

QUESTION ITU-R 234/1*

Alternative techniques for radiolocation determination

(2007)

The ITU Radiocommunication Assembly,

considering

- a) that the current 2002 edition of the Spectrum Monitoring Handbook describes direction-finding as the only terrestrial technique to locate transmitters and harmful interference;
- b) the trends in wireless communications towards higher frequencies, wider bandwidths, more complex modulation schemes and lower power levels are making radiolocation determination more problematic;
- c) that new alternative techniques and solutions for radiolocating transmitters (such as time difference of arrival (TDOA)) are now becoming available;
- d) that said techniques may offer advantages in accuracy and capability over direction finding in some situations,

recognizing

- a) that the Radio Regulations provides definitions for *radiodetermination*, *radiolocation* and *radio direction-finding*;
- b) that the current 2002 edition of the Spectrum Monitoring Handbook describes radiolocation of transmitters on Earth using time and frequency difference measurements from two GSO satellites to locate interference to communication satellites;
- c) that Recommendation ITU-R SM.1598 describes alternative techniques for direction-finding and location specifically for time division multiple access and code division multiple access signals;
- d) that Recommendation ITU-R SM.854-1 describes an alternative direction-finding and location determination technique of signals below 30 MHz using single site location (SSL),

noting

- a) that Question ITU-R 28-3/1 proposed that methods to improve the accuracy of direction-finding and related digital signal processing be studied, but did not specifically address using TDOA or frequency difference of arrival (FDOA) methods for radiolocation,

* In the year 2009, Radiocommunication Study Group 1 extended the completion date of studies for this Question.

- further decides*

- Category: S2