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## **ROLLING OUT HD WITH DVB-T & DVB-H AT BROADCAST ASIA**

**19 – 22 June 2007, Singapore Expo, Booth No. 7P4-01**

**Singapore – 19 June 2007** – Visitors to Broadcast Asia will be able to see first-hand on the DVB Stand, the efficient technical capability of DVB-T to enable the rollout of terrestrial High Definition services for the Asia region. Using a signal supplied by MediaCorp transmitted on UHF Channel 38 and a Humax set-top receiver, the HD service will be shown on a Panasonic plasma display. The service uses MPEG-4 video coding and the transmissions use 64QAM modulation in 8k mode. The transmitter has an output of 2kW and the total available bitrate is 22.12Mbit/s.

The demonstration is particularly relevant as Singapore, after completing its technical trials, becomes the first ASEAN country to launch full terrestrial HDTV services later this year.

“This is an exciting time in Asia as Singapore becomes the first nation in the region to enjoy full terrestrial High Definition services using DVB-T. It will no doubt give other Asia-Pacific countries the confidence and impetus to further their HDTV plans” commented Peter MacAvock, Executive Director, DVB.

Also, on display will be a range of DVB-H receivers including the Nokia N92 and the new N77 handsets. These receivers will display the live DVB-H service which is on air throughout the Singapore Expo demonstrating the robust nature of the mobile TV open standard.

Also on the DVB-H agenda, as part of the official Broadcast Asia conference programme Peter MacAvock will chair the “Mobile TV Forum” on Wednesday, 20<sup>th</sup> June. The Mobile TV Forum will showcase success stories, business models and strategies, and lessons learnt from mobile TV trials in different markets worldwide. The event will also address key technical, standardisation and content delivery issues, and will close with a panel discussion.

DVB representatives and technology experts will be on hand to answer queries and provide information on the implementation of the world's most successful set of technical standards for DTV. DVB's open, interoperable standards form the basis of services on every continent with more than 160 million receivers now deployed.

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## **Background**

### **The DVB Project**

The Digital Video Broadcasting Project (DVB) is an industry-led consortium of over 260 broadcasters, manufacturers, network operators, software developers, regulatory bodies and others in over 35 countries committed to designing global standards for the delivery of digital television and data services. The DVB standards cover all aspects of digital television from transmission through interfacing, conditional access and interactivity for digital video, audio and data. The consortium came together in 1993 to create unity in the march towards global standardisation, interoperability and future proofing.

To date, there are numerous broadcast services using DVB standards. There are hundreds of manufacturers offering DVB compliant equipment, which is already in use around the world. DVB dominates the digital broadcasting world with over 160 million receivers deployed. A host of other services is also on-air with DVB-T, DVB-S and DVB-C including data on the move and high-bandwidth Internet over the air. Further information about DVB can be found at: [www.dvb.org](http://www.dvb.org).

### **DVB-T (Terrestrial)**

The DVB-T system specification for terrestrial digital television was approved by ETSI in February 1997. The first DVB-T services were launched in 1998 in Europe with subsequent deployments throughout the world. As with the other DVB standards, MPEG-2 sound and vision coding forms the basis of DVB-T. Other elements of the DVB-T specification include: a transmission scheme based on Coded Orthogonal Frequency Division Multiplexing (COFDM), which allows for the use of either 1705 carriers (usually known as '2k'), or 6817 carriers ('8k'); concatenated error correcting. The '2k' mode is suitable for single transmitter operation and for relatively small single frequency networks with limited transmitter power. The '8k' mode can be used both for single transmitter operation and for large area single frequency networks.

### **DVB-H (Handheld)**

DVB-H is defined as a system where the information is transmitted as IP datagrams. Time-slicing technology is employed to reduce power consumption for small handheld terminals. IP datagrams are transmitted as data bursts in small time slots. The front end of the receiver switches on only for the time interval when the data burst of a selected service is on air. Within this short period of time a high data rate is received which can be stored in a buffer. This buffer can either store the downloaded applications or playout live streams. The achievable power saving depends on the relation of the on/off-time. If there are approximately ten or more bursted services in a DVB-H stream the rate of the power saving for the front end could be around 90 percent. Information on DVB-H can be found at: [www.dvb-h.org](http://www.dvb-h.org).

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