

From:

Norges televisjon as

Lysaker, Norway

Att: Anne Karin Augland, communications director

To:

European Commission

Information Society and Media Directorate-General

Opinions and recommendations on the Public Consultation "Transforming the digital dividend opportunity into social benefits and economic growth in Europe" issued 10.07.2009

Summary

- High Definition TV is now becoming the new standard, and the competition between the pay-TV distributors are sharpened on the new ground of HD quality. For the DTT network to become and remain a competitive actor in the distribution industry, it's essential to comply with at least the basic common requirements for quality and content.
- The answer to the question of efficient distribution and competitiveness as well as to secure access to TV for all, seems twofold; First, the improved and/or new transmission compression standards will contribute – but the results of technological development are still to be seen. Second, the question of allowing at least parts of the 800 MHz band to be used for high power broadcasting are urgent and should be considered thoroughly. To our beliefs the one answer cannot replace the other.
- The Norwegian DTT-network technology, set-top-boxes included, are all produced and implemented with MPEG-4 and HDTV compatibility as standard requirements. The DTT-network already carries HDTV programs on a regular basis.
- About 15 percent of the Norwegian households are situated in satellite shadow, leaving the DTT-network the only possible access to TV for most of them. The importance of the DTT network is not unique for Norway.

1. The Norwegian DTT-network

About Norges televisjon

Norges televisjon (NTV) holds the licence to build and operate the Digital Terrestrial Television network in Norway, using the spectrum 470-790 Mhz. The licence was issued 02.06.2006 and runs for 15 years. NTV is owned by Norwegian Broadcasting Corporation, TV2 Group and Telenor by 1/3 each. The operation is conducted on complete market principals, where the Norwegian Broadcasting Corporation and the pay-TV distributor RiksTV will rent the entire capacity of five multiplexes.

Status of the DTT network and analogue shutdown in Norway

The ordinary DTT network is built to cover a minimum of 95 percent of the population (households), which was achieved by November 2008. Today, the analogue terrestrial network is shut down for 81 percent of the population and as the last regions will see the analogue shutdown this autumn, the whole transition will be completed by December 1. 2009.

Until shutdown is completed, the DTT network carries three multiplexes while two more are being implemented ready to launch by mid 2010.

Capacity and technology

The Norwegian DTT rollout started June 2006, allowing the most up-to-date technical standards to be used. The transmission and network technology, receivers included, are all produced and implemented with MPEG-4 and HDTV compatibility as standard requirements.

On the Public consultation document 4.1 a.: the Norwegian DTT network already complies with the suggested standards of H264/MPEG-4 AVC. Requirements that improve the ability of digital TV receivers to resist interference as proposed by the document (4.1. b), is an important issue that need to be addressed and developed. All receivers based on well known standards (as ITU, NorDig etc) used in DTT networks in European countries are specified to be able to operate within the whole 800 MHz band. That means for instance new services within mobile access solutions based on long range base stations in the upper part of 800 MHz band (from 790 and up) could very easily disturb the already implemented population of DTT receivers.

2. Use of the 800 MHz band

The importance of a DTT-network to secure access to TV for all households

European countries, Norway included, are faced with various topographical challenges trying to optimise access to broadcast TV. In Norway, the topographical conditions give severe challenges, leaving about 10 percent of the households in topographical satellite shadow¹. Altogether about 15 percent of the households are without access to satellite signals when obstacles as buildings, forest etc. are considered relevant. With a very scattered population and a long stretched and

¹ Satellite shadow occurs when topographical conditions prevent the possibility to receive TV-signals from satellites. A typical example is households situated on the southern side of an east-west directed valley with high mountains blocking the angle necessary to receive satellite signals from south.

mountainous countryside, most people in satellite shadow have no access to cable-TV or IPTV either. For this part of the population the only possibility of receiving TV (and partake as citizens in a cultural community) is through the DTT network.

