OptM Media Solutions Private Limited: Response to Queries on Digital Radio Broadcast Policy Consultation Paper dated

1) **Do you agree that single digital radio technology adoption is preferable for entire country? If not, support your reply with justification.**

[OptM] – We agree and recommend **Single Digital Radio Technology**: A unified digital radio standard across the country is recommended for consistency in infrastructure, regulatory ease, and device compatibility, ultimately improving the user experience and accelerating rollout

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

[OptM] - **Preferred Technology - DRM**: Digital Radio Mondiale (DRM) is suggested for its compatibility with AM bands, efficient spectrum usage, simulcast capability, and minimal infrastructure changes. This would allow broadcasters to transition smoothly to digital while sharing costs through a unified infrastructure.

India has already adopted the DRM standard on AM bands, with DRM signals reaching approximately 900 million people and over 6 million DRM-enabled cars on the road. This adoption has fostered a “Make in India” ecosystem, with DRM-compatible chipsets and modules widely available. Extending DRM to FM bands would therefore be a logical, cost-effective choice.

Key Advantages of DRM for FM Broadcasting

1. Unified Digital Radio System:

- Consistency Across Bands: Deploying DRM across both AM and FM bands creates a unified digital radio system nationwide, simplifying operations for broadcasters and manufacturers and offering listeners a single, standardized platform.

- Seamless Transition: Many users already have DRM-enabled devices due to the AM implementation. Expanding DRM to FM means these devices can access both bands without additional hardware, ensuring smooth access to digital content.

2. Efficient Spectrum Use:

- DRM uses only 100 KHz for each transmission, offering high-quality audio and the ability to deliver up to three audio channels and additional data services like Journaline.

3. Ease of Implementation and Transition:

- Simulcasting Capability: DRM enables simultaneous analogue and digital broadcasting on FM, preserving current infrastructure. Using Alternative Frequency Signaling (AFS), DRM allows seamless switching between analogue and digital, ensuring uninterrupted service for listeners.

- Cost Efficiency with Shared Infrastructure: Multichannel DRM supports multiple broadcasters on a single DRM transmitter, optimizing spectrum gaps and lowering initial investment. Each broadcaster

retains full content control via the DRM Content Server, enabling efficient content management without needing individual infrastructure.

- Minimal Transition Costs: Existing analogue transmitters remain functional, as DRM FM requires no major infrastructure changes, making DRM adoption both economical and scalable.

- Future-Ready Conversion: Current FM transmitters can later be upgraded to full-digital DRM mode, allowing broadcasters to add DRM content within the FM bandwidth, safeguarding investments.

4. Consumer Benefits and Availability of Devices:

- Expanding Device Market: The existing AM DRM setup has increased the availability of DRM-compatible receivers, encouraging further production and affordability for consumers, especially in automotive markets where no additional costs are needed.

- Ease of Access: Consumers with DRM-enabled devices can switch to FM DRM seamlessly, using existing devices across AM and FM.

- Adaptability to Regional Needs: DRM is scalable for India's diverse geographic needs, covering rural areas via AM and urban areas via FM, providing a robust nationwide broadcasting solution.

In summary, rolling out DRM on FM is a natural extension of India's AM adoption, enhancing efficiency and service quality while maintaining a unified, future-ready digital radio ecosystem. With DRM's advantages in audio quality, multimedia services, and spectrum efficiency, India stands to benefit from a seamless and cost-effective digital radio experience across regions.

3) **In case multiple digital broadcasting technologies are to be adopted, please specify whether it should be left to the market forces to decide the appropriate technologies and what could be the potential problems due to adoption of multiple technologies? Please suggest probable solutions to the problems, with detailed Justification**

[OptM]- Allowing multiple digital radio standards can fragment the market, increase costs, and confuse consumers. A unified national standard, supported by clear implementation plans, public awareness, and regulatory guidance, would streamline the transition, reduce costs, and promote interoperability. This structured approach offers the best balance between flexibility and consistency, benefiting consumers, broadcasters, and the digital broadcasting ecosystem overall.

4) **What should be the approach for migration of existing FM radio broadcasters to digital radio broadcasting?**
5) **What should be the timeframe for various activities related to the migration of existing FM radio broadcasters to digital radio broadcasting?**

[OptM] Q4+Q5: The migration of existing FM radio broadcasters to digital radio broadcasting is a delicate process that requires a well-thought-out, phased approach. The goal is to ensure a smooth and cost-effective transition while minimizing disruption to both broadcasters and listeners. Below is a comprehensive approach to facilitate this migration:

Set a Clear National Policy and Timeline

• **Establish a National Digital Radio Policy**: The government should establish a clear and cohesive digital radio policy. This policy must outline the choice of digital broadcasting standard (e.g., DRM for FM) and set a realistic timeline for the migration.

• **Pan India Roll-out**: The migration should pan India. This allows for faster roll-out with a consistent experience for all form of users. Additionally, this can counter the urban-rural divide and drive the receiver market

• **Set a Date for Analog Switch-Off**: While flexibility is key, it's important to set a long-term deadline for the switch-off of analog FM broadcasting. A clear timeline provides certainty to broadcasters and encourages timely investments in digital infrastructure.

