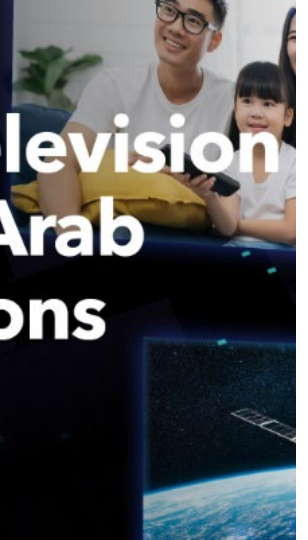




**ITU workshop**  
**The Future of Television**  
**for South Asia, Arab**  
**and Africa Regions**

11 May 2023  
Bangalore, India



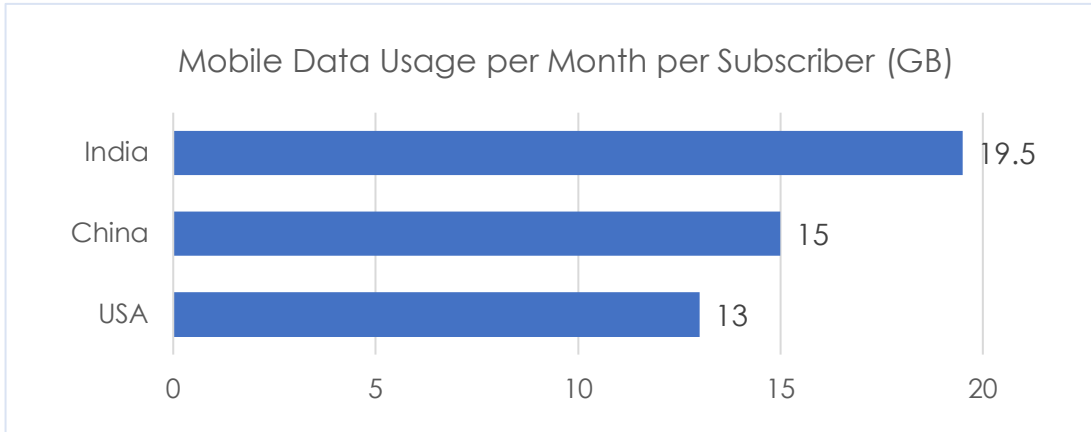
# **User Experience Enablers to consider for Direct-to-Mobile (D2M) Success in India**

v1.1

**Sesh Simha**

# D2M India Vision & Mission Statement

## India Mobile Data Consumption



- **Total mobile data consumed in India is expected to more than double by 2024<sup>1</sup>**
- 70% of traffic is Video traffic. Video traffic is consumed more in the rural parts than in the urban parts of the country
- Consumption is primarily restricted by mobile data price, which have been steadily increasing since late 2019

Source : 1) [Nokia: India Mobile Broadband Index 2023](#)

## Mission and Vision

**D2M as a Digital Public Good Service can enable direct broadcasting of video/data to mobile devices and other smart devices at a low cost thus widening accessibility**



# What is D2M?.....Direct to Mobile

- D2M is DTT re-invented for the mobile and converged telecom era
- D2M is the addition of a UHF-based broadcast/multicast **Standalone Downlink Only** distribution to offload broadcast-optimized traffic
- The SDO Network is largely cell-based broadcast utilizing cell class radios collocated at cell towers using Single Frequency Networking
  - High tower transmission will supplement coverage
- D2M utilizes a RedCap version of ATSC3, which
  - Interworks with the 3GPP RAN in the consumption device
  - Utilizes 5G service layers
  - Is converged with the 5G Network
- **FROM RADIO TO SERVICE STACK AND USER INTERFACE, THE USER EXPERIENCE ACROSS BROADBAND AND BROADCAST IS SEAMLESS**

## WHAT D2M IS NOT

- **NOT JUST** Television Broadcasting
- **NOT JUST** Isolated Transmitters and multiplexers
- **NOT JUST** Scanning and electronic service guides
- **NOT JUST** “Antenna TV”
- **NOT JUST** High towers

