

## Who is involved in Broadcast standardization work?

ETSI provides standards that allow Broadcast services to be delivered to the Next Generation of ICT devices. ETSI involves the different contributors to the ecosystem, e.g. consumer electronics manufacturers, content providers, network operators & ISPs, vendors and third-parties; and produces standards through various Technical Committees.

Differentiation will be enabled through the unique applications deployed in the edge cloud.

Service	Delivery	Technology	ETSI Technical Committee
Mobile TV	3G Radio Network	eMBMS, DVB-T2	3GPP
	Mobile Broadcast Service	DVB-H, DVB-SH DVB-T, DMB Forward Link Only	JTC Broadcast
Fixed line TV	NGN Fixed line service	IPTV DAB adaptation	TISPAN JTC Broadcast
	Cable	DVB-C	JTC Broadcast
Terrestrial and Satellite TV and Radio		DVB-T DVB-S DVB-RCS DAB DMB, DRM	JTC Broadcast
Interactive TV		DVB-MHP, DVB-GEM MHEG-5 Broadcast profile Hybrid Broadband Broadcast TV	JTC Broadcast

## Mobile TV

- The 3rd Generation Partnership Project (3GPP) has added features to enable mobile networks to deliver television services in new and improved ways. Television and content providers may now directly provide their services over standardized interfaces. Recent 3GPP broadcast improvements include; greater radio broadcast range, dedicated eMBMS capacity, delivery of free-to-air services and work on a standardized interface for content providers (xMB). Look out for future work on; the 5G Media Streaming Architecture, an extended Framework for Uplink Streaming, Audio-Visual Production capabilities, more interactive Immersive Services and “Extended Reality” concepts..
- The Broadcast Joint Technical Committee (JTC Broadcast) brings ETSI together with the European Broadcasting Union (EBU) and CENELEC. The committee is responsible for broadcast systems (emission-reception combination) for television, radio, data and other services via satellite, cable and terrestrial transmitters. ETSI JTC Broadcast has input from ETSI Members who may be also members of a forum e.g. WorldDMB Forum, DRM Forum and, by specific agreement, from the DVB Project. For Mobile TV, ETSI (via JTC Broadcast) has published:
  - DVB (Digital Video Broadcasting) system specifications such as DVB-H (Digital Terrestrial mobile TV), DVB-SH (Mobile TV over advanced Hybrid Satellite/Terrestrial Networks), DVB-T and DVB-T2 (Terrestrial);
  - Forward Link Only air interface specification;
  - DMB (Digital Multimedia Broadcasting) standard which includes the DMB Video service.

## Fixed Line TV

- DVB IPTV is defined by JTC Broadcast along with DVB IPDC (IP Datacast) specifications. The goal of the DVB IPTV deliverables is to specify technologies on the interface between a managed IP network and retail receivers.
- DAB (Digital Audio Broadcasting) adaptation of IPTV: JTC Broadcast has defined a specification on DAB IPDC (IP Datacast) services transport.
- Cable delivery: DVB-C and DVB-C2 standards have been issued by JTC Broadcast while TC CABLE delivered a Multipart standard for Third Generation Transmission Systems for Interactive Cable Television Services based on Euro DOCSIS (Data Over Cable Service Interface Specification) 3.0.

## Interactive TV

JTC Broadcast delivers standards on:

- DVB-MHP (Multimedia Home Platform) & DVB-GEM (Globally Executable MHP);
- MHEG-5 Broadcast profile;
- Hybrid Broadcast Broadband TV.

## Digital radio

The intention is to provide a simpler and broader set of applications which will cover DAB, DAB+, DMB, DRM and the internet. JTC Broadcast defines:

- DAB and DAB+ (Digital Audio Broadcasting): ETSI has published the basic DAB standard and also specifications on MPEG-2 Transport Streaming and Transport of Advanced Audio Coding (AAC) audio;
- DRM (Digital Radio Mondiale) System Specification and DRM+ (DRM extension to higher frequencies);
- DMB: based on work initiated in Korea, ETSI develops standards for DMB, which includes the DMB Video Service.

## Other Broadcast developments in ETSI

- JTC Broadcast standards and specifications also cover:
  - Digital Satellite TV: DVB-S and DVB-S2; DVB-RCS and DVB-RCS2
  - TV Anytime.
- Next generation audio.
- Broadcast equipment: TC ERM TG17 is producing standards for broadcast and ancillary communications equipment (tuners, domestic aerials and amplifiers). The purpose of TG17 is the preparation of ETSI Harmonized Standards covering the regulatory requirements for broadcast transmitters, sound and vision, using analogue and digital modulation.

For further details on Broadcast Standards please visit:

[www.etsi.org/BROADCAST](http://www.etsi.org/BROADCAST)

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**ETSI** provides members with an open, inclusive and collaborative environment. This environment supports the timely development, ratification and testing of globally applicable standards for ICT-enabled systems, applications and services. We are at the forefront of emerging technologies across all sectors of industry and society that make use of ICT. Our 850+ member organizations are drawn from 64 countries and five continents. We operate on a not-for-profit basis and are one of only three bodies officially recognized by the EU as a European Standards Organization.

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