



Broadcast Engineering Society (I)

Response of BES (I)

to

Consultation Paper on

Inputs for formulation of National Broadcasting Policy-2024

floated by

Telecom Regulatory Authority of India

About BES:

Broadcast Engineering Society (India) ((BES (I)), a society of broadcast professionals, established in 1987 and registered with the Registrar of Societies in Delhi, India, and having its registered office at 912, Surya Kiran Building, 19, Kasturba Gandhi Marg, New Delhi-110007. Broadcast Engineering Society is engaged in the business of dissemination of broadcasting knowledge and latest happenings in the field of broadcasting across the globe to the broadcast professionals in India. BES (I) holds an annual BES Expo which allows broadcast equipment manufacturers from across the globe to showcase their technologies and solutions for broadcasters across the sub-continent. The Expo also organizes a three-day conference with sessions on current topics. BES Expo has lately gained prominence with greater participations from senior government functionaries and top-notch broadcasters including journalists.

BES as a society consists of members who are primarily broadcast engineers with experience in different aspects of broadcasting. BES is perhaps the only not for profit society in India which has large numbers of members with rich experience in terrestrial broadcasting apart from conventional broadcasting.

As a responsible society of broadcasters, BES has taken an initiative in submitting its response to the consultation paper floated by TRAI for seeking Inputs for formulation of National Broadcasting Policy-2024. BES understands that it is indeed a watershed moment for fledgling Indian broadcast industry and it is the most appropriate time for such policy to be in place for ensuring that the Indian broadcasting industry gets its due support from the Government to be able to make significant contribution to the growth of the country like other organized industries. BES feels that an enabling policy framework can provide the much needed fillip for the broadcasting industry and take its rightful place by contributing significantly to the GDP growth of the country by aligning with the Government's vision of a USD 5 trillion Indian economy. The National Broadcasting Policy can indeed be an important tool for this growth by setting right policy principles to guide the development of the sector and increase its contributions to the Indian economy.

The responses of BES to those points it considers important are as below:

Q1. Stakeholders are requested to provide their inputs in framing the Preamble, Vision, Mission and Broad Objectives for the formulation of the National Broadcasting Policy (NBP).

Response of BES:

Vision:

"To create a dynamic, inclusive, and technologically advanced broadcasting ecosystem that reflects India's cultural diversity, fosters innovation, and empowers both creators and consumers, positioning India as a global leader in broadcasting."



Mission:

"Mission is to formulate and implement policies that ensure the growth and sustainability of the broadcasting sector, by:

1. Attracting investments and promoting ease of doing business to expand the consumer base.
2. Fostering innovation through R&D, enabling policies, and technology-neutral approaches. Creating a global hub.
3. Facilitating job creation and nurturing skill development to support national and regional content production.
4. Strengthening public service broadcasting to promote India's cultural heritage and values globally while enhancing quality content production and dissemination.
5. Promoting fair competition, protecting intellectual property rights, and addressing security concerns in content distribution."
6. Creating a global voice for India and multiple global media brands/platforms out of India.

Objectives:**Attracting Investment:**

1. Ensure policy and regulatory certainty to attract investments.
2. Expand the consumer base by providing ease of doing business.
3. Provide a business-friendly environment for sustained growth.

Fostering Innovation:

1. Enable policies that encourage research and development (R&D).
2. Support local manufacturing and technology-neutral approaches.
3. Adopt international best practices to drive innovation in the sector.
4. Facilitating Job Creation and Nurturing Skill Development:
5. Promote quality national and regional content production.
6. Support post-production processing and start-ups in the broadcasting sector.
7. Develop institutional mechanisms for skill development and capacity building.
8. Creating a global innovation hub.

Strengthening Public Service Broadcasting:

1. Modernize infrastructure and enhance R&D capabilities of Prasar Bharati for quality content production.
2. Promote Indian content through Doordarshan (DD), All India Radio (AIR), and digital media platforms.
3. Globally promote India's cultural heritage and values through public service broadcasting.
4. Making activities of public service broadcaster as part of CSR to amplify its efforts.

Promoting Fair Competition and Consumer Interests:

1. Ensure fair competition across the sector.



2. Protect intellectual property rights and combat piracy and unauthorized distribution.
3. Provide consumers with access to new technologies, improved quality, and a wider choice of content at affordable prices.

Embracing Technological Advancements and Sustainable Practices:

1. Encourage indigenous R&D and partnerships between industry and academia.
2. Address challenges posed by technological advancements and security issues.
3. Embrace sustainable practices to minimize the environmental footprint and lead global initiatives for responsible broadcasting.