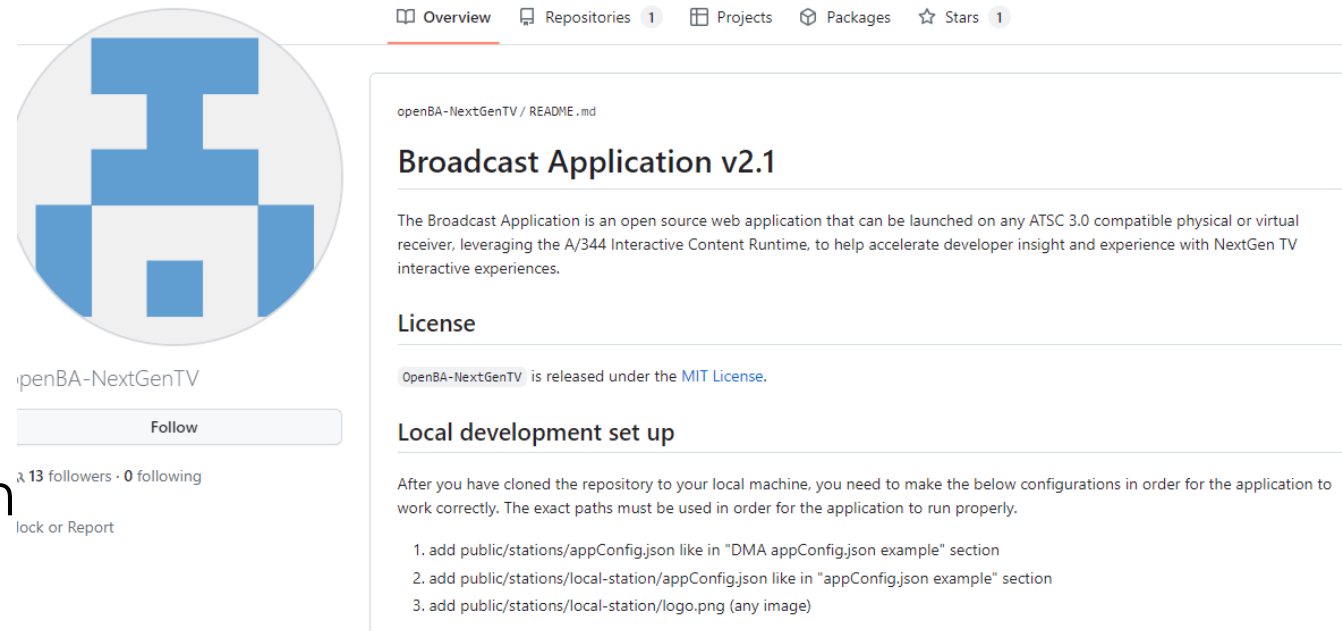
## WHAT D2M IS

- **IS ALSO** Telecom
- **IS** Downlink supplement to unicast delivery
- **IS** Virtual core, cloud based
- **IS** High and low towers
- **IS** Tight integration with 5G System
- **IS** AI-based offload and onload
- **IS** Tight interworking in consumption device between OTT and broadcast
- **IS** Apps! Apps! Apps!

# Sinclair Broadcast App Open-Source Web Application

<https://github.com/openBA-NextGenTV>

- Delivered over the air
- Completely interactive
- Merged DTT/D2M and OTT
- Maximizes screen space for programming and ancillary services like weather, alternate programming and advertising
- Permits the viewer to control which services to watch no matter the source
- Multiplatform – TV or smartphone
- Offered for free via an MIT Open-Source license



Overview Repositories 1 Projects Packages Stars 1

openBA-NextGenTV / README.md

## Broadcast Application v2.1

The Broadcast Application is an open source web application that can be launched on any ATSC 3.0 compatible physical or virtual receiver, leveraging the A/344 Interactive Content Runtime, to help accelerate developer insight and experience with NextGen TV interactive experiences.

### License

OpenBA-NextGenTV is released under the [MIT License](#).

### Local development set up

After you have cloned the repository to your local machine, you need to make the below configurations in order for the application to work correctly. The exact paths must be used in order for the application to run properly.

1. add public/stations/appConfig.json like in "DMA appConfig.json example" section
2. add public/stations/local-station/appConfig.json like in "appConfig.json example" section
3. add public/stations/local-station/logo.png (any image)

## In conclusion the REAL USER EXPERIENCE ENABLERS ARE...

- User experience **MUST** be seamless across broadcast and broadband on ANY device consuming media
- Service evolution **MUST** be multiplatform
- AI and extended reality technologies **MUST** be part of 5G Stack
- Barriers **MUST** fall between broadcast and broadband ecosystem in every area – technical, regulatory, political
- Broadcast industry **MUST** be involved in telecom industry and standards making bodies and vice versa



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