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## **DVB SCORES ANOTHER WORLD'S FIRST PROVIDING 6MHz DVB-T DUAL SERVICE IN A SINGLE CHANNEL AT NAB 2000**

### **HDTV & Mobile Reception Show the Way Ahead.**

**April 10, 2000 — Las Vegas** — At this year's NAB, in another 'world's first', DVB will be transmitting a dual service of HDTV and SDTV in a single 6Mhz channel.

Using DVB-T Hierarchical modulation, the HDTV and SDTV service will be transmitted using the facilities of KVWB-DT29 on Black Mountain, Nevada to various reception points, both static and mobile, in and around the Las Vegas Convention Centre and Sands ExpoCentre. Following on from the recent Brazilian decision to recommend COFDM as the country's preferred digital terrestrial modulation scheme; this transmission will further illustrate the multi-faceted capability of the DVB portfolio of standards. This will also enable DVB to highlight the flexibility, adaptability, technology, expertise and support that are available to decision-makers who are assessing their DTV needs. With the possibility to offer viewers HDTV, SDTV and a range of multimedia and Internet services, DVB has delivered standards that offer growth without limitation.

Helmut Stein (Nokia), Chairman of DVB Promotions, said, "These broadcasts underline the undeniable capability of the DVB-T standard. Where there is a public demand for HDTV service, DVB standards deliver. At last year's NAB we scored a 'world's first' by demonstrating the robust nature of the DVB standards with mobile DTV reception. This year we are proud to be showing how DVB standards can be used to provide both HDTV and SDTV 6Mhz services in a single channel. DVB is an agnostic data pipe that allows packaging and transmission using interoperable standards in end-to-end solutions. The rapid deployment of digital television, new business models and the generation of new services to attract and satisfy the consumer is what DVB is all about".

DVB acknowledges the support and active participation of the following companies: Project Support – Sinclair Broadcast Group; Equipment and Services – Acrodyne (Transmission System), Nokia (Mobile Reception), Rohde & Schwarz (Modulation), STI (720P HDTV), Tandberg (TV Encoding and Decoding) Tektronix and Adherent (Additional Equipment).

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## **Background**

### ***What is Hierarchical Modulation?***

In hierarchical modulation, two separate data streams are modulated onto a single DVB-T stream. One stream, called the "High Priority" (HP) stream is embedded within a "Low Priority" (LP) stream. Receivers with "good" reception conditions can receive both streams, while those with poorer reception conditions may only receive the "High Priority" stream. Broadcasters can target two different types of DVB-T receivers with two completely different services. Typically, the LP stream is of higher bit rate, but lower robustness than the HP one. For example, a broadcaster could choose to deliver HDTV in the LP stream, while delivering an independent SDTV service in the HP stream.

### ***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 50 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 in Europe, North and South America, Africa, Asia, and Australia. A host of other services are also on-air with DVB-T, including data on the move, high-bandwidth Internet over the air and the possibility to introduce terrestrial Pay-TV services.

Owing to its use of the multi-carrier Coded Orthogonal Frequency Division Multiplexing (COFDM) modulation technique, DVB-T is capable of delivering a crystal clear picture to televisions connected to portable, set-top antennas in hostile reception environments such as city apartments, or even to receivers on the move. DVB-T has been rigorously tested in slow-moving city trams and at speeds in excess of 170 mph.