

QUESTION ITU-R 1-4/5*

Interference protection ratios and minimum field strengths required in the land mobile services

(1963-1986-1992-1998-2007)

The ITU Radiocommunication Assembly,

considering

- a) that for certain kinds of mobile service (MS) systems, partial data relating to interference protection ratios and minimum field strengths required, exist in documents of some ITU conferences and some ITU-R Recommendations (Note 1), and certain ITU-R Reports (Note 2), et al.;
- b) that such documents, however, do not constitute a complete and consistent set of data relating to protection of the desired transmission signal quality from interference of all kinds from services operating in all frequency ranges, particularly with respect to VHF band and UHF band MS systems, nor do they assure proper and consistent use in predicting interference signal levels in MS systems;
- c) that consistent methods are needed for various types of information transmission to assure consistent use of parameters and their values for determining system interference protection criteria;
- d) that consistent methods are needed as well for calculating interference due to unwanted emissions to assure protection of the desired signal quality in the necessary bandwidth of a MS system;
- e) that the Radiocommunication Bureau (BR) has requested guidance from Radiocommunication Study Groups on the methods to be employed for the calculation of the interference from the mobile-satellite service (MSS), to the MS, and on the criteria to be used;
- f) that consistent methods are needed as well for calculating interference due to spectrum sharing with other services such as MSS or fixed service to assure protection of the desired signal quality in the necessary bandwidth of a MS system;
- g) that interference prediction parameters and computational methods are also under study in other Radiocommunication Study Groups, in other telecommunications standards organizations, and in frequency coordination organizations,

decides that the following Questions should be studied

- 1 What are the signal-to-interference protection ratios which define the threshold of harmful interference for mobile services?
- 2 What are the signal-to-noise ratios and the minimum field strengths required for satisfactory reception of the different classes of emission in the mobile services?
- 3 What are the appropriate fading allowances in the mobile services?
- 4 Which combinations of interfering and victim carrier types are covered by ITU-R texts on interference calculation methods?

* Former Question ITU-R 1-4/8.

5 Which combinations of interfering and victim carriers are not currently covered by ITU-R texts describing interference criteria and/or calculation methods, and what criteria and calculation methods are appropriate for such combinations?

6 What guidance could be given on circumstances in which the probability of harmful interference between carriers can be considered to be negligible?

further decides

1 that the above studies should be continued simultaneously and with the same urgency;

2 that particular attention should be given to those studies which will assist the further refinement of the technical characteristics of land mobile systems;

3 that the above studies should address not only intra-service interference, but also inter-service sharing interference with other services such as the MSS;

4 that the results of the above studies should be included in one or more Recommendations, Reports or Handbooks;

5 that the above studies should be completed by 2010.

NOTE 1 – See Recommendations ITU-R M.441, ITU-R M.478, ITU-R SM.331 and ITU-R SM.852.

NOTE 2 – See Reports ITU-R M.358, ITU-R M.739, ITU-R M.914 and ITU-R M.1018.

Category: S2