

RECOMMENDATION ITU-R TF.583-6^{*,**}

Time codes

(Question ITU-R 110/7)

(1982-1990-1994-1995-1997-2001-2003)

The ITU Radiocommunication Assembly,

considering

- a) that in many branches of science and technology there is a need for the dating of events which requires knowledge of the date (year, month, day) and clock time;
- b) that this information can be transmitted in coded form at relatively low bit rates;
- c) that such coded transmissions require relatively small bandwidths resulting in economic spectrum use and enhanced reliability in the received information;
- d) that such codes are in increasingly widespread use and can be disseminated by both AM and FM broadcast services in appropriate data channels without impairing the prime service;
- e) that Universal Coordinated Time (UTC) related date and time information in digital form are available via modem in a number of countries on telephone networks;
- f) that it is important that such sources of time reference should conform with the standard for time signal emissions (see Recommendation ITU-R TF.460);
- g) that commercial production now exists of low-cost radio-controlled clocks, operating from services in band 5, for both public and private use,

recommends

- 1** that this form of time dissemination should be encouraged;
- 2** the introduction of new services in areas not adequately served and also the employment of existing transmitters for time code dissemination;
- 3** that where a new service of time code dissemination is introduced its format should conform to ISO 8601-2000 as far as possible;
- 4** that when a time code is operational its time-keeping should conform to the standard laid down in Recommendation ITU-R TF.460, i.e. the disseminated time should not differ from UTC by more than 1 ms;
- 5** that where a new service of time code dissemination is introduced its format (coding and modulation) should conform when practicable with an existing service¹ (see Annex 1).

* This Recommendation should be brought to the attention of Radiocommunication Study Group 6.

** Radiocommunication Study Group 7 made editorial corrections to this Recommendation in 2022 in accordance with Resolution ITU-R 1.

¹ The following hyperlink is provided with respect to the referred information, pending a future revision of this Recommendation: <http://www.itu.int/oth/ROA08000004/en>.

Annex 1

Information on coded timing

Coded timing information is conveyed in a variety of formats and transmission media. In many cases such information is disseminated in a broadcast mode either on dedicated time and frequency services (for example, the time services of WWVB, JJY, DCF 77 or RBU) or as a part of other types of broadcasts primarily intended for other purposes. Time code broadcasts are currently available using amplitude modulation, frequency modulation and phase modulation techniques. Other forms of time codes have been developed and are in wide use for transmitting time information directly from one piece of equipment to another via hardwired or other types of connection. Some specific examples of commonly-used time codes are provided both for the broadcast and the instrumentation time code types on that part of the ITU-R website dealing with Radiocommunication Study Group 7, select: time code examples.