These objectives aim to position India's broadcasting sector as a torchbearer of 'Make in India' and 'Brand India' while ensuring its viability, sustainability, and global competitiveness over the next two to three decades.

Response of BES on few Key Issues of NBP:

The response of BES on some other important key issues which fall in purview of BES is also enumerated below for consideration of TRAI on formulation of National Broadcasting Policy:

BES' Opinion on Public Service Broadcasting: While BES has proposed the strengthening of public service broadcasting as one of the objectives of NBP and to be fulfilled through Prasar Bharati, BES opines that public service broadcasting needs to be supplemented through participation of private broadcasters to make it more effective. It is amply clear that Prasar Bharati is officially India's Public Service Broadcaster and has been created to fulfil the role of a responsible public service broadcaster by informing, educating and entertaining masses. It is also the fact that Prasar Bharati in the past has been able to keep its mandate effectively by meeting the aspirations of its people. However, the broadcast industry has undergone sea change which includes the consumption patterns and its form has also changed and taken a shape where public service broadcasting content being broadcast by Prasar Bharati may not reach all and it is therefore important that all mediums and methods which are used to reach audience are mandated to carry content of public service broadcasting to meet the aspirations of ever dynamic population of the country especially considering its demographic.

All countries have its own public broadcasters that play a hugely important role especially in democratic societies, particularly in disseminating news and information. Given India's size and diversity, the growth and development of Prasar Bharati (Doordarshan and All India Radio) cannot be undermined. India's public broadcaster has been a long-standing presence, operating to serve the objective of public duty. But as explained above, Prasar Bharati needs to be supplemented through participation of private broadcasters to fulfill this mandate especially in such fast changing technological environment. To strengthen this argument, the examples of education and health industry may be cited here, and these subjects are of equal



importance. In both these sectors, Government of India has made it mandatory for participation of private industry by reserving facilities for economically weaker sections. Similar efforts are required for fulfilling the mandate of public service broadcasting. Therefore, there is a strong need to impose overlapping mandates on the private sector like education and health sectors. The Consultation Paper, through some of its stated objectives and issues for consideration, rightly tries to push public broadcaster-like obligations on the entire sector. BES fully supports this though there is a need to define its scope very clearly to ensure that this does not undermine the role of Prasar Bharati as a public service broadcaster but only augments it and supplements it.

Presently, media activities are prohibited to be funded through CSR funds. BES, however, is of the opinion that the content of greater public importance being produced or being acquired by public service broadcaster should be allowed to be part of CSR activities to amplify the efforts of public service broadcaster and to enable it to cover more social issues through CSR funding.

BES's Opinion on R&D:

One of the important objectives of NBP proposed by BES is to embrace technological advancements and sustainable practices by encouraging indigenous R&D and partnerships between industry and academia. If India must become a developed nation, R&D has to play leading role in various fields especially in important fields including in communication. R&D needs lot of funding as its results are not immediate and therefore it cannot be left alone on Government or public service broadcaster. There is a need to institutionalize various elements of R&D by creating a large pool of non-lapsable funds sourced from various stakeholders. This would ensure that the industry grows in line with the vision of the country and is not restricted to the growth of individual stakeholders. There is also a need for global standards, patents and IPRs to emerge out of India.

Further, despite broadcast industry being of big size, the country is lacking any media labs of significance. NBP, therefore, needs to align its policy to keep these factors in mind.

Need for maximizing the use of Common Infrastructure:

Resources are scarce and in the time of global environment crisis, it is important that every resource is optimally utilized. During the time when the possibility of sharing of spectrum among telecom operators is explored, there is a similar need for several resources and infrastructure built by one to be facilitated to be shared by others. This will have many economic advantages apart from being kind to global environment. To cite an example, the case of cable digitalization may be quoted here. While cable digitalization was being taken up in the entire country and was to be completed in time-bound manner across phases, every MSO and cable operator was required to set up similar headends to obtain source signals. The cable digitalization would have been expedited and would have become cost-effective for every MSO if every MSO was



encouraged to make use of HITS (Headends in the Sky). This required little government intervention and would have saved lot of foreign currencies apart from other resources. Such decisions are to be taken in the interest of the country and in the interest of green environment. This is just one example but the scope of sharing among broadcasters is huge and will be highly beneficial and will increase the profitability for price sensitive broadcast industry. Therefore, policies need to be made where such sharing of resources and infrastructure is encouraged among broadcasters. This may also be incentivized and if need be, regulated to small extent.

