

Making Room for HD

First live Danish DVB-T2 trials on air

Kenneth Wenzel, CEO Open Channel

Based in Copenhagen, Open Channel, a subsidiary of U-Media, distributes free-to-air television programming on UHF channel 35 / MUXKBH. The company has been conducting DTT trials since 2006 in the Greater Copenhagen area. The coverage area of MUXKBH consists of over 700,000 homes, equal to 28 percent of all Danish households. Over this period, it has broadcast several 24 hour channels seven days a week.

Within the next few years, high definition will become the new TV standard in Denmark, and it is therefore imperative that the DTT network has the necessary capacity for TV channels to be broadcast in HD. If these steps are not taken, the DTT network will be left behind by the satellite and cable operators.

Currently, however, there is no room on the Danish DTT network for transmitting HDTV services, therefore it is necessary to move to the next generation terrestrial TV standard, DVB-T2, to provide around double the broadcasting capacity compared to DVB-T. DVB-T2 also provides some new technological opportunities such as the possibility of broadcasting on the same frequency TV channels via traditional antennas and other TV channels for handheld receivers etc.

On the May 6, Open Channel has, after several months of preparation, started broadcasting using DVB's second-generation digital terrestrial TV standard, DVB-T2, on UHF Channel 67 / MUXKBH-2 in the Greater Copenhagen area.

The purpose of the DTV trial is partly about determining how to implement a full DVB-T2 setup so Open Channel can transmit a high definition service. The trial will also give local TV companies and other entities the possibility to prepare for the digital HD set up. This will ensure that these players in the market have a reason to start the necessary upgrading of their equipment and production routines to adhere to the HDTV production environment.

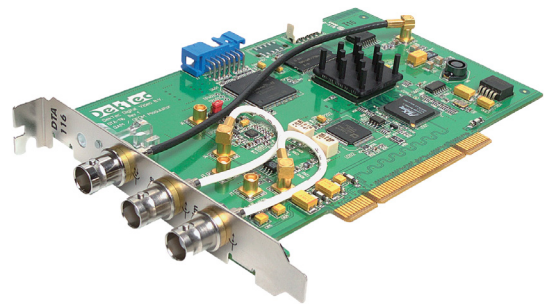
The trial is being conducted with the cooperation of a couple of DVB member companies – the Danish company, ProTelevision A/S and the

Dutch company DekTec Digital Video. The DVB-T2 transmission uses DekTec's Modulator DTA-116 with DVB-T2 Signal Generator Software DTC-378 2Xpress and ProTelevision Technologies' PT2000 Terrestrial Gateway which now is upgradable through firmware to DVB-T2.

We definitely feel we have entered into new territory with this DVB-T2 project. First of all, we had to build our own transmitter with innovative and affordable technologies. In the initial trial phase the broadcast is from a single antenna setup with 600 Watt ERP, 100 meters high, from the TDC Tower on Borups Alle in the center of Copenhagen. The TV channels are the same as on UHF Channel 35 / MUXKBH - Kanal København, Familie TV, the English language news channel France 24 and the computer and video gaming channel, G-TV.

At present, there are no DVB-T2 integrated televisions or set-top boxes available in the Danish market, but they are

expected to be in the retail stores by the end of the year. At that time, Open Channel plans to expand the broadcast setup to include several broadcasting positions in Roskilde and/or Hillerød in a SFN network with the broadcasting capacity increased to 2 kWatt ERP.



DekTec's Modulator DTA-116 with DVB-T2 Signal Generator Software DTC-378 2Xpress



ProTelevision Technologies' PT2000 Terrestrial Gateway



Kenneth Wenzel monitoring the quality of the received DVB-T2 signal with DekTec T2Xpert DVB-T2 Receiver