Provide Financial and Technical Support for Broadcasters

Enable Simulcasting During the Transition with a Dual License Period: Broadcasters should be allowed to hold dual licenses for both analogue and digital transmissions during the transition period, giving them time to migrate their audience without immediate pressure to shut down analogue transmissions.

Encourage Adoption of Digital Receivers with well-defined minimum functionality, such as DRM FM-band support and EWF – Emergency Warning Functionality

Implement a Flexible Regulatory Framework

Collaborate with Broadcasters and Industry Stakeholders

Monitor and Evaluate Progress

6) **Please suggest measures that should be taken to encourage existing FM radio broadcasters to adopt digital radio broadcasting**

To encourage existing FM radio broadcasters to adopt digital radio broadcasting, several strategic measures need to be implemented. These measures should address financial, technical, regulatory, and consumer-oriented challenges that broadcasters face during the transition to digital radio. Below are some key steps:

Financial Incentives and Support

• **Subsidies and Grants**: Offer financial assistance, such as government subsidies or grants, to cover the cost of upgrading broadcast equipment, including digital transmitters, encoders, and infrastructure.

• **Tax Breaks**: Provide tax incentives or reductions for broadcasters investing in digital radio technology, which can lower their capital expenditure.

• **Reduced Licensing Fees**: Offer reduced or waived licensing fees for a specific period to encourage broadcasters to migrate to digital radio.

• **Flexible Payment Terms**: Provide flexible payment terms for spectrum licensing and digital equipment procurement, allowing broadcasters to spread their costs over time.

Regulatory Measures and Support

• **Incentivise Digitization of Radio:** Allow a broadcaster to manage the configuration and content their own DRM block/transmission. The DRM block (or the respective spectrum) should be the smallest unit being licensed by the government.

• **Mandate Simulcasting**: Allow broadcasters to simulcast both analogue and digital signals during the transition period (not necessarily side-by-side in the spectrum). This will ensure that broadcasters can retain their analogue audience while attracting new digital listeners.

• **Flexible Licensing Framework**: Implement a flexible licensing framework that encourages digital adoption with planned transition with minimal effort and investment

• **Ensure Spectrum Availability**: Allocate dedicated spectrum for digital broadcasting and make it easily accessible to FM broadcasters.

To ensure the widespread adoption of digital radio, particularly in regions like India, the availability of affordable digital radio receivers is crucial. Here are several measures that can be taken to facilitate this:

Open Standard Technology:

Adopt an open radio standard that fits all band/coverage requirements. This allows manufacturers to freely access the technologies and encourages the development of solutions locally making the product affordable for consumers. This also drives the Make In India initiative.

Ensure Pan India/Wide Network Coverage

Nationwide Digital Infrastructure: Ensure digital radio coverage reaches all parts of the country, as consumers will be more likely to invest in affordable receivers if they know they can access services everywhere. Government and industry cooperation is essential for ensuring that digital signals are widely available.

Incentivize Manufacturers

• Tax Reductions & Subsidies: Governments can reduce taxes on digital radio receivers and components or offer subsidies to manufacturers. This would lower production costs, making the final product more affordable for consumers.

• Bulk Production: Encouraging large-scale production of digital receivers can drive down costs through economies of scale. Governments and broadcasters can collaborate to generate enough demand for mass manufacturing.

• Public-Private Partnerships: The government can partner with private companies to co-invest in digital receiver manufacturing, ensuring competitive pricing and encouraging innovation in the production process.

Encourage Local Manufacturing

• Set up Local Manufacturing Hubs: Governments can promote the establishment of digital radio receiver manufacturing units domestically by offering incentives like land, infrastructure, and support for setting up production facilities.

• Reduce Import Dependency: By encouraging the development and assembly of digital radio components locally, the country can reduce its reliance on expensive imports, making digital radios more affordable.

Standardization and Regulation

• Standardize Digital Radio Receiver Design: Regulatory bodies can enforce standardization in receiver design (e.g., incorporating both analogue and digital functionalities in one device), ensuring compatibility and reducing fragmentation in the market.

• Set Minimum Quality Standards: Governments should set minimum standards for digital radio receivers, ensuring quality while allowing for competitive pricing among manufacturers.

Subsidize Receivers for Low-Income Consumers

Targeted Subsidy Programs: Governments could introduce targeted subsidies or voucher programs to make digital radios affordable for low-income households, helping bridge the digital divide.

Bulk Distribution by Public Agencies: Public agencies could distribute basic, affordable digital radios to underserved areas, funded by the government or development agencies, ensuring that even marginalized communities have access to digital radio.

Public Awareness and Promotion Campaigns

• Raise Consumer Awareness: Governments, broadcasters, and manufacturers can launch public campaigns to educate consumers on the benefits of digital radio (e.g., better sound quality, more channels, emergency alert features). This increased awareness could drive demand and lower prices as more consumers buy digital radios.

• Digital Literacy Programs: Incorporate digital radio education in digital literacy programs, especially in rural areas, to create demand for digital radios, which in turn encourages manufacturers to produce affordable devices.

Collaborate with Broadcasters

• Subsidized Digital Radio Receivers with Services: Broadcasters can collaborate with manufacturers to offer bundled digital radios at discounted rates, particularly for loyal listeners or through promotional campaigns.

• Bulk Orders from Broadcasters: Public or private broadcasters can order large quantities of digital radios and distribute them to listeners as part of promotions or public service initiatives, facilitating affordability through bulk pricing.