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DVB-I Services over 5G Systems

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5G MAG MEDIA ACTION GROUP

Dolby

Fraunhofer FOKUS

DVB-I Services over 5G Systems
Quick guide

Which specifications are under implementation?

- 5g-mag.github.io/Standards/pages/dvbi-over-5g.html

Which reference implementations are made available?

- 5g-mag.github.io/Getting-Started/pages/dvbi-over-5g/
- **Repositories**
- **Projects**

How can I play?

- **Tutorials**

5g-mag.com/store

Check our **Store** for **APKs**, **VMs** and other **components**

Note that these repositories are currently only accessible under **Early Access**

Please request access at www.5g-mag.com/early-access

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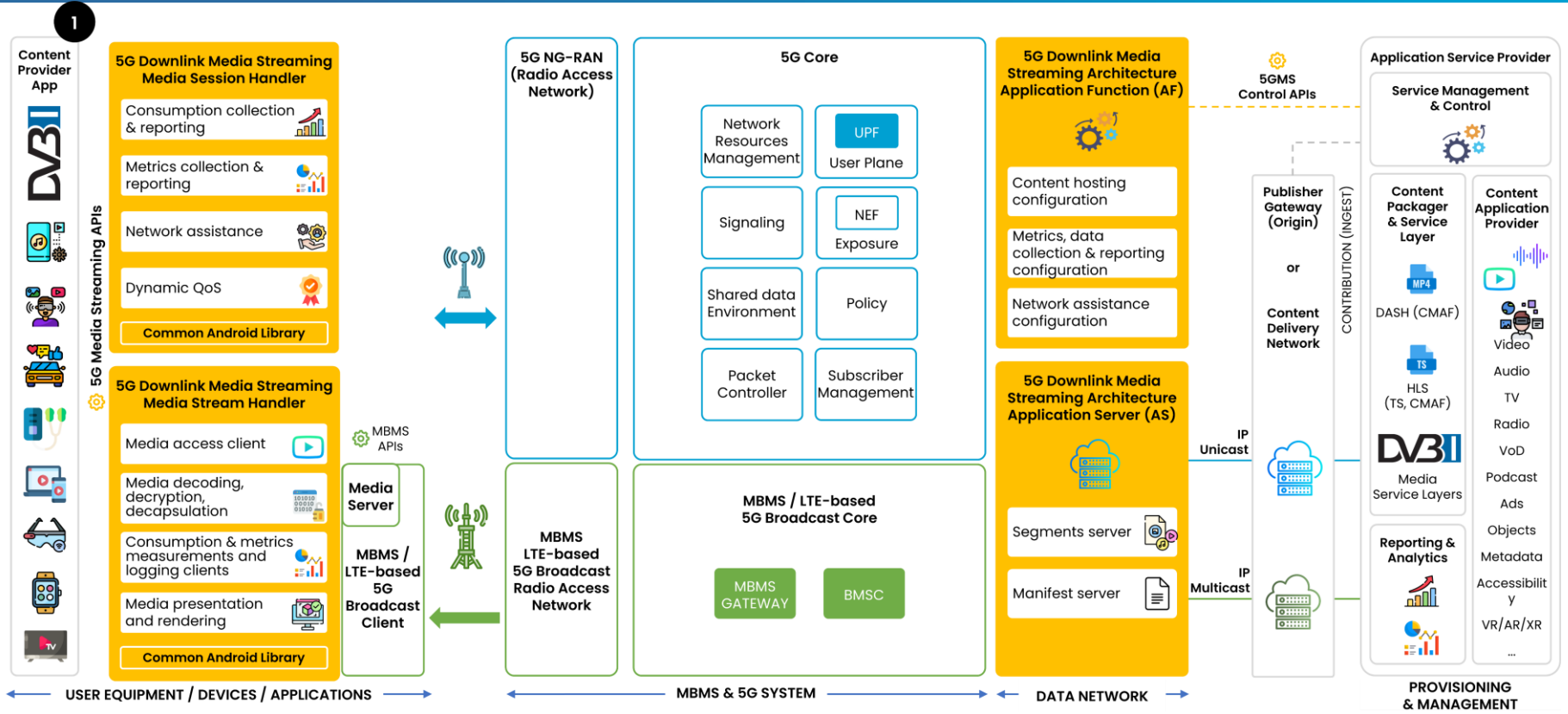
DVB-I Services over 5G Systems

What is being implemented?



DVB-I Services over 5G Systems

What is being implemented?

