

RECOMMENDATION ITU-R TF.374-4

STANDARD-FREQUENCY AND TIME-SIGNAL EMISSIONS

(Question ITU-R 102-1/7)

(1951-1953-1956-1959-1963-1966-1970-1974-1998)

The ITU Radiocommunication Assembly,

considering

- a) that the World Administrative Radio Conference (WARC) (Geneva, 1979), allocated the frequencies 20 kHz \pm 0.05 kHz, 2.5 MHz \pm 5 kHz (2.5 MHz \pm 2 kHz in Region 1), 5 MHz \pm 5 kHz, 10 MHz \pm 5 kHz, 15 MHz \pm 10 kHz, 20 MHz \pm 10 kHz and 25 MHz \pm 10 kHz, to the standard-frequency and time-signal service;
- b) that the same Conference allocated the following frequencies for use by the standard-frequency and time-signal satellite service:
- 400.1 MHz \pm 25 kHz,
 - 4 202 MHz \pm 2 MHz (space-to-Earth),
 - 6 427 MHz \pm 2 MHz (Earth-to-space),
 - 13.4 to 14.0 GHz (Earth-to-space),
 - 20.2 to 21.2 GHz (space-to-Earth),
 - 25.25 to 27.0 GHz (Earth-to-space),
 - 30.0 to 31.3 GHz (space-to-Earth);
- c) that additional standard frequencies and time signals are emitted in other frequency bands, e.g. at frequencies 14-19.95 kHz and 20.05-70 kHz and in Region 1 also in the bands 72-84 kHz and 86-90 kHz, which have been designated by other Conferences (see RR S5.56);
- d) the provisions of Article S.26 [33] of the Radio Regulations;
- e) that transmissions in the bands mentioned in *considering* a) and predominantly those in *considering* c) provide widely accepted means of distributing time signals and standard frequencies;
- f) that for many purposes worldwide time synchronization with an uncertainty of less than 1 ms is required, which in an ideal case should be based on simple and inexpensive equipment;
- g) that interference may reduce the usefulness of standard-frequency and time-signal services to a serious degree,

recommends

- 1** that ITU-R Study Group 7 continue its study of worldwide standard-frequency and time-signal services and explore the application of new techniques for this purpose;
- 2** that existing standard-frequency and time-signal services be operated in conformity with the detailed Recommendations of the ITU-R;
- 3** that all efforts be made to prevent or reduce the mutual interference between emissions in the allocated bands specified in the *considering*;
- 4** that the methods and results of measurements of phase instabilities over paths in bands 4 and 5 be made available to ITU-R Study Group 7;
- 5** that appropriate stations existing in band 5 be employed for distributing standard frequencies by precise control of their carrier frequencies as a complement to satellite systems distributing a time reference;
- 6** that the documentation of services in Recommendations ITU-R TF.583 and ITU-R 768 and in Chapter 2B of the ITU-R Handbook "Selection and Use of Precise Frequency and Time Systems" be taken into consideration when using existing services or planning new services.
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