

Appendix H Multimedia Home Platform

This has been taken from the MHP web site (11 March 2003) at: -
http://www.mhp.org/what_is_mhp/index.html

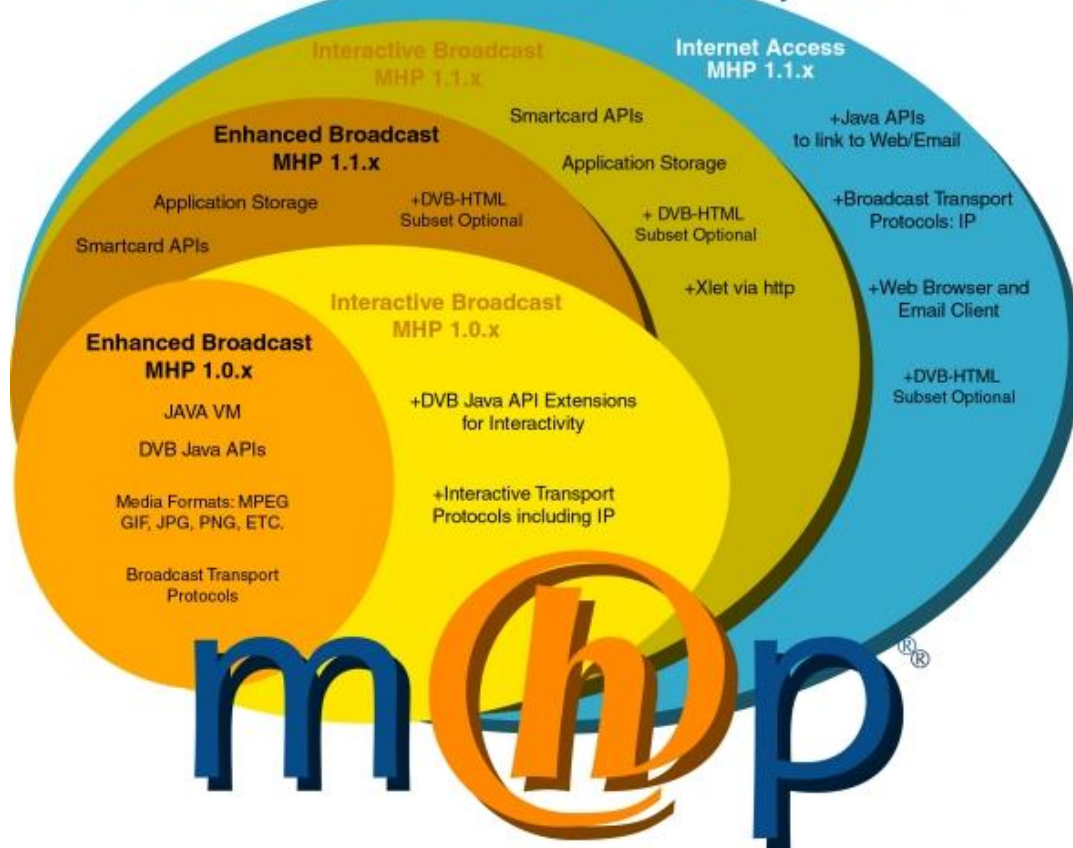
For the not so technical...

The MHP (Multimedia Home Platform) is simply a common API (Application Programme Interface) that is completely independent of the hardware platform it is running on. MHP (Multimedia home Platform) is an open standard platform, which will alter proprietary or vertical markets of existing software platforms into one that will enable content to be authored once and 'run' anywhere. Enhanced Broadcasts, Interactive Broadcasts and Internet Content from different providers can be accessed through a single device e.g. Set top box or IDTV, that uses this Common DVB-MHP API. It will enable a truly horizontal market in the content, applications and services environment over multiple delivery mechanisms (Cable, Satellite, Terrestrial, etc.) The business implications are enormous, as new and exciting content as well as applications will stimulate the growth of the broadcasting Industry into the multimedia age linking the broadcasting and Internet worlds together.

More technical bits...

The Multimedia Home Platform (MHP) defines a generic interface between interactive digital applications and the terminals on which those applications execute. This interface decouples different provider's applications from the specific hardware and software details of different MHP terminal implementations. It enables digital content providers to address all types of terminals ranging from low-end to high-end set top boxes, integrated digital TV sets and multimedia PCs. The MHP extends the existing, successful DVB open standards for broadcast and interactive services in all transmission networks including satellite, cable, terrestrial and microwave systems.

DVB-MHP Profiles 1, 2 & 3



MHP Profiles diagram

The MHP supports many kinds of applications including the following typical examples:

- electronic program guides (EPG),
- information services ("super teletext", news tickers, stock tickers),
- applications synchronised to TV content - score cards, local play-along games,
- e-commerce and secure transactions.
- educational

The architecture of the MHP is defined (with exception in the specification itself - hardware is not defined) in terms of three layers: resources, system software and applications. Typical MHP resources are MPEG processing, I/O devices, CPU, memory and a graphics system. The system software uses the available resources in order to provide an abstract view of the platform to the applications. Implementations include an application manager (also known as a "navigator") to control the MHP and the applications running on it.

System Core

The core of the MHP is based around a platform known as DVB-J. This includes a virtual machine as defined in the Java Virtual Machine specification

from Sun Microsystems. A number of software packages provide generic application program interfaces (APIs) to a wide range of features of the platform. MHP applications access the platform only via these specified APIs. MHP implementations are required to perform a mapping between these specified APIs and the underlying resources and system software.

The main elements of the first release of the MHP specification are:

- MHP architecture (as introduced above),
- Detailed definition of enhanced broadcasting and interactive broadcasting profiles,
- Content formats including PNG, JPEG, MPEG-2 Video/Audio, subtitles and resident and downloadable fonts,
- Mandatory transport protocols including DSM-CC object carousel (broadcast) and IP (return channel),
- DVB-J application model and signalling,
- Hooks for HTML content formats (DVB-HTML application model and signalling),
- DVB-J platform with DVB defined APIs and selected parts from existing Java APIs, JavaTV, HAVi (user interface) and DAVIC APIs,
- Security framework for broadcast application or data authentication (signatures, certificates) and return channel encryption (TLS),
- Graphics reference model,
- Annexes with DSM-CC object carousel profile, text presentation, minimum platform capabilities, various APIs.

The MHP specification provides a consistent set of features and functions required for the enhanced broadcasting and interactive broadcasting profiles. The enhanced broadcasting profile is intended for broadcast (one way) services, while the interactive broadcasting profile supports in addition interactive services and allows MHPs to use the world-wide communication network provided by the Internet. New profiles will be added later based on the continuing work of the DVB project.

Further information can be found at the MHP website: -

<http://www.mhp.org>

Questions and Answers on MHP are at: -

http://www.mhp.org/what_is_mhp/qa.html