

RECOMMENDATION 685*

INTERNATIONAL SYNCHRONIZATION OF UTC TIME SCALES

(Question 1/7)

(1990)

The CCIR,

CONSIDERING

- (a) that Recommendation 460 only requires time-signal emissions to be synchronized to UTC to within 1 ms, but also that they should conform to UTC “as closely as possible”;
- (b) that each timing centre's UTC(k) should be in close agreement with UTC (Recommendation 536);
- (c) that the lack of synchronization between the UTC(k) time scales, typically of a few microseconds, causes confusion and difficulty among some users;
- (d) that there is an increasing number of users, in communication systems, navigation systems, radioastronomy and geodesy, requiring world-wide synchronization at the few nanoseconds level,

UNANIMOUSLY RECOMMENDS

1. that each timing centre, within the constraints of their operational requirements, pursue improved methods, digital servo techniques, and algorithms for synchronizing their UTC(k) to UTC, one microsecond being a desirable goal;
2. that timing centres, as appropriate, pursue the improvement of the long-term stability of their clocks and of associated methods used to generate their UTC(k);
3. that the timing centres in synchronizing their UTC(k) should seek to coordinate their efforts with the BIPM.

* The Director of the CCIR is requested to bring this Recommendation to the attention of the Director of the CCITT, the President of the CIPM and of the Director of the BIPM.