1 ✅ **rt-5gms-application**
(5GMSd-Aware Applications with DVB-I Player)

3GPP Multiple

DVB-I Reference Application DVB-I 5G-MAG PLv1.0

APK Android

✅ Public release ⚠ Early Access

Linux Windows Android APK Docker Cloud Postman API Web Interface Dependency Code Licence

DVB-I Services over 5G Systems
What is being implemented?

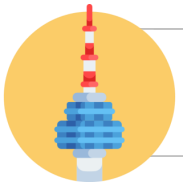
- **Joint Task Force on «DVB-I over 5G» with the DVB Project**

Unicast

Broadcast

DVB-I SERVICES APP

DVB-I over 5G Broadcast

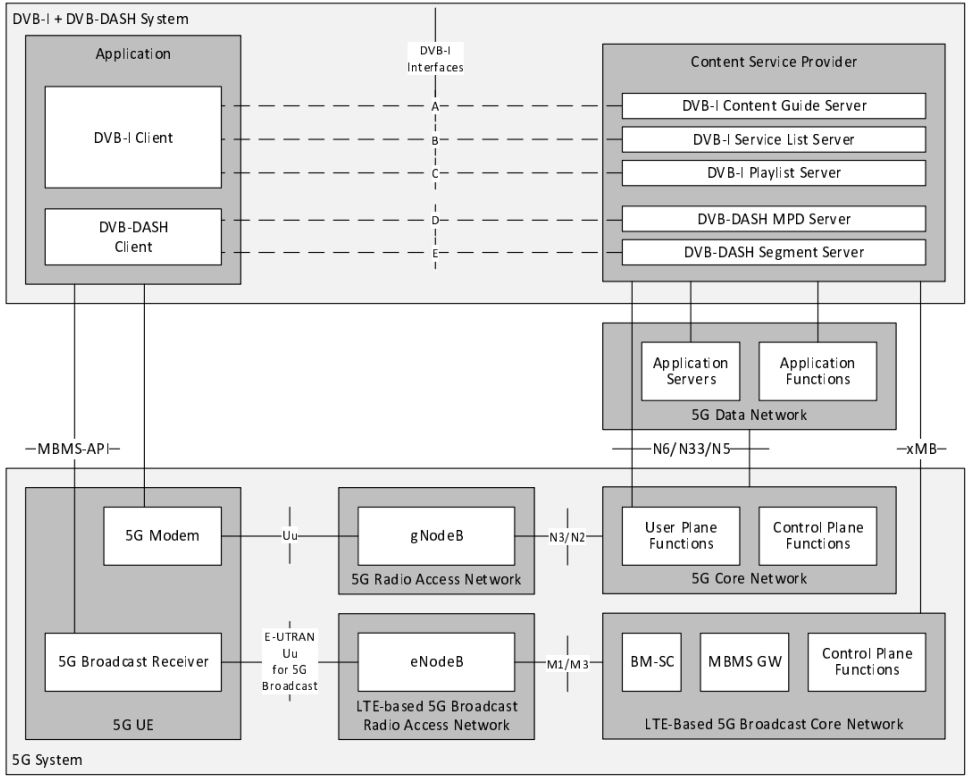


ETSI Technical Specification

ETSI TR 103 972 "Deployment Guidelines for DVB-I services over 5G Systems"

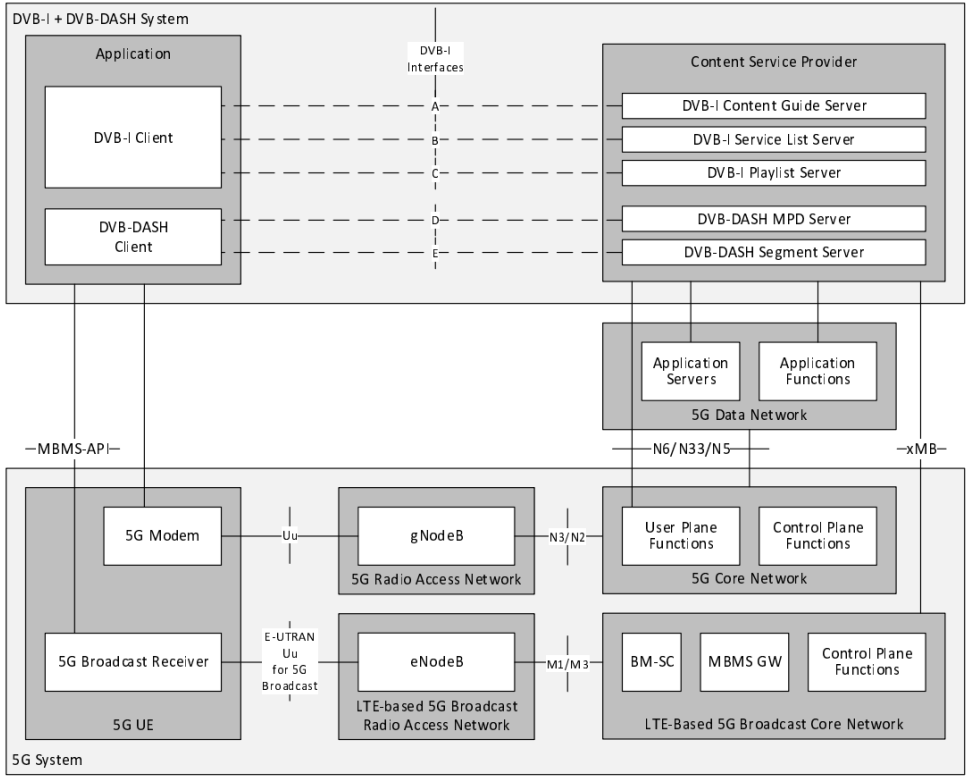
DVB-I Services over 5G Systems
What is being implemented?

