



www.xperi.com

Comments on the TRAI's Consultation Paper 4/2023 on "Issues related to FM Broadcasting"

Submitted by Xperi Corporation HD Radio™ Technology Group

Xperi Inc applauds TRAI on the Consultation Paper 4/2023 inquiring on Issues Related to FM Radio Broadcasting. Xperi is extremely supportive of radio broadcasters and radio technology world-wide. Our HD Radio technology offers many advantages for spectrum efficiency, new content services, and reliable emergency warning systems.

General Statement about Digitization of FM

Digital radio broadcasting is transforming radio operations across the world. Many digital technologies are providing new services and content to consumers. Analog radio is losing ground to these digital services and losing audience share in many markets. In order to compete, radio stations in countries around the world are converting to digital radio broadcasting systems. We are supportive of the plans for allowing broadcasters to implement analog as well as digital broadcasts on their new frequency assignments. TRAI's suggestions to allow stations to implement a digital radio transition on a voluntary decision permits the continuation of analog broadcasting for the 900+ million mobile receivers and creates the future for digital broadcasting programming to provide new audio channels and enhanced alerting and warning systems.

We believe that TRAI should recommend a policy that supports the transition of FM operations from analog to hybrid analog-digital broadcast services.

Xperi Inc agrees that digital radio transition for new stations should be implemented in a reasonable time period and without added regulatory burdens. Without clear guidance on the questions raised in the Issues for FM Radio Broadcasting, other emerging technologies will continue to erode radio-listening audience.

- Digital broadcasting is transforming radio operations across the world.
- Other digital technologies are providing services and content to consumers.
- Analog radio is losing ground to these digital services and losing audience share in many markets. In order to compete, radio stations are converting to digital radio broadcasting systems like HD Radio.

Digital radio implementation should allow for the existing analog services to continue broadcasting with the inclusion of new digital services. It is important to maintain the existing analog broadcasting services.

- Technology should support smooth transition to new digital services while permitting existing analogue services. Simulcast of analogue and digital on existing spectrum allocations provide the most efficient approach to retaining existing audience while building new service loyalty.
- Technology should allow for rapid expansion of digital services to provide the listeners with best access to new information and services.

Corporate Headquarters

2190 Gold Street
San Jose, CA 95002
T 1.408.519.9100



www.xperi.com

- Access to additional radio programming has been demonstrated to maintain listenership and increase revenues for radio stations which have adopted digital broadcast services.

We ask that TRAI provide guidance to existing radio stations operating with current licenses which enables smooth transition to digital radio operations while maintaining their existing analog channel assignments.

Q1. Are provisions related to Annual License Fee prescribed in the extant Policy guidelines for FM Radio broadcasting reasonable? If not, please provide methodology and criteria for arriving at Annual License Fee for private FM Radio channels with detailed justification.

We urge TRAI to consider the potential impact and benefits of digital radio broadcasting on radio station operations. Some of the key benefits of the HD Radio system are simulcasting (the ability to transmit analogue and digital services on the existing spectrum allocation) and multicasting (the ability to transmit additional audio programming on the assigned spectrum allocation). The combination of these key features allows for rapid adoption and expansion of new digital broadcast services.

It is important to consider the aggregation of the digital programming associated with any specific licensed channel. Additional digital programming may increase the revenue opportunity for the private broadcaster, resulting in the possibility of additional gross revenues.

Therefore, any potential Annual License Fee associated with HD Radio digital broadcasting should not be assessed on a per-programme basis, but, rather, focus on the cumulative revenue associated with the operation of the radio services – analog and digital – combined. The term revenue should be defined to include revenue arising only from the licensed HD Radio digital broadcasting services and no other revenue streams. Also, the license fee should not be linked to any Non-refundable One Time Entry Fee, if applicable.

Alternatively, the digital radio ecosystem will take some time to gain scale and require a huge amount of investment to create digital radio network/transmission. In view of the above, MIB should take a token license fee until the complete migration takes place from analogue to digital radio and digital radio gains some scale.

Q2. Is there a need to extend the permission period for existing FM Radio licensees?

- a. If yes, what should be the revised permission period? Please prescribe the period with detailed reasoning/justification.***
- b. If not, is there a need to extend any other assistance to private FM Radio broadcasters to overcome the impact of the pandemic? If so, please suggest suitable measures with quantified parameters and justification.***

Corporate Headquarters
2190 Gold Street
San Jose, CA 95002
T 1.408.519.9100



www.xperi.com

The COVID period has been challenging for radio station operations worldwide. Currently, business and revenues are increasing across most major markets and this growth is projected to continue for the next few years.

Xperi believes agrees that an extension of 3 years should be granted to existing FM Radio licensees. Such an extension would allow operators to strengthen their operations to compete with other distribution services.