This, however, would require greater discussions among broadcasters and BES is willing to be part of this exercise and we at BES feel that the country is going to immensely benefit from this and all stake holders will benefit even more by bringing down their cost and thus increase profitability.

Localization of Various Parts of Different Ecosystems:

The CP adequately deals with localization. However, BES would like to make emphasis on certain important aspects of localization and would like some policy regulations to make sure that long-term benefits are accrued by the industry and consumers.

To cite an example, where localization would have helped the industry and consumers at large if the country had mandated and encouraged localization of CAS during cable digitalization. This would have made the cost of digitalization easier for MSOs and would have also paved the way for portability which TRAI had been trying to achieve for last few years. Same is applicable to DTH industry as well. The localization of CAS would have allowed not only allowed portability but would have also lessened the non-recurring and recurring cost for DPOs. Similarly, there is a need for mandatory localization of various elements of different eco systems without compromising on quality. This requires wider discussions among various stake-holders and BES would be willing to facilitate this for the larger benefit for the industry and consumers at large.

Similarly, BES agrees with the objective of "Capacity Building and Promoting Skill Development" for the sector as stated in CP that must be pursued through partnerships between the government, industry and if necessary, through academia.

OTT to be part of NBP:

BES agrees to the CP which proposes to make regulation of OTT under NBP. It is felt that OTT players are like content aggregators though they generate their own content to some extent. And their majority of content has already been broadcast on conventional broadcast channels or is broadcast later. Further, many consumers consume content on OTT similar way they consume on traditional platforms. OTT also facilitates sharing of log in IDs among family members which allows access to same content among other members of the family. Hence, there is a need that OTT should be regulated in similar way albeit with special provisions for them to allow them more



freedom so that OTT industry is allowed to flourish.

Further, BES also agrees with the proposed obligation on registered OTT services to carry DD channels to promote Indian content. As mentioned in Public Service Broadcasting section, BES is of the opinion that every content aggregator has to contribute partly to the mandate of public service broadcasting to some extent. In pursuit of this, MIB has also included this obligation under Section 6 (1) of the publicly available Broadcasting Services (Regulation) Bill.

Provisioning of affordable television services in 'TV Dark' homes:

BES appreciates the inclusion of one of the parameters to be considered to increase the sector's contribution to the Indian economy is the provisioning of affordable television services in 'TV Dark' homes. The country with the vision to become developed nation by 2047, it is hard to believe that there are still more than 100 million homes which are TV dark. This translates to nearly 440 million people not having access to any type of TV content. While this provides opportunity for various stakeholders to tap this untapped market but since most of these TV dark homes belong to economically weaker sections and have little purchasing power and therefore will have little attractions for majority of industry's stakeholders. Though Government has been doing its bit to make easy availability of rich content to them through DD Free Dish and also through distribution of DD Free Dish STBs, BES is of the opinion that much more needs to be done narrow the gap between TV home and TV Dark homes. This requires a TV and a STB to convert one TV Dark home to TV home. While the Ministry of I&B has done enough to make easy accessibility of TV content through DD Free Dish but more needs to be done to make TV display devices more affordable for TV dark homes. As converting TV Dark homes to TV homes is going to provide greater accessibility to advertisers, TRAI may like to consider it making part of NBP to make provision of affordable TV services for such TV Dark homes.

However, BES would also like to convey that many TV homes are deprived of accessibility to free DD Free Dish services owing to non-availability of DD Free Dish Receive systems at many places especially in deep rural areas where stocking, sale and installation of these devices is not viable. TRAI may also like to address this issue through NBP and this may also be achieved through some directions to the state public service broadcaster with some industry support.

BES also feels that the content available on DD Free Dish is mostly Hindi which prevents its user base in many regions especially in south India. Therefore, there is a need for making provisions for regional content including from south and other regions to ensure affordable access to economically weaker sections.

BES feels that this also requires greater deliberations among various stake-holders of the industry.



Leveraging Digital Terrestrial Broadcasting:

BES has carefully perused the para on leveraging digital terrestrial broadcasting given in the Consultation Paper and which falls in the domain of Prasar Bharati as per the extant policy. BES opines that DTT of the present form must give way to direct to mobile broadcasting (D2M). The country has seen lot of deliberations on D2M technology recently and its usefulness in the country like India after Prasar Bharati engaged IIT Kanpur to undertake field trials. It is learnt that IIT Kanpur has already successfully carried out field trials in Delhi and Bengaluru and has submitted a detailed report on Proof of Concept (PoC) on D2M and has suggested roll out of D2M in 19 cities where DTT infrastructure is already available.

