as the idea of broadcasting to many people at the same time becomes more and more quaint.”

It is entirely possible that podcasting and downloads is a technology preferred by the public to one-to-many broadcasts (and the experience of video entertainment, now consumed to a significant extent online in a non-synchronous mode) would suggest that this could easily be the case.

2.3 Unforeseen technical difficulties

Ole Jørgen Torvmark, CEO of Digital Radio Norway and Radio Metro, in an interview¹³ said “DAB+ in cars is especially challenging.” In fact DSB adaptors for cars appear especially problematic¹⁴ due to interference with other devices and sound systems in cars in the vicinity. Further more, the market for these adaptors is small so far since it is large restricted to Norway. There are many technical difficulties with DAB(+), including

- quality that is not necessarily better than stereo FM¹⁵,
- users reporting frequent loss of signal while driving which would be a big problem in SA where a great deal of commercial value of radio lies in the commuter audience, especially where coverage

⁸<https://businesstech.co.za/news/lifestyle/145469/this-is-how-many-people-are-listening-to-south-africas-most-popular-radio-stations/>

⁹<https://www.t-mobile.com/offers/free-music-streaming>

¹⁰<https://www.mset.gov.jm/moa-between-government-digicel-and-flow-zero-rated-access-all-government-websites>

¹¹<https://www.iol.co.za/business-report/telkom-launches-lit-prepaid-bundles-12166925>

¹²<http://theconversation.com/dab-radio-was-the-future-until-live-streaming-and-podcasts-arrived-95250>

¹³<https://www.radioworld.com/columns-and-views/norways-fm-shutdown-six-months-later>

¹⁴<http://digitalradioinsider.blogspot.com/2017/11/problems-with-many-dab-radio-adaptors.html>

¹⁵<https://www.carsguide.com.au/car-advice/what-does-digital-radio-or-dab-mean-for-cars-40638>

<https://www.theguardian.com/world/2017/jan/11/norway-begins-switching-off-analogue-radio>

http://www.ucc.co.ug/files/downloads/UCCug_DAB_Presentation_March_23_%202017.pdf

stops just outside big cities, and

- bad reception in houses and other buildings¹⁶.

It should be kept in mind that analogue radio was introduced slowly and broadcasters and engineers were able to learn on greenfields spectrum how to handle a transmission network, avoid interference etc. The sudden introduction of DSB is likely to have unintended effects, depending on local conditions – such as happened in Brisbane¹⁷ at the end of 2017.

2.4 Adverse impact on the poor

The poor disproportionately live in rural areas where there is no shortage of FM spectrum. In order to expand the range of media available in deep rural areas, it is sufficient to subsidise FM relay transmissions of urban stations. Furthermore, digital radio sets are really much more expensive than analogue FM receivers. Replacing the huge number of FM receivers in the country by DSB devices will be expensive and will require a subsidy. This will require funding that might be better spent subsidising the expansion of Internet access and other media distribution channels including such old-fashioned facilities as libraries.

A study by the European Broadcasting Union¹⁸ concluded that in low population density areas, Internet distribution is less expensive than the distribution of DSB. It is our view that a forced and/or subsidised migration to digital broadcasting would be anti-poor and expensive. An alternative is to subsidise access to existing media channels for the poor and especially the rural poor.

2.5 Complexity and concentration

The migration process is complex and tended, in other countries, to concentrate the market in the hands of a small number of broadcasters who have the technical ability to execute it. In a 2017 presentation¹⁹ by the President of DSB lobby group WorldDAB, he states

“Fears of competition are overstated: incumbents are the winners”

and shows that the audience share of the two largest private radio groups had grown after the introduction of DSB in the UK. At the ICASA hearings, several broadcasters expressed their support for DSB in terms that made clear that it was absolutely expected that the regulator would enforce a moratorium on new market entry for a period that was not specified. Among other things, this risks a challenge under competition law.

2.6 International experience

The international experience with DSB is, at best, mixed. Several countries have abandoned digital radio, notably Hong Kong²⁰ – a wealthy territory with high population density which might have been

¹⁶<https://conversation.which.co.uk/technology/led-bulb-radio-interference-dab-test/> <http://www.dailymail.co.uk/news/article-3168864/Coming-loud-clear-gripes-digital-radio-Audiences-condemn-DAB-poor-quality-signal-cuts-middle-programmes.html>

¹⁷<https://www.radioinfo.com.au/news/brisbane's-dab-dilemma-gold-and-sunshine-coasts'-unwelcome-visitor>

¹⁸https://tech.ebu.ch/docs/techreview/EBU_Tech_Review_2017_Cost-benefit_analysis_of_FM_DAB_and_Broadband.pdf

¹⁹<http://www.frontiersmart.com/sites/default/files/17%2005%2003%20DAB%20-%20platform%20for%20Europe.pdf>

²⁰<https://www.scmp.com/news/hong-kong/economy/>

considered a natural home for DSB. Hong Kong found however that DSB was not commercially viable²¹ simply because of a lack of interest among the public.

Even in an advanced and rich country like Norway, the switch-over to digital audio broadcasting has resulted in very large numbers of people in border areas simply tuning in to FM stations from neighbouring countries or local stations (which still broadcast on FM). DSB was introduced in the UK in 1995 (with 60% population coverage then) but the audience for DSB passed the 50% mark only²² in 2018. Sweden and Finland are two countries similar to Norway which have abandoned digital audio transmissions on FM. In Australia, digital radio is available only in the largest cities and only since very recently in the national capital²³.

Denmark and Germany introduced DSB early but there has been no wide-scale adoption in these countries. According to WorldDAB numbers²⁴ fewer than 10% of the world's population is currently able to receive DSB services.

2.7 Signal distribution in SA

The state-owned signal operator, Sentech who would likely have to manage much of the migration, is under-resourced and, as stated by auditors in its 2016/17 annual report “the public entity’s major customer is experiencing financial challenges which could pose a risk to the going concern”. This is an appreciable risk for a DSB migration project.

DSB coverage does not follow exactly the same pattern as FM coverage due to different propagation characteristics and extensive coverage planning will be required in the case of a migration to DSB. Implementation of new transmitters (190 in the UK²⁵) would also be on the agenda and this might require considerable funding and expertise which might not be at the disposition of Sentech.

3 Conclusion

Having considered issues that we regard as pertinent to the matter and considering the public interest, as alternative to the proposed introduction of DSB, the authors suggest that ICASA consider one or more options among

- licensing only AM band digital radio stations using DRM technology;
- re-examine the issue in several years’ time when there is better technology support and Norway is not the sole country to have switched off national FM broadcasts;
- conduct a comprehensive review of the public broadcaster’s spectrum use (especially for its commercial stations) and the effect thereof on restraining new entry;
- consider making spectrum rights fully tradeable and liberalising the broadcasting licence regime.

At the very least, we suggest delaying any decision until such time as the international evidence is more convincing.

²¹<https://www.hongkongfp.com/2016/08/08/dbc-station-close-marking-second-closure-digital-radio-station-year/>

²²https://www.theregister.co.uk/2018/05/22/digital_future_is_not_dab/

²³<http://www.abc.net.au/radio/canberra/dab+-digital-radio-canberra/9217588>

²⁴http://www.cab-acr.ca/english/research/06/sub_mar1506_app_g.pdf

²⁵https://www.ofcom.org.uk/__data/assets/pdf_file/0022/83281/aberdeen_local_dab_interim_final_report_jan15.pdf

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Both authors are members of the Board of the International Telecommunications Society and have extensive experience in commercial and academic research in information economics, telecommunications, competition and governance.

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