question ITU-R 279/4

Satellite broadcasting of high-definition television

(2009)

The ITU Radiocommunication Assembly,

considering

*a)* that a high‑definition television (HDTV) service for direct satellite broadcasting is being implemented by some administrations;

*b)* that a BSS plan needs to take into account the probable simultaneous presence of standard‑definition television (SDTV) signals and HDTV signals;

*c)* that considerable technical progress in space station technology, receiving equipment performance and in transmission methods has been made, and that this may improve the efficiency of orbit and spectrum use;

*d)* that considerable technical progress in digital compression algorithms has been made, allowing broadcasting of multiple conventional TV programmes, and possibly more than one HDTV programme in a single transponder,

decides that the following Questions should be studied

1 What are the optimum HDTV system parameters and satellite channel configuration for satellite transmission?

2 What are the advantages and disadvantages of different digital coding and modulation schemes for HDTV satellite broadcasting in terms of spectrum efficiency and interference factors (inter‑ and intra‑service sharing)?

3 What are the provisions to achieve compatibility between HDTV and SDTV which are required in the design of the space and ground segments for direct satellite broadcasting, with particular consideration to avoid prejudicing the existing satellite broadcasting Plans within the 11.7-12.7 GHz band, for example:

– configuration of travelling wave tube amplifier to accommodate HDTV channels;

– spacecraft transponder channelization;

– receive terminal design features for the reception of HDTV and SDTV signals?

NOTE – See Reports ITU-R BO.1075 and ITU-R BO.2007,

further decides

1that the results of the above studies should be included in appropriate Recommendations and/or Reports;

2that the above studies should be completed by 2025.

Category: S1