

ISHWAR SINGH MEHLA  
Former Director (Engg) -AIR  
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Sub; comments on the consultation paper titled, "Digital Radio"

**Para wise comments (in bold) on the consultation paper Digital Radio are as below;**

**Para 1.9** In keeping with the pace of deployment of digital radio around the globe, the Government in 2010 took a decisive step forward for transition from analogue radio services of AIR to digital mode of transmission. -----while also saving large amounts of transmission power every year.

**Comments;**

**There is lot of information gap in the paper regarding contribution by India in digital broadcasting as following facts on the efforts by the Engineering wing of HQ of AIR ,have not been considered;**

**(a) AIR (its planning & development unit at Akashwani Bhawan headquarter and R&D dept) was extensively engaged in this technology since 2004 with a pilot project on DAB (Digital Audio Broadcasting) by installing a 1KW transmitter in L-band at Akashwani Bhawan. The details of the experiment & findings are available in R&D dept and can be accessed through Engineer –in –Chief.**

**(b) Then in mid 2005 AIR (I as in-charge of Transmitter Design Unit) got updated & modified a compatible Thomson Make high power SW Transmitter at Khampur Transmitter Complex through its OEM & aired DRM standard digital signal in International exposition BES-2006 in Delhi. This transmitter still is in operation for external services of AIR.**

**(c)Then to further the cause of DRM30 , in May 2007 AIR arranged a DRM-ABU-AIR showcase project at New Delhi Called , "Digital Radio Transmission Workshop & Field Measurements between 7-12<sup>th</sup> May 2007 ( 1<sup>st</sup> Page of programme attached for reference).**

**The objective of this DRM showcase was ;( 1) Simulcast DRM transmission (single channel simulcast (SCS)/Multichannel simulcast (MCS)/DRM monocast transmission in MW,(2) NVIS (Near Vertical Incident Sky wave) in SW ,and (3) a Local service broadcast in SW in 26 MHz band.**

**For experiment in MW a Thomson make 100 KW MW compatible transmitter operating at 666 KHz at AIR, s Nangli Transmitter complex was got upgraded by OEM (PFA the Radio News Published by M/S Thomson-2 pages)**

**For experiment in NVIS, again a Thomson make 50 KW SW compatible transmitter of operating in 3-6 MHz band at Kingsway Complex was modified.**

**For Local broadcast experiment service in 26 MHz band a Hitachi Make Transmitter was used.**

**After the experiment the results were compiled & with analysis were sent to ITU. Detailed document of ITU on this was issued on 20<sup>th</sup> March, 2008.**

**The report of the ITU study group on this is available in ITU vide Document 6D /XXX of XX March 2008. A scanned copy of 1<sup>st</sup> page of report for your ready reference is attached herewith.**

**NB; for more details on all the above three cases you may approach Engineer –in-Chief AIR.**

**Para1.10** While AIR is active in implementation of digital radio in MW and SW bands,----- radio broadcasting is facing competition from emerging technologies and other platforms like webcasting, podcasting, Internet streaming etc.

**Comments;**

**In the absence of availability of seamless internet / Wi-Fi throughout the coverage area platforms like webcasting, podcasting, Internet streaming etc. is not a competition as it's free to air & majority of FM Radio service listeners are people on move in their car or stationary household artisans / workers listening to radio while attending to their works or homemaker ladies .**

**Para 1.11** In a competitive environment digital radio broadcasting may provide exciting new opportunities -- -----there is neither any clarity in policy guidelines for Phase-III regime regarding provision of digital radio service in FM band nor the ecosystem is available which can encourage existing private FM broadcasters to move towards digital radio broadcasting.

**Comments; Nothing in the Policy guidelines of FM Phase-III discourages regarding provision of digital radio service in FM band. Govt of India thru WPC under Min of comm. & IT as well MIB is competent to amend if a standard technology for Digital FM radio is adopted in India. Even AIR had ordered & procured 12 no's of 5 KW DRM+ compatible FM transmitters & had tested few at OEM, s works in 2012.**

Summary of issues for consultation

**Para 5.1** Is there a need to encourage or facilitate introduction of digital radio transmission at present? If so, what measures do you suggest and in which market?

**Comments;**

**Yes there is need to encourage digital transmission but before that for FM Radio technology for digital has to be established & adopted by Govt / AIR**

**Para 5.2** Is there a need to frame a roadmap for migration to digital radio broadcasting for private FM broadcasters? If yes, which approach, mentioned in Para 4.7, should be adopted? Please give your suggestions with justification.

**Comments;**

The ITU study group report published in 2010 as mentioned in Para 4.7 is for implementation of digital audio broadcasting (DAB) and not other digital technology like DRM+ etc. So 1<sup>st</sup> AIR (INDIA) have to select the technology as DAB operates in L-band & not in FM band.

