

Media Streaming for T-DMB

Professional hardware and software
solution for T-DMB media broadcasting



Product Features

- Audio/Video grabbing (digital SDI, analog and file input)
- Real-time encoding of video (H.264/AVC) and audio (HE-AAC v1 + v2)
- MPEG-2 transport stream (TS) multiplexing according to T-DMB specification
- T-DMB compliant TS over UDP/IP, ASI and as file output
- Simple Network Management Protocol (SNMP) support
- Cross platform solution (Windows and Linux)

Background Information

Terrestrial Digital Multimedia Broadcasting (T-DMB) is taking advantage from the existing DAB broadcasting infrastructure. This greatly supports the introduction of the new TV-like services for mobile devices such as PDAs or mobile phones. In many countries T-DMB is very close to its introduction on the market. FhG-HHI offers a variety of commercial software products in the field of mobile broadcasting among which is the T-DMB media server that is used in various field-trials throughout the world. The media server impresses with its outstanding image quality even at low bit rates.

T-DMB Media Server

The T-DMB media server software is available on Windows/Linux based PC platforms. PCs equipped with professional A/V grabber cards (e.g. DVS, Osprey 530/540/560) offer flexible and high quality audiovisual input that matches the requirements of broadcast playout centers. The processing chain of the T-DMB compliant media server includes the functionality of analog or digital A/V signal grabbing (all T-DMB image and audio formats), A/V encoding (LC-AAC, HE-AAC v1+v2, H.264 video) and MPEG-2 transport stream multiplexing according to the T-DMB specification which includes the MPEG-4 synchronization layer (SL) prior to PES/TS packetization. File input and output is an additional feature of the MediaServer. An SNMP agent is provided with the software that allows remote configuration and monitoring of the media server operation.

System Overview

A complete T-DMB processing chain including the media server (P1) the R&S DSIP020 (P2) and a DAB Sender (P3) is shown in Figure 1.

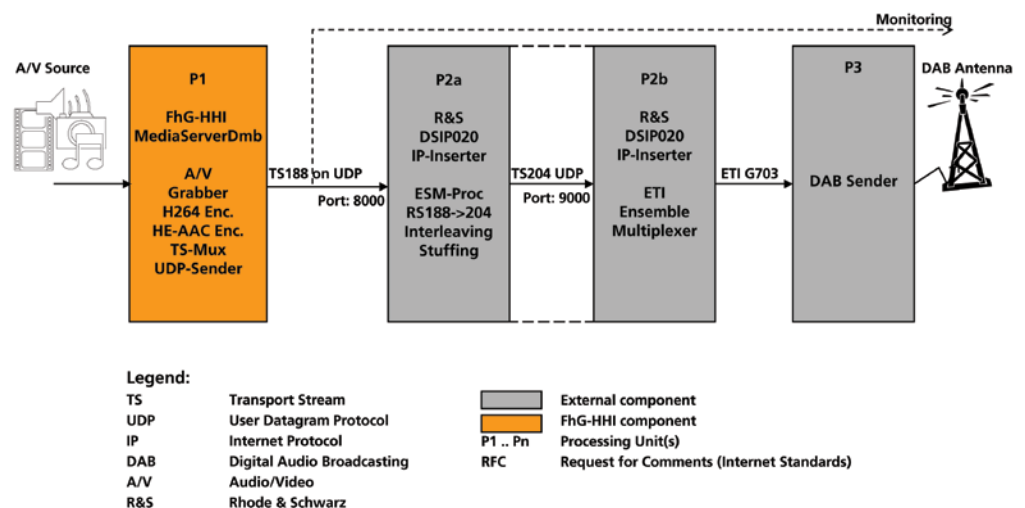


Figure 1: DMB processing chain

The T-DMB media server performs the previously described processing steps up to the generation of the constant bitrate transport stream that is packetized in UDP/IP packets. The TS is delivered over Ethernet to some gateway (R&S DSIP020 in the diagram above). Unit P2 extends the TS packets to 204 byte by adding 16 Reed Solomon FEC bytes to each packet and performs interleaving and ETI multiplex. The ETI (NI, G.703) output can be directly connected to a DAB transmission unit (P3) or alternatively be attached to some Ensemble Multiplexer prior to feeding the signal into the DAB transmitter.

Contact

Fraunhofer Institute
for Telecommunications
Heinrich-Hertz-Institut
Image Processing

Einsteinufer 37
10587 Berlin
Germany

Thorsten Selinger
Phone: +49 30 31002 607
Fax: +49 30 392 72 00
Email: selinger@hhi.fraunhofer.de
http://ip.hhi.fraunhofer.de