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DVB TECHNOLOGIES SET TO DAZZLE AT BRAZIL'S FUTURECOM

Highlighting Global Open Standards For Enabling Interactive Services

Geneva – 25th October 2004 – Furthering its commitment to the Brazilian and Latin American broadcasting and telecommunication industries, DVB is participating at Futurecom 2004 in Florianopolis, Brazil (25 – 28 October) with a number of activities designed to demonstrate the technological and economic advantages of its globally successful open standards for digital broadcast services. In addition to representatives of the DVB Project, top level management and DVB experts from DVB member companies will present key technologies and conference lectures.

Peter MacAvock, Executive Director of the DVB Project Office, commented "We are delighted with the opportunity to present the DVB family of open standards and to highlight the advanced technical capabilities and the important economic benefits deriving from the global DVB marketplace. As the telecommunications and broadcasting industries continue to grow closer together, DVB is strongly committed to this evolution with an expanding portfolio of standards designed to meet these challenges. An example of this is DVB-H, which brings broadcast services to handheld devices including mobile telephones. Visitors to Futurecom 2004 will not only be able to hear about this exciting new technology in the conferences, but also see DVB-H in use."

Visitors can see a Nokia 7700 media device used to demonstrate DVB-H, an exciting new specification that combines the excellent mobile performance of DVB-T with IP datacasting technology extending the range of DVB-T services into the mobile handset market. The demonstration can be seen at the ETSI Pavilion (A33). In the conference programme, Raimundo Duarte of Nokia will present DVB – Um Padrâo para Mobilidade e Convêrgencia (Digital TV & Mobility).

In an opener to the main conference and exhibition, DVB is taking part in a pre-conference workshop on the DVB-RCS (Return Channel Satellite) interactive satellite standard sponsored by ETSI under the @LIS programme taking place on October 25th in conference Room IV, East Pavilion. DVB-RCS is fast becoming the global standard for satellite communications and this important workshop will bring together key speakers from the satellite and broadcast industry.

For Latin America the DVB-RCS system opens up possibilities for many different applications. Deployment cost is the same, regardless of distance, and the satellite networks offer a uniform quality of service at a uniform price over the coverage area.

Dr. Alberto Morello, Chairman of the DVB-S2 Technical Module will be present during the event to explain how the introduction of DVB-S2 will reduce the cost of information transmission in the forward link.

The new DVB-S2 specification is the most advanced satellite distribution technology available today and is already poised to become the international standard widely adopted by satellite operators and service providers around the world. Designed to build upon the success of its predecessor DVB-S, the standard offers greater flexibility and better performance over existing satellites. Leading satellite broadcast operators are already migrating their satellite infrastructure from the current DVB-S standard based transmission system to the more bandwidth efficient DVB-S2 standard to offer more channels and HDTV services.

Background

The DVB Project

The Digital Video Broadcasting Project (DVB) is an industry-led consortium of over 250 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. 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.

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%.

DVB-RCS (Return Channel for Satellite)
The specification for the provision of the interaction channel for GEO satellite interactive networks with fixed return channel satellite terminals (RCST). The specification facilitates the use of RCSTs for individual or collective installation (e.g. SMATV) in a domestic environment. It also supports the connection of such terminals with in-house data networks. The standard may be applied to all frequency bands allocated to GEO satellite services.

The solutions provided for interaction channel for satellite interactive networks are a part of a wide set of alternatives to implement interactive services through DVB systems.

The revision accomplished in 2002 provides the means to extend the applicability of the standard to regenerative satellite systems. This revision also allows for reduction in terminal costs without significantly impacting the performance.

DVB-S2

DVB-S2 benefits from recent developments in channel coding and modulation that give a 30% capacity increase over DVB-S under the same transmission conditions and more robust reception for the same spectrum efficiency. DVB-S2 is so flexible that it is able to cope with any satellite transponder characteristics, with a large variety of spectrum efficiencies (from 0.5 to 4.5 bit/s per unit bandwidth) and associated Carrier-to-Noise requirements (from –2 dB to 16 dB).

When used for interactive point-to-point applications like IP unicasting, the gain of DVB-S2 over DVB-S is even greater. Variable Coding & Modulation (VCM) functionality allows different modulations and error protection levels to be used and changed on a frame-by-frame basis. This may be combined with the use of a return channel to achieve closed-loop Adaptive Coding Modulation (ACM), thus allowing the transmission parameters to be optimised for each individual user, dependant on path conditions. ACM allows the reuse of the 4 to 8 dB of power which are typically wasted in conventional satellite links, thus doubling or even tripling the average satellite throughput and reducing dramatically the service cost.

DVB is registered trademark of the DVB Project.