**Para 5.3** Should the date for digital switch over for radio broadcasting in India needs to be declared? If yes, please suggest the date with suitable justification. If no, please give reason to support your view.

**Comments;** For AM Digital radio broadcasting standard is final, adopted & lot of transmitters by AIR are available throughout India except the availability of affordable receivers and customisation / reposing/ repackaging of contents. So GOI / AIR after ascertaining the availability of receivers & customisation of programme can declare the date.

However for FM Digital radio broadcasting lot of policy matters including the technology standard is yet to be decided & adopted. Hence digital radio transmission in FM band is a long way.

**Para 5.4** Is present licensing framework or regulatory framework is restrictive for migration to digital radio broadcasting? Please explain with justification.

**Comments;**

Licensing / regulatory framework of RF spectrum falls under the jurisdiction of WPC under Min of Comm. & IT under the framework of ITU. Present licensing / regulatory framework shall have to be tweaked by WPC.

In Pvt FM Policy of either phase there is no such restriction for migration to digital radio broadcasting if made applicable by GOI.

**Para 5.5** Should single digital radio technology be adopted for entire country or choice of technology should be left to radio broadcasters? Support your reply with Justification.

**Comments;**

It has to be single digital radio technology for the entire country to have uniform technical parameters & equitable platform from all points of view for all agencies. Leaving the choice of technology to radio broadcasters will lead to non-uniform platform & chaos from spectrum use / regulatory point of view.

**Para 5.6** In case a single digital radio broadcast technology is to be adopted for the entire country, which technology should be adopted for private FM radio broadcasting? Please give your suggestions with detailed justification.

**Comments;**

**As indicated in previous Para it has to be single digital radio broadcast technology for the entire country for Public as well as for private FM radio broadcasting for seamless reception through common technology receivers & portability as well as from spectrum use & regulation point of view ?**

**Para 5.7** How issues of interference and allocation of appropriate spectrum allocation can be settled in case the option to choose technology is left to radio broadcasters?

**Comments;**

**Since allocation, optimum utilisation & regulation of the RF spectrum from use and interference point of view is with Govt, the option to choose technology cannot be left to radio broadcasters.**

**Para 5.8** Should the permission for operating FM channel be delinked from technology used for radio broadcasting? If yes, please provide a detailed framework with justification. **Comments;**

**No it cannot be delinked from technology used for radio broadcasting prevailing in the country by the public broadcaster. It has to be same.**

**Para 5.9** Should the existing operational FM radio channels be permitted to migrate to digital broadcasting within assigned radio frequency ? If yes, should there be any additional charges as number of available channels in digital broadcasting will increase? Please provide a detailed framework for migration with justification.

**Comments;**

**No, FM radio operators cannot be permitted to migrate to digital broadcasting within assigned radio frequency as entire equations will change from number of programme & available channel point of view. In digital instead of one it will amount to more channels as one frequency will be able to take more than one & different programme. They should follow same technology as used by the public broadcaster to have uniformity from interference, reception & equitable platform from service area point of view.**

**Para 5.10** Should the future auction of remaining FM channels of Phase-III be done delinking it from technology adopted for radio broadcasting? Please give your suggestions with detailed justification.

**Please refer comments as for Para 5.8**

**Para 5.11** In case future auction of remaining FM channels of Phase-III is done delinking it from technology, should the present auction process be continued? If no, what should be the alternate auction process? Please give your suggestions with detailed justification.

**Please refer comments as for Para 5.8**

**Para 5.12** What modifications need to be done in FM radio policy to use allocated FM radio channels in technology neutral manner for Radio broadcasting?

**Please refer comments as for Para 5.6**

**Para 5.13** What measures should be taken to reduce the prices of digital radio receivers and develop ecosystem for migration to digital radio broadcasting?

**Comments;**

**Some relaxation in taxes & reduction in custom duty of components required for manufacturing of Digital Receivers initially say for a period of three yrs or so be considered by GOI to reduce the prices of digital radio receivers and develop ecosystem for migration to digital radio broadcasting?**

**Para5.14** Stakeholders may also provide their comments on any other issue relevant to the present consultation.

**Comments;**

**Broadcasting in all modes including Terrestrial mode is the mandate of Min of I&B through its two departments i.e. AIR for Radio & DD for TV under the umbrella of Prasar Bharati. These two departments at their HQ in engineering wing of Planning & Development sections prepares project plans including for induction of new technologies for broadcasting & content producing as per international markets. So I would suggest that consultation papers on Radio & TV, in future before putting them in public domain, inputs from these two departments be obtained & included for updated & latest factual technology status.**