This situation is probably not unique for Norway. Switzerland, Austria and Island are to some extent known to face the same conditions of satellite shadows. Even so, 10 percent of the population in topographical satellite shadow is certainly a high figure and makes the DTT network particularly important as a mean of TV access for the Norwegian population.

To make sure households in Norway without DTT coverage and without any other access to TV, at least can receive the TV channels from Norwegian Broadcasting Corporation, an additional 500 small transmitters are established to cover 5200 households, which are scattered mainly along the western coast and the northern part of the country. This is not to be confused with the fact that most households in satellite shadows are covered by one of the 430 transmitters in the ordinary DTT network.

HDTV – the new standard

The Consultation Document 4.7 suggests future challenges of uncertainty which have been identified and that lead to the need for a dynamic process. The uptake of HDTV is one of them.

About half of the population in Norway will by the end of this year, have a HD-ready TV-set, and all households using the DTT network already have one or more HD-ready receivers. In July this year the Norwegian TV2 turned their main channel into a HD-channel in the DTT network. We expect Norwegian Broadcasting Corporation to do the same when more capacity is launched by mid 2010.

Satellite and cable distributors already offer a selection of HDTV channels, and the competition between the pay-TV distributors are sharpened on the new ground of HD quality.

Our question is not so much about the speed of consumer uptake as the Consultation Document frames it, but the possibility of offering what is now becoming the new standard; High Definition. For the DTT network to become and remain a competitive actor in the distribution industry, it's essential to offer at least the basic common requirements for quality (video and audio), which within the next two-three years will be HD. This leads us to the question of how to obtain a minimum of capacity.

The answer – to our beliefs – are twofold; first the pace of improved and/or new transmission compression standards, and second the question of allowing at least major parts of the 800 MHz band to be used for high power broadcasting. The one answer cannot replace the other, as the results of technological development are still to be seen.

Considering the importance of a sustainable, competitive DTT network – where HD-standard is now becoming a basic requirement - and the dependence of such a network for TV broadcasting to all, the consequences of excluding these services from the 800-band should be considered thoroughly.

The technological improvements, and more specifically the improvement of compression standards and DVB-T2, will be considered implemented as quickly as possible in the Norwegian DTT-network for one main reason; to secure a widest possible range of channels and programs of HD-quality. NTVs main purpose with considering DVB-T2 is to

offer a wider range of HD programs and channels in the future. Investment in DVB-T2 is not interesting for the purpose of more SD channels.

The importance of the DTT platforms all over Europe to perform in competition with other distribution platforms, are crucial. Without the necessary offer of HDTV-channels and programs, any platform will within a few years time suffer severely.

A collapse of DTT platforms implies consequences for the public dependent on the distribution as well as for the broadcasters. For public service broadcasters with DTT as their main distribution, a vital platform is essential.

Our proposal is to reserve at least the major parts of the 800 MHz band for high power broadcasting. Further, it will be essential not to put an absolute limit to use of bandwidth for high power broadcasting, but keep an amount of flexibility to allow for individual measures to be taken by each country or region. The question of how to make room for a multiplex number six, is already at the forefront. On this issue the situation seems to be that despite the wide use of Single Frequency Networks (SFN) and thorough coordination between neighbouring countries, there will probably not be enough space below 790 MHz for all to obtain a multiplex number six.

Electronic communication purposes are not solemnly dependent on access to the complete 800 MHz band to develop their services. On the other hand an extension of the capacity for broadcasting services, definitely depend on an extension of the bandwidth already in use. An important consideration is the possibility for electronic communication purposes to make use of bandwidth already dedicated for the purpose (above 1 GHz), as well as possibly making use of the white spaces.

We believe these aspects should be taken into consideration given the importance of a DTT network in many places as well as the need for offering a variety of TV-channels and the need to comply with the new standard for video and audio transmission as outlined above; HDTV.

Lysaker, Norway 04.09.2009

Norges televisjon as