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FAQ for MHEG & MHP

What is MHEG?

MHEG stands for Multimedia and Hypermedia Information Coding Expert Group (MHEG) This group assist in developing several ISO standards, which deal with the digital code represented in Multimedia and Hypermedia Information.

What is MHEG-5?

MHEG-5 is the fifth part of the MHEG standard suite. It was developed to define a methodology and process, which supports the broadcasting of interactive multimedia applications across enterprise, plus many and varied client server platforms.

Is there a simple introduction to MHEG-5?

There are now a range of internet-based web sites, reports and standards groups i.e. www.DTG.org.uk, which can provide information on MHEG-5.

Who owns MHEG-5 and are their patents

The MHEG specification is an open ISO standard and there are no constraints of copyright or patents, however ISO documents are protected by copyright.

Why does a Set top box need an MHEG-5 engine?

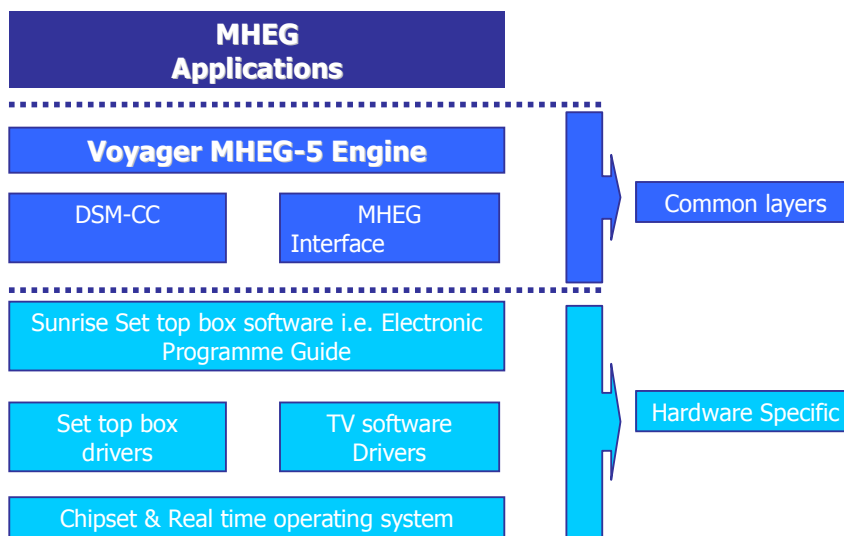
In the UK, the specified API/Middleware for DVB-T broadcasting and Digital TV receiver devices is MHEG-5. For example, Digital teletext requires a resident MHEG-5 engine to run the digital TV broadcast applications.

What is the advantage to have the MHEG-5 engine inside a Set top box?

An MHEG-5 engine embedded onto a set top box insures that MHEG-5 applications will run on that Digital TV receiver device. Therefore, MHEG applications can be developed under a “write once and run anywhere” concept. The MHEG-5 engine can also be optimised for speed and performance to specific hardware platform and chipset.

What is the architecture of MHEG combined with a Free to Air software stack and set top box software and hardware layers?

*Ocean Blue Software Voyager MHEG-5 & Sunrise
Free to Air System Architecture*



What applications can be developed in MHEG-5?

- Games
- Digital Multimedia teletext
- Home shopping
- Video on Demand
- Interactive education applications for all ages
- Multistream news reporting

- Interactive & enhanced Advertising
- On-Screen Information
- Voting/Polling

Below is a sample broadcast of an MHEG-5 scene containing audio, video, text, pictures and images.



What standards groups promote MHEG-5

The Digital Terrestrial group (www.DTG.org.uk) are the UK custodians of the MHEG standard. The DVB group (www.dvb.org) promote MHP Java standards, which also include MHEG-5 as a plug in to Java. MHEG-5 is also an ETSI standard (www.etsi.org)

Why do you need MHEG-5 when there is Java?

The Java language, the Java virtual machine and the Java runtime environment combined form the set of specifications that make it possible to write applets that can be embedded in HTML documents "Web pages".

The target environment for MHEG-5, however, is an interactive television, which is quite different from the typical environment of a Web browser. The difference manifests itself in two ways in the MHEG-5 specification: the focus on declarative rather than procedural code, and the effort to keep the footprint size of the MHEG engine to a minimum. In addition, MHEG requires minimum resources in terms of processor power & memory.

The world standard for Digital TV devices as defined by the DAVIC standards group is Java & MHEG-6. The DVB group also define MHP Java & MHEG as an acceptable Digital TV standard.

MHP & MHEG co-existence

MHEG-5 software components including the data carousel (DSM-CC) are upward compatible to the Multi-Media Home platform (MHP) Java DVB standard. MHEG-6 & MHP was chosen as the world digital TV standard by the DAVIC consortium many years ago. The standards group Digital Video broadcasting (DVB) committee has also adopted MHP Java and MHEG as a Digital TV solution.

What resources does an MHEG-5 engine typically require?

At least 3MB of memory is required to cache (store) the transmitted MHEG application.

300-450 KB of program memory for the MHEG-5 engine software (this is very much dependent on Operating System / Chipset implementation).

On Screen Display (OSD) graphics for rendering of bitmaps, lineart, video I-Frames.

Video, subtitle and audio streams.

DVB Service Information (SI) tables and DMUX section filters

General Real Time Operating System (RTOS) functionality for memory access, Inter Process Control (IPC).

Is anybody actually building and developing MHEG-5 engines?

Ocean Blue Software develops and supports a quality range of software solutions and support services for the Digital TV, IPTV and Digital Home markets. Products include Voyager: an MHEG-5 engine, DSM-CC, Sunrise Free to air for DVB-T and DVB-S and Surfsoft PVR content management software. Please contact Ocean Blue Software for any further information or assistance. **www.oceanbluesoftware.co.uk**