प्रसार भारती
India's Public Service Broadcaster

ABU TC Meeting 2020

Key Transformations in Prasar Bharati

- Next Gen Broadcast – Direct To Mobile (DTM)
- Next Generation TV with IBB Convergence

Next Gen Broadcast - Direct to Mobile (DTM)

Exploiting the change in consumer viewing habit

- Consumers switching to mobile for content consumption – opportunity for Next Gen Content/Media broadcasting platforms.
- Technology advances in broadcasting, world-wide, are tending towards a convergence of broadcasting and mobile broadband technologies. This is expected to deepen further, with the deployment of 5G technology.
- Broadcasters need to respond to the changes in viewing habits to meet consumers expectations on more engaging, interactive and tailored broadcast experience.

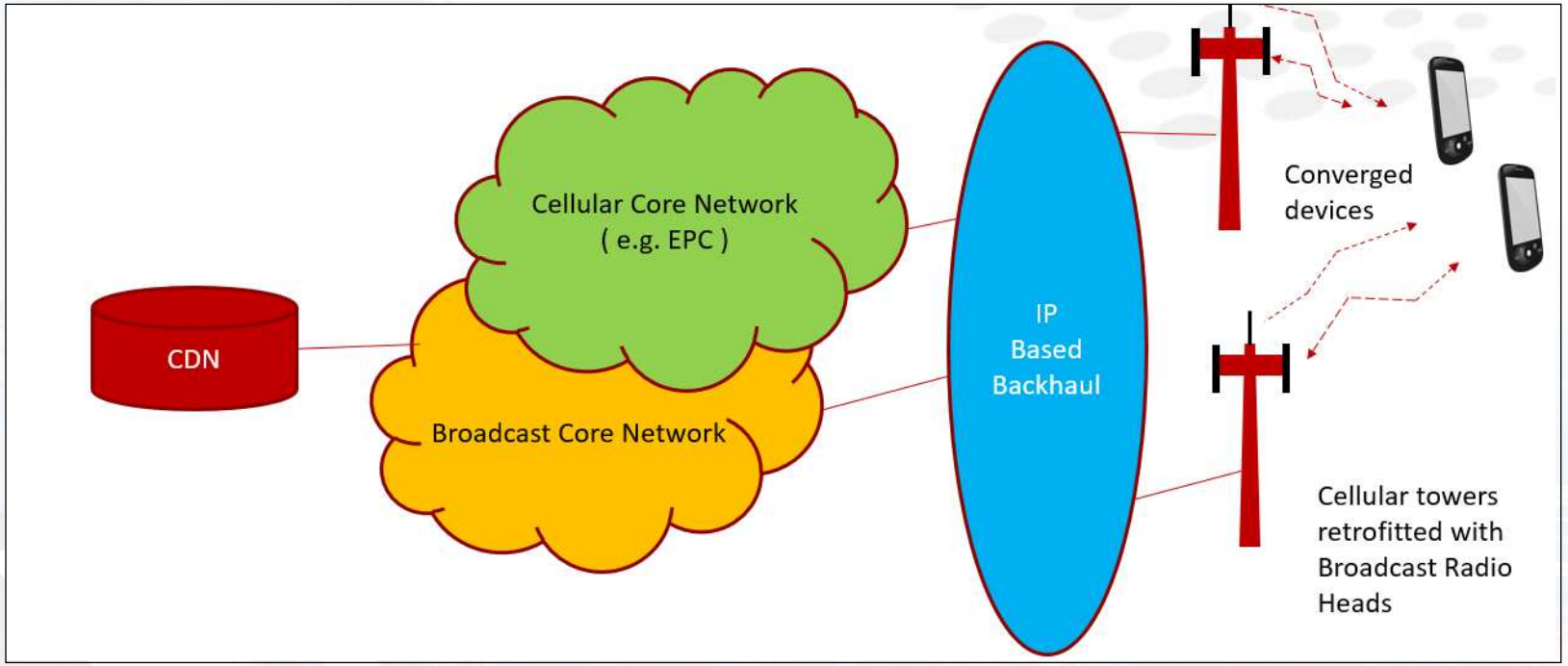
Earlier efforts to DTM did not pickup

Reason for failure	Situation today
No user demand for long-form, linear broadcast services on mobile devices	Demand for broadcast/streamed content delivered via mobile networks is still mostly for short-form content. Users store long form content on mobile devices to watch offline.
User did not associate video with mobile devices	The growth of smartphones improved resolution, bitrate, screen size and tablets
Small, low-resolution, poor quality displays	Display are now larger with high resolution and high quality.
Dedicated network required	DVB-T2, ATSC 3.0 and LTE eMBMS now allow multiple modes to share same network.
Insufficient number of TV broadcast networks configured for mobile reception	This still remains the case. The network topology of cellular mobile networks is favourable for mobile reception. LTE eMBMS can be deployed as an add-on to a unicast network
No global standard for TV broadcasting	This still remains the case. 3GPP produces de facto global mobile standards and there is ongoing work in 3GPP to further develop existing broadcast functionality.
Cost of building a standalone network was prohibitive	The ability to add-on to existing deployed cellular networks opens up new opportunities.
Technical solutions did not enable new forms of cooperation	ATSC 3.0 and 3GPP technologies enable new forms of collaboration between mobile and broadcast stakeholders by combining linear and non-linear delivery in a single delivery platform.

Exponential rise in per capita Video consumption

- **Video traffic is fastest growing traffic in mobile network and bandwidth requirement is huge.**