- The top part describes the DVB-I and DVB-DASH system that comprises an Application running on a 5G-connected device (left) and the Content Service Provider's back-end servers in the network (right) that support the Application.
- The Application includes a DVB-I Client (for discovering DVB-I services), a DVB-DASH Client (for consuming DVB-I services). In the general case depicted in the reference architecture, the Application can consume DVB-DASH content via the 5G mobile broadband and/or from an LTE-based 5G Broadcast
- The client is connected via DVB-I logical interfaces to the Content Service Provider's DVB-I and DVB-DASH servers. The logical interfaces are carried over the 5G System which is depicted in the bottom part of the figure.



DVB-I Services over 5G Systems
What is being implemented?

- The DVB-I Client and DVB-DASH Client are connected via client APIs to the broadcastcapable 5G UE (User Equipment a.k.a. 5G device). The UE interfaces to the 5G Core network via the 5G Radio Access Network and to the LTE-based 5G Broadcast Core Network via the LTE-Based 5G Broadcast Radio Access Network. The Core Network functions interfaces towards the Content Service Provider's DVB-I and DVB-DASH servers via two reference points whose interfaces are defined by 3GPP:
- xMB API for LTE-Based 5G Broadcast.
- N6 for direct user plane IP Connectivity, or via Application Functions and Application Servers for 5G Media Streaming.
- The 5G Media Streaming Application Function (5GMS AF) interfaces towards the 5G Core's Control Plane Functions (PCF and NEF) via reference points N33 and N5.



Projects

DVB-I Services using 5G Media Streaming

- Implementation of **DVB-I Services** over **5G Media Streaming**
- **Under development…**
  - Contribution of a DVB-I app from Dolby

- **Not implemented and welcome…**
  - Simple setup: take one of the CTA WAVE 30s AVC streams, loop it using livesim2, add subtitles / captions, generate a small DVB-I service list
  - Advanced setup: configuration, such that you could “scale” it up to “many” services, and to configure some of the parameters.
  - Something like Live-Sim-2+ that allows to parametrize
  - Integration of Dolby app into MBMS Middleware app

- How to use the tools? Check the GitHub Tutorials
- Developer Xchanges and Updates: 5g-mag.com/tutorials
- Video library for DVB-I over 5G over 5G Broadcast: https://youtu.be/HQX5Ao_UXo0?feature=shared&t=20

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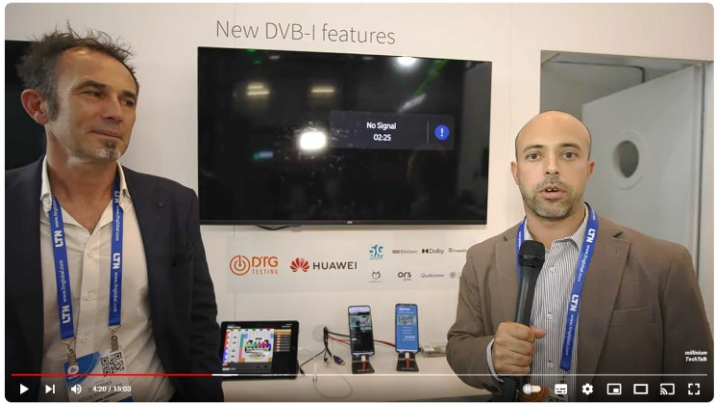
- **5G-MAG Reference Tools in use: 5g-mag.com/trials**



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Visit www.5g-mag.com or contact us for more information

Eva Markvoort - Membership
markvoort@5g-mag.com

Jordi J. Gimenez - Technology
gimenez@5g-mag.com