DIGITAL radio mondiale

June 18, 2020

**VIA ELECTRONIC FILING**

**Ms Marlene H. Dortch,**
Secretary Federal Communications Commission
Office of the Secretary
445 12th Street, SW,
Room TW-A325
Washington, DC 20554
USA

**Dear Ms. Dortch**

Re: Notice of **Ex Parte** Communication All-Digital AM Broadcasting, MB Docket No. 19-311
Revitalization of the AM Radio Service, MB Docket No. 13-249

On June 17th, 2020, Ruxandra Obreja, Chairman of the not-for-profit Digital Radio Mondiale (DRM) Consortium and Association and Alexander Zink, Vice-Chairman of the DRM Consortium, participated in a remote conference call meeting with James Bradshaw, Christine Goepp, and Jerome Manarchuck of the FCC's Media Bureau, Audio Division, to discuss the Commission's proposal to allow AM stations to voluntary transition to all-digital broadcasting.

**The DRM Consortium** thanked the FCC for the opportunity to discuss the current consultation and add to the DRM consultation paper. They also wanted to use this meeting to ask for the amendment of the proposed rules to allow AM broadcasters to use all-digital transmissions, including the ITU endorsed and open DRM technology. The reasons given were that DRM provides, in the opinion of the DRM Consortium representatives, a superior, flexible and an advanced technical solution. DRM is available and can be implemented now on more transparent and cost-efficient terms than other standards. DRM is spectrally efficient, offering more content opportunities and as an open standard allows broadcasters to start a transmission in DRM format without the need to request any licenses to use the technology, sign contract, or even agree to annual costs or revenue-sharing. The IP royalties for DRM equipment (transmitters and receivers) only apply once per device, are taken care of by the respective manufacturers, and are fully published without the option for discriminatory license grants by the third-party patent pool administrator Via Licensing (https://www.via-corp.com/licensing/drm/). In addition, modern receivers may not even need to pay for the xHE-AAC audio codec used by DRM separately, as the technology is part of the overall AAC technology license already implemented in most modern radio sets to support file playback and web streaming. There is no charge for broadcasters or listeners for using the DRM technology. And since the full DRM technical specification is published (including the xHE-AAC and AAC audio codecs), IP royalties will cease after the underlying patents have expired – in contrast to technology licenses based on un-disclosed technology components, for which manufacturers and users could be charged indefinitely.

DRM carries up to 3 audio services, plus Journaline text, station logos, metadata ("artist experience": song title/artist, album cover, etc.) all within a 18/20 or even 10 kHz signal bandwidth. All DRM configurations share the same advanced functionality: radio and multimedia services based on the highly efficient audio codec MPEG xHE-AAC and free-to-air Journaline multi-lingual and on-demand

interactive text information, detailed service signalling, service linking (including to analogue AM/FM services), Slideshow, EPG, traffic and travel information and DRM EWF – Emergency Warning Functionality. Its capacity to transmit parallel channels in different languages, to function as an EWF system underlines the benefits of DRM, the newest audio broadcasting terrestrial technology.

One argument put forward was that DRM was adopted in 2005 for SW transmissions by the US and is currently in use for international services (e.g. from Guam and Radio Marti from USA). Therefore, the DRM experts were wondering and asking why the standard's use cannot be extended to all bands deployed in the US for broadcasting, considering that DRM is the only open and ITU recognized standard delivering the same benefits in all radio broadcast bands SW, MW (AM), LW, and even VHF bands I—III. The suggestion was made, therefore, that DRM, a voluntary consensus standard, should be tested in the USA against a series of well-defined criteria like benefits and costs. In effect DRM has never been fully tested in the USA for domestic use in the AM bands, given that the technology was not yet available at the time in 2002 when HD-AM was selected against Eureka 147 (DAB Classic). Today, DRM is established around the world and thus should be taken into consideration as the latest radio broadcast technology. Such a test would allow for a proper comparison with HD in all-digital AM broadcast and open the possibility of including DRM, either alone or together with HD in the proposed regulation as a full-digital transmission standard for the AM bands – with the option for simulcast operation alongside analog AM signals from the same transmitter if required. In 2020 this is possible since the innovation level, the all-standard chipset and automotive capabilities have evolved enormously in the past 18 years. This would also answer the question on the benefits and its attractiveness when compared to and introduced alongside HD Radio.

The progress made by the biggest radio receiver chipset manufacturers including the DRM Consortium members including NXP[1] and Silicon Labs[2] means that nowadays radio receiver chipsets and boards can support all major digital audio broadcast standards, which can be activated according to the regulation and needs of each market. This explains why the same brand of car might have a DRM receiver in India, a DAB receiver in the UK and an HD Radio receiver in the USA – all based on the same chipset and hardware. There was also a discussion about the possibility of having a receiver able to receive broadcasts in DRM and HD Radio on the same device, as well as analog AM and FM transmissions for the transition period. USA would not be the only country in the world envisaging the use of more than one digital radio standard. The technical solutions exist and for the listener what matters is that they can listen to all the digital broadcasts available in their country through a common user interface.

[1] [1] See for example:

- https://www.nxp.com/products/audio/multi-standard-digital-radio:MULTI-STANDARD-DIGITAL-RADIO#/
- https://www.nxp.com/products/audio/multi-standard-digital-radio/digital-radio-and-processing-system-on-chip:SAF360X

[2] See for example:
https://www.silabs.com/audio-and-radio/automotive-tuners/si4791x-high-performance-receivers

As AM in the USA covers large rural areas, it is worth noting the fast development of in-car adaptors for DRM that offer an easy and cheap access to digital radio for owners of legacy cars with only analog AM or HD Radio reception.

The DRM representatives also explained that a test could be conducted in the USA as members of the Consortium deliver transmitters that can be upgraded to DRM and can even operate in both HD and DRM. As DRM saves on both energy and spectrum such a test could be conducted in DRM's native full-digital mode or in a simulcast configuration where a full analog AM signal could be placed alongside the digital DRM component.

Therefore, allowing DRM services with their advanced technical and commercial benefits to be possible in the USA and to work alongside the already adopted HD Radio services could provide significant benefits to the FCC, to the overall broadcast industry (including big or small AM stations), and most importantly to the future generations of AM listeners.

Yours sincerely

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