- **Globally, in another 2 years say by 2022, the**
  - Internet video traffic will be 82% of all consumer Internet traffic,
  - with 1.1 million minutes of video streamed or downloaded every second,
  - Live Internet video traffic will increase 15-fold between 2020 and 2022.
- **In India,**
  - Video traffic will be 77% of the Indian mobile data traffic by 2022, compared to 60% at the end of 2020.

5G Broadcast will help un-choke the mobile networks from video traffic



- Offloading the video traffic will free the mobile spectrum.
- Reduced call drops, increased data speed, etc.

Strong case for Mobile operator to partner with broadcaster

- Enables mobile operators to broadcast or multi cast services over LTE networks spanning multiple sets.
- Known as EnTV, makes delivery of digital TV over existing mobile networks a reality.
- EnTV, is pro mobile operator instead of Terrestrial broadcaster or 5G Core based technology.
- 5G NR shall give more clear picture for the 5G broadcast under the release 17 of 3GPP.
- DTM content delivery requires more number of towers which is a challenge for traditional broadcasters

India's Public Service Broadcaster "Prasar Bharati" marches towards DTM

- MoU with IIT Kanpur, for collaboration in research related to DTM, research related to convergence with 5G, to setup a centre for converged broadcast and broadband .
- PB shall implement Next Gen broadcasting infrastructure addressing DTM, and develop India's specific standards for DTM in line with global standards and technologies.
- PB's entire terrestrial infrastructure and internet streaming infrastructure across TV and Radio to be converged to a common DTM broadcasting infrastructure.
- In common DTM broadcasting infrastructure there will be no need to operate parallel infrastructure for DTT digital radio broadcasting and internet streaming.

India's Public Service Broadcaster "Prasar Bharati" marches towards DTM

- Converged infrastructure for Digital mobile TV, Digital radio and Internet streaming will seamlessly operate across country while optimally leveraging the underlying spectrum and existing infrastructure.
- The infrastructure will operate independent of cellular infrastructure.
- DTM broadcasting will offer limitless scaling to online streaming.
- NGB shall provide accurate TRP statistics and targeted advertising capabilities.
- National disaster and emergency warning system will be implemented.

