

**Q7. Should the 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.**

The auction for remaining FM channels should be delinked from the technology adopted for radio broadcasting.

The choice of digital technology for radio broadcasting is driven by multiple factors – incremental cost of transmission infrastructure, cost and availability of receivers, listener willingness and affordability, alternative options to listeners, etc. This choice will be a complex function, and unless delinked, the choice will have to be made in advance without any real time radio internship data about these new markets. Also, unless delinked, the licensing process will face delays and postponed timelines, while the choice is evaluated by the TRAI/Prasar Bharti. Delinking the technology will allow Phase III to proceed while the choice of technology will be driven by socio-economic factors.

At the same time, we strongly feel that the choice of digital technology must be combined with the responsibility to implement digital broadcasting. The auction license must put the onus of implementation of digital broadcasting on the bidders, and specify a timeline to implement a hybrid / simulcast (analog + digital broadcast) model, if not entirely digital. Currently available technology from Multiple OEMs allows Radio Broadcasters to create infrastructure, which is easily, quickly and at a fraction of cost, upgradeable to Digital Broadcasting.

Digital Radio technologies not only provide a more efficient use of the spectrum, they are also much more efficient from energy perspective. With the use of digital technologies available today, broadcasters can easily expect 50% or lesser energy consumption with same coverage as analog and increased number of channels.

It is our recommendation that the choice of technology be delinked from the license, however the move to digital technology be made necessary, or appropriate economic incentive be provided to broadcaster to implement digital technologies. TRAI must consider extending this benefit & responsibility to the existing license holders as well.

**Q8. In case auction of remaining FM channels of Phase-III is delinked from technology, whether FM Radio broadcasters who adopt digital technology be permitted to broadcast multiple channels on single frequency? Please give your suggestions with detailed justification.**

Yes, Radio broadcasters shall be permitted to broadcast multiple channels on single frequency.

Broadcasting on multiple frequencies has a lot of associated costs and risks – content production, royalties, transmission infrastructure, availability of receivers etc. – which will be borne by the broadcaster. Open economics will allow the broadcaster to choose this for

markets where this can be profitable – which will lead to high profit sharing with the govt as well. Any additional fees for the additional channels may de-motivate the adoption of digital technologies itself.

In due course of time, there will be a tipping point, where digital technologies will become more cost effective. Restricting the number of channels will delay that time and may as well hamper the profitability of the broadcaster (and the govt.) and be counter-productive to organic growth of radio.

From a social impact perspective, it will make way for more talk shows, discussions and educational content in multiple languages which will be beneficial to the masses in general.

**Q9. Stakeholders may also provide their comments/ suggestions on any other issue that may be relevant to the present consultation.**

a) Bandwidth increase to 400KHz for Digital Transmission

Digital transmission equipment exists that can support all three modes: analog FM, hybrid FM+Digital, and pure Digital for all digital technologies under consideration. With a little bit of upfront planning and the right transmission equipment a broadcaster can leverage the initial capital investment for continual growth. The TRAI / WPC should provide a frequency allocation method to allow for all three transmission modes under the umbrella of the issued license.

“To support this approach additional frequency bandwidth beyond the 200 kHz channel allocation is required, but can be allocated on-channel with minimal impact to other FM channel allocations. We suggest that bandwidth be increased to 400KHz suitable for all digital simulcast configurations under consideration and made available to broadcasters who implement digital transmission and broadcast content in Digital Radio. The increased bandwidth can work with the current 800 kHz and proposed 400 kHz channel separation.”

b) Incentive for Digital Technology Adoption

Government may consider allocating a portion of the collected auction funds to create an incentive fund for broadcasters committing to digital hybrid/simulcast transmission by a certain date. Government may consider this as an investment to be recovered and exceeded by the 4% government fee.

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The comments above are submitted by Comcon Technologies Limited, with detailed inputs from Nautel Ltd. of Canada. It is our intent to share our inputs purely from a technological stand point only. These are not in counter comments to any previous submission.

Comcon Technologies Limited is a technology services and solutions company, based in New Delhi, India. It specializes in the field of AM & FM radio technology and is engaged in end to end solutions and consulting and support services focussing on various technology aspects of Radio networks. The company has been actively engaged in the development of Digital Radio in India, and has been following the progress closely as a secondary stakeholder (supplier to primary stakeholders).

Nautel is one of the world's largest manufacturers of AM and FM radio broadcast transmitters. Focused on making transmission worry-free for users worldwide, Nautel provides valuable new solutions for digital radio broadcasting at stations of all sizes. All Nautel transmitters employ advanced control, monitoring and instrumentation tools which simplify management of transmitter sites, both locally and remotely via Web access. More than 16,000 Nautel transmitters have been deployed in over 177 countries since 1970.