BES would like to dwell on D2M in greater details basis inputs gathered during last BES Expo 2024 which had dedicated conference session on D2M. We are therefore submitting details on D2M as below for TRAI to evaluate and consider making D2M as part of NBP in some way considering the impact it is likely to make including narrowing the gap between TV homes and TV Dark homes.

BES is also of the opinion that D2M service must be operated as public service with the active participation of private players along the line of DD Free Dish within the ambit of Prasar Bharati Act' 1990.

About D2M and its Benefits:

Direct to Mobile (D2M) is fully home-grown technology and its development has been led by IIT Kanpur on the initiative of Prasar Bharati. IITK and Saankhya Labs, an Indian company, have been at the forefront of innovation with its development of Direct to Mobile (D2M) broadcasting technology. D2M has the potential over the next 5-10 years to positively impact over 65% of the population of India covering nearly 800-900 million mobile users. This can have a revolutionary effect on the digital economy value chain right from content creation all the way to content consumption with significant economic upsides to the underlying semiconductor value chain, mobile handset ecosystem, and network infrastructure manufacturing sectors. The other main features of D2M are enumerated below:

- i. D2M allows smart phone users to watch live channels and other content free of any internet/data plan.
- ii. Unlimited number of users can access the D2M content with no buffering. Broadcast delivery of concurrent traffic provides the best use of network resources at the lowest cost with a buffer-free experience – especially live sports, news, educational content, popular linear entertainment channels, and popular viral OTT content.
- iii. Subsidy may be considered for feature phone users by replacing their phones with smart phones which will be win-win proposition for both consumers as well as D2M service provider as D2M service provider will be



- able to increase subscribers resulting into enhanced advertisement revenue.
- iv. D2M service can provide expanded reach to the broadcasters, content owners and advertisers. Therefore, D2M also creates an opportunity for Doordarshan and All India Radio to expand broadcast reach to mobile devices at no additional cost and with the opportunity of significantly enhanced revenue from increased reach as well as through revenue share from D2M services and other sources.
 - v. In view of the expanded reach through D2M, it can significantly boost content industry, with very low to no entry barrier for content industry startups.
 - vi. As video form nearly 70% of mobile data traffic, the roll out of D2M can decongest Broadband network and offload high viewership video content to Broadcast network. This would ultimately result into better call services.
 - vii. D2M can provide significant boost to domestic semiconductor and device industry which may spur GDP growth of the country.
 - viii. D2M roll out will be able to create a Broadcast stack on the lines of India's Universal Payment Interface (UPI) to spur massive adoption by the nation's entire population.
 - ix. D2M will facilitate Government and PB towards efficient utilization of spectrum.
 - x. D2M service can be of National and strategic importance for Government as targeted alerts and message can be delivered over the network. Besides broadcast of Emergency alerts, it can also facilitate broadcast of events of National Importance.
 - xi. D2M service will provide Digital sovereignty to the nation as the entire technology will be locally made and India will have its IPR and the technology can be exported to other country after successful implementation in India. Therefore, Success in India can be replicated in other populated markets with similar needs – Brazil, Mexico, Southeast Asia, Bangladesh, the EU and eventually the US.
 - xii. As terrestrial network of Doordarshan has been nearly phased out, D2M terrestrial service can act as fallback for satellite and GPS failure protecting critical infrastructure and Defense systems.
 - xiii. As adequate funding may not be made available by the Government for roll out of D2M, a feasibility of taking up D2M project through an SPV as also envisaged by the Ministry of I&B, needs to be explored. This would mean that the operational and capital cost towards roll out of D2M service is to be



borne by an SPV and PB does not have to incur any cost on implementation of D2M. On the other hand, PB can earn significant revenue through revenue share and also from utilization of its idle assets through the SPV. The business model may be similar to DD Free Dish.

- xiv. D2M presents a low-cost option to consumers in a market with expensive OTT content, resulting in fast customer adoption.
- xv. The standard proposed to be used with D2M technology provides numerous benefits as it helps to deploy Single Frequency Network (SFN) and also has the facility of LDM (Layer Division Multiplexing) that makes it suitable for broadcast over different types of devices.

