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

v1.1

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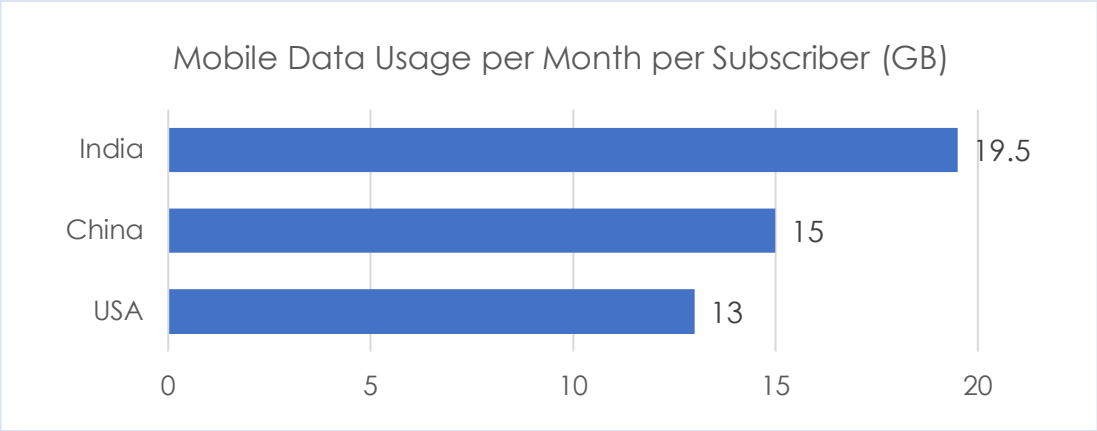
D2M India Vision & Mission Statement

India Mobile Data Consumption



- **Total mobile data consumed in India is expected to more than double by 2024[1]**
- 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

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

210 Million

1150 Million

Source : 1) Nokia: India Mobile Broadband Index 2023

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

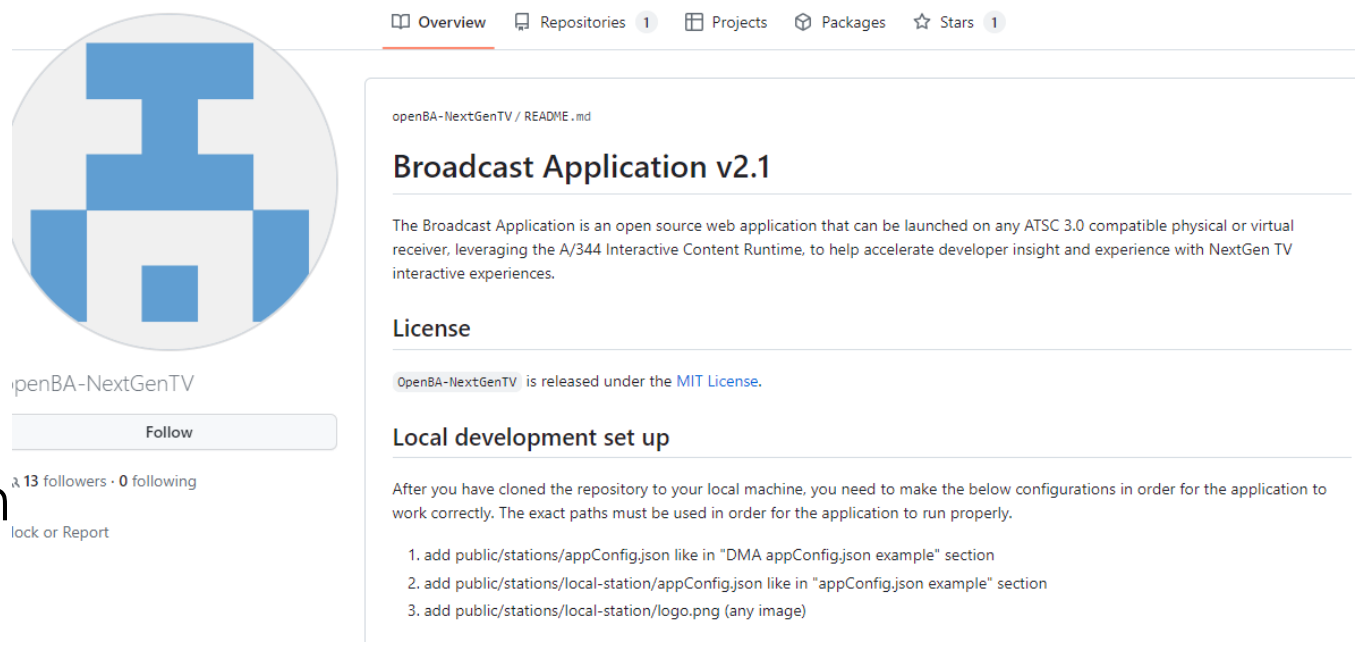
WHAT D2M IS

- **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



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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