

QUESTION ITU-R 64-1/6*

Planning parameters for digital broadcasting at frequencies below 30 MHz

(1999-2004)

The ITU Radiocommunication Assembly

considering

- a) that since a few years efforts have been made in several parts of the world to develop digital broadcasting systems for introduction in the LF, MF and HF broadcasting bands (150 kHz to 26 MHz);
- b) that Question ITU-R 60/6 asks for the formulation of an appropriate Recommendation by 1999;
- c) that Recommendation ITU-R BS.1348 recommends technical and operational characteristics and capabilities for digital sound broadcasting services from terrestrial transmitters, intended for vehicular, portable and fixed reception in LF, MF and HF bands;
- d) that Recommendation ITU-R BS.1349 recommends that any system developed for digital sound broadcasting to vehicular, portable and fixed receivers in the LF, MF and HF bands should have emission characteristics which are compatible with the channel widths currently in use, e.g. 10 kHz, 9 kHz and 5 kHz;
- e) that such a new digital broadcasting system has to be introduced in a compatible manner in an existing environment of AM broadcast transmissions in the LF, MF and HF bands;
- f) that some parts of the LF and MF bands are shared with other services, e.g. in Region 1 the band 255-283.5 kHz and in Region 2 the band 525-535 kHz is shared with the aeronautical radionavigation service and in Region 2 the band 1 625-1 705 kHz is shared with the fixed and mobile services;
- g) that Resolution 543 (WRC-03) has recommended provisional RF protection ratio values for digitally modulated emissions in the HF broadcasting service and asked ITU-R to continue studies on this subject and report the results of these studies to the World Radiocommunication Conference 2007,

* This Question should be brought to the attention of Radiocommunication Study Groups 8 and 9.

decides that the following Question should be studied

1 What are the values of the following planning criteria for the implementation of digital sound broadcasting systems in the bands 5 (LF), 6 (MF) and 7 (HF) in an AM environment at the beginning which gradually will change into a full digital scenario?

- minimum usable field strength;
- RF protection ratios** for the following cases:

Wanted emission	Unwanted emission
Digital	Digital
Digital	AM
AM	Digital

2 What methods of sharing with the aeronautical radionavigation, fixed and mobile services could be applied and what are the criteria to protect these services interfered with by the digital broadcast emissions and what are the criteria to protect the broadcasting services from interference caused by the shared services?

3 What protection ratios are required for the protection of digital sound broadcasting systems in the bands 5 (LF), 6 (MF) and 7 (HF) against interference from out-of-band emissions of industrial, scientific and medical (ISM) equipment, and from radiation caused by telecommunication systems utilizing power supply or telephone line distribution?

further decides

- 1** that the results of the above studies should be included in (a) Recommendation(s);
- 2** that the above studies should be completed by 2006.

Category: C1

** The determination of protection ratios should be based on the methods described in Recommendation ITU-R BS.559.