Additionally, we recommend that the 3-year extension period be used to incubate the operation of digital radio services. The Government should facilitate to create an ecosystem of digital radio broadcasting services in VHF-II (FM) frequency band through policy formulation, regulatory intervention and fiscal incentives. Given a 3-year period to try new digital broadcast solutions and experiment with the potential operational and revenue models will benefit the industry prior to any license renewal.

In the U.S., the Federal Communications Commission (FCC) allowed the experimental use of digital radio operations for a number of years before formally adopting the technology in 2002. In Mexico, HD Radio operations were allowed on a trial basis starting in 2008 prior to the government approval in 2011. In Canada, digital radio is currently allowed on experimental basis as the government reviews and finalizes policy.

During each of these trial/experimental periods, radio stations commenced operation of the HD Radio services allowing the industry to establish operational guidelines and set the basis for transmission services in major markets. With this national basis of transmission, receiver manufacturers were then spurred to provide products to the growing consumer base. The incubation period was successful in establishing the ecosystem for digital radio operations which has fueled further growth of the market.

Q3. Is there a need to review the present Policy guidelines as regards the News and current affairs on private FM radio stations? If so, please provide detailed justification, including the additional compliance / reporting (if any), duration of news and current affairs programmes and method of effective monitoring.

One of radio's key charters is the ability to inform and educate the public. And because radio serves local communities, the importance of providing news and informational programming at a local level is best served by local broadcasters. During this age of misinformation and "fake news", it is important to have qualified and authenticated news sources. Radio operations, in cooperation with the government and trusted news services can serve the role of trusted provider. We believe that private FM radio stations should have the ability to serve the public with news and current affairs.

Corporate Headquarters

2190 Gold Street
San Jose, CA 95002
T 1.408.519.9100



www.xperi.com

A number of verification and authentication services should be created and implemented. Double-factor authentication with news services has been implemented in Europe. Additionally, radio fingerprinting technologies are used in many countries to identify content sources. With the use of digital radio broadcasting, radio programming can be easily synchronized with associated text transcripts of the audio programme. With these types of services, automated compliance services can be created by the government or 3rd party technology providers to monitor content.

Q4. Is there a need to mandate that all the Mobile Handset manufactured/sold in India will require to have an in-built FM Radio receiver? Please provide detailed justification for your comments.

Xperi sees the value of digital radio to improve communication to local populations. Worldwide, radio is a powerful communication tool for the government to reach the public, especially during times of emergency. Just recently, FEMA leaders and FCC Commissioner Simington expressed the need to maintain radio operations for AM broadcasters in local communities. Both groups expressed the powerful need to reach the public with information.

While AM radio is impractical in mobile handsets, FM radio operations is quite feasible. A large percentage of the population has access to either smartphone or feature phone products, used for both personal communication as well as access to information and entertainment.

And the potential of digital radio applications for mobile handsets will combine the benefits of over-the-air communications with IP services.

Apart from the inherent benefits of including FM receivers in mobile phones mentioned above, the arguments outlaying benefits in the case of India are two-fold.

Firstly, India enjoys a decent presence of community radio stations having 290 community radio stations in 2020. A community radio station acts as a means for NGOs and educational institutions to further community interest. The broadcasts made by community radio stations cater to local needs and are often in the local dialect to ease understanding. In some cases, community radio stations act as the only source of information in rural areas. A significant part of the user base for such radio stations has little or no resources and relies on the in-built receivers of their feature phones to receive the broadcast. Secondly, the modern telecom infrastructure is inherently fragile against natural disasters. Hence in case of such a calamity, FM radio becomes critical for communicating emergency information in the effected region.

Corporate Headquarters

2190 Gold Street
San Jose, CA 95002
T 1.408.519.9100



www.xperi.com

The importance of communicating with the public about critical news and information services should guide the government and TRAI consideration of this question. Especially during critical emergencies, the need to reliably alert and notify the public demands the necessity of incorporating FM radio (and digital FM radio) functionality into future handset products.

Additionally, there is a significant international precedent against the removal of FM receivers from mobile handsets. For instance, Mexico became the first country to mandate FM chip activated in smartphones sold in the country in 2017.

Apart from mandating the FM Radio receivers in mobile handsets, the government should also make an effort to incentivize the digital receiver manufacturers, digital radio test services, software developers for digital radio etc., so that the digital receivers and transmitters are available at commercially reasonable prices.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ashruf El-Dinary'.

Ashruf El-Dinary
Senior Vice President, Radio Technology Solutions
ashruf.el-dinary@xperi.com
O: +1 443-539-4360

Corporate Headquarters
2190 Gold Street
San Jose, CA 95002
T 1.408.519.9100