The other significantly important points related to D2M are enumerated below:

1. The Game-Changing Potential of D2M Technology as Public Service:

D2M technology has the potential of being another public service similar to UPI. D2M technology being indigenously developed is in National Interest as India can carve its unique approach that the world adopts just like other Digital Public Goods Infrastructure (DPGI) and therefore has the potential of technology being exported to other countries. D2M as a DPGI will be open and available for everyone to use including Telcos and hence, there is no conflict with Mobile Telcos. It is anticipated that the overall economic value creation due to D2M in India over the 5–10-year period could be of the order of magnitude of 15-20 billion USD.

2. Enhancing Domestic Demand: D2M can spur domestic consumer demand to the tune of over 500 million devices and creating incentives to shift over 300 million feature-phone users to broadcast enabled phones. D2M can prove to be the single biggest driver for domestic demand in India since 4G/5G. This innovation is particularly relevant in a country like India, where mobile penetration significantly outpaces broadband access thus fulfilling unmet social needs such as Education. With several million aspirants for competitive exams every year, by facilitating easier access to educational content digitally, D2M technology can drive a surge in demand for mobile handsets equipped to handle this broadcasting capability, thereby spurring demand for advanced semiconductors.

3. Boosting Domestic Manufacturing: The increased demand for D2M-capable devices and the required semiconductors presents a golden opportunity for domestic manufacturing. India's push towards establishing semiconductor fabrication units (fabs) aligns well with this emerging need. Local production of semiconductors not only reduces reliance on imports but also positions India as a key player in the global semiconductor supply chain. By creating incentives of over a 100 million USD for domestic manufacturers on the handset side and by developing a market of over 500 million USD on the network infrastructure side, D2M can boost domestic electronics manufacturing



in a significant manner.

- 4. Impact on Network Infrastructure Gear Manufacturing:** D2M technology necessitates the development and deployment of specialized network infrastructure. This includes broadcast towers and equipment capable of supporting D2M broadcasting, creating substantial opportunities for domestic manufacturers of these technologies. Moreover, the infrastructure for D2M can be leveraged to enhance the efficiency and reach of cloud computing, data centers, and Content Delivery Networks (CDNs), further bolstering the domestic manufacturing sector. The development of a world class domestic electronics manufacturing industry around D2M will open up several global markets for exports out of India. With Positioning, Navigation and Timing (PNT) being classified as critical emerging technologies by the United States government, India's D2M capabilities will have a ready market in the United States for Broadcast Positioning System (BPS) as an alternative to GPS in providing PNT services to the US economy. With Brazil evaluating ATSC 3.0 for mobile tv and Korea authorising mobile operators to conduct broadcasting, Indian D2M exports could go well beyond North America spanning multiple continents.
- 5. A Testament to Aatmanirbhar Bharat:** Prime Minister Narendra Modi's vision of Aatmanirbhar Bharat or self-reliant India finds a strong ally in D2M technology. By fostering innovation within India and reducing dependency on foreign technologies and products, D2M is a shining example of what Indian ingenuity can achieve. This aligns perfectly with the broader goals of "Make in India" and Aatmanirbhar Bharat, highlighting the country's capabilities in high-tech manufacturing and innovation.
- 6. Catalyzing a Developed India:** The deployment of D2M technology can catalyze India's journey towards becoming a 'Viksit Bharat' or developed India. By enhancing digital access, empowering local manufacturers, and creating a robust digital infrastructure, D2M technology can drive economic growth, create jobs, and improve the quality of life for millions.

Further, it may also be conveyed that BES after evaluating responses it received from BES Expo 2024 is planning to take more initiatives towards D2M as it feels that it is going to be a game changer and very beneficial to all sections of the society particularly weaker sections and has the potential to narrow the gap between TV Homes and TV Dark homes considering the penetration of mobiles across the country.

In view of the above, BES would like TRAI to consider the above and take initiatives in faster roll out of D2M for benefits of masses.

Q19. Keeping in mind the immense role of broadcasting during disasters, how can the latest technologies be effectively utilized to provide disaster alerts and timely updates on television/mobile/radio during disasters? Elaborate with proper justifications.



BES feels that D2M could provide answer to this question. This is because of widespread use of mobile and its geographical reach. D2M, if successfully rolled out across country could provide disaster alerts and timely updates in real time even in the absence of internet connectivity.

Request to allow BES to make Presentation to TRAI:

BES has given responses on points which it considered to fall within its domain. However, the responses above may not fully spell out details and considering that details are essential for considering for as important document as National Broadcasting Policy, it may be necessary to get complete details on responses made by BES. We would, therefore, would like to make a request to TRAI to allow BES to make a presentation on each of these responses which would provide an opportunity for greater deliberations on all important points.