प्रसार भारती
India's Public Service Broadcaster

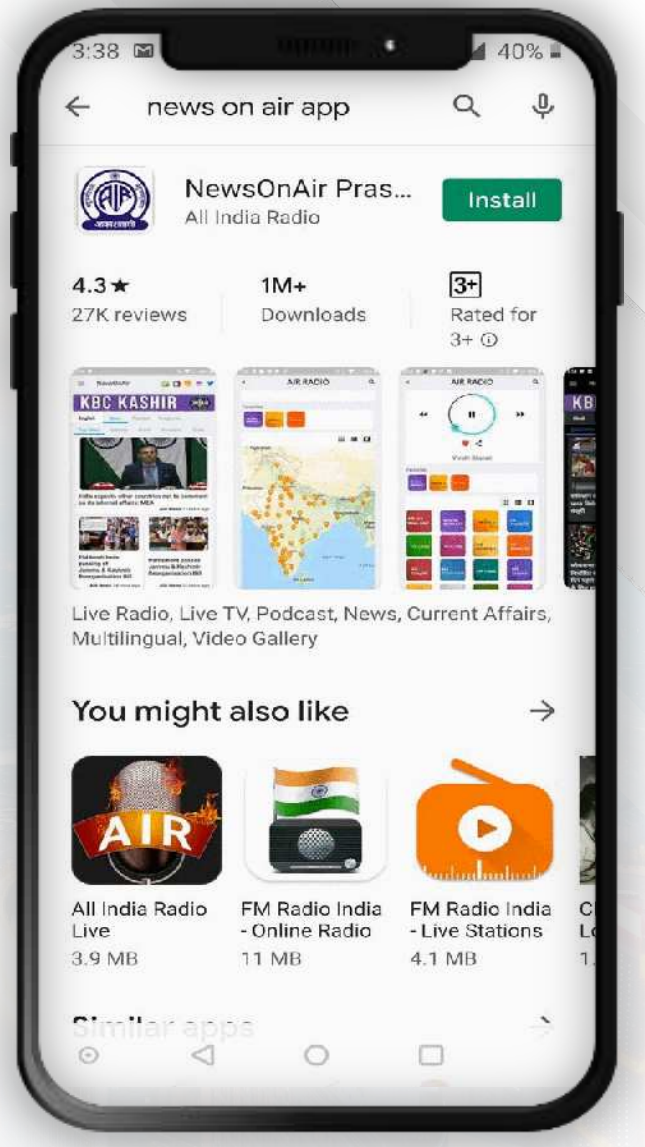
Next Generation TV with IBB convergence

NGT – IBB Convergence : Business Potential

- NGT with IBB convergence offers ample business opportunities for broadcasters especially in datacasting and mobility.
- Financial Potential of integrating broadcasting into nation's IP infrastructure are unlimited.
- The broadcast telco vision will create a data commodities market with unprecedented last mile delivery capacity along side the traditional television.
- Content delivery must be mobile to remain viable.

Why Mobile ?

- 70% of younger generation watch TV on their phones.
- Rapid ad revenue shift to mobile.
- Mobility also offers a point of data collection and management like cable, satellite or OTT.
- Next Gen receive chips in phones is revolutionary.



The Green Field

- Business goal should be to increase the spectrum asset value.
- Potential of Data broadcasting is huge.
- SFNs helps coverage gaps and provide higher saturation of power.

How it Works

- Can carry HD TV signals in 3 MBPS instead of 11.
- Bandwidth can be provisioned for National clients seeking large scale capability that cellular networks cant provide.
- Next Gen data casting is one-to-many. Broadcasters will have access to the return channel necessary to collect data.

Addressability and Data Casting

Addressability

- NGTV advertising will enable stations to provide different ads to different households within the same program.

Next Gen TV Data Casting

- NGTV datacasting brings one-to-many delivery of broadcasting to one-to-one world of wireless connectivity.
- NGTV can turn broadcast spectrum into a data pipe where linear video is only one part of the data.
- NGTV is unique , timely and complementary to 5G wireless and GPS.
- Challenge is, How to monitize this bandwidth by coordinating adjacent industries like automative, manufacturing, education, etc.

Sum up

- No sector can work in silos. Convergence will enable flow between different delivery platforms smooth.
- Broadcasting cannot reap the benefits of convergence until and unless it completely migrates towards IP domain.
- IP migration and convergence would also open up entire internet world for broadcasting platform.
- Convergence will facilitate off loading video from telco.
- Broadcasting will provide bigger download pipe, telco the return path.
- Any platform which can provide addressability, mobility, interactivity, good bandwidth, cheap delivery and connectivity to internet world would be able to stand against any challenge.

प्रसार भारती
India's Public Service Broadcaster

Thank You