

About This Standard

Mandated

Standard Identifier ITU-R TF460-6

Title of Standard

Standard-frequency and time-signal emissions 02/02

Standards History

Introduced to Registry	Date Emerging	Date Mandated	Last Status Update	Last Status Review	Inactive/Retired
2008-04-03	n/a	2008-04-03	2008-04-03	2008-04-03	n/a

Standards Body [ITU](#)

[Broken Link?](#)

URL to Access or Acquire <http://www.itu.int>

Working Group

Primary Owner Geospatial Intelligence TWG (GWG)

Secondary Interest No Secondary Interest

Service Area GEOINT: Geospatial

KIPs No KIP Found

Standard Applicability

2008-03-27

Coordinated Universal Time (UTC), traceable to the UTC U.S. Naval Observatory (USNO) and maintained by the USNO, shall be used for time-of-day information exchanged among DoD systems. Time-of-day information is exchanged for numerous purposes including time-stamping events, determining ordering, and synchronizing clocks. Traceability to UTC USNO may be achieved by various means depending on system-specific accuracy requirements. These means may range from a direct reference via a GPS time code receiver to a manual interface involving an operator, wristwatch, and telephone-based time service. It is important to note that ISO 8601 (DISR mandated) specifies a character string format for expressing date and time. It does specify that UTC shall be used but does not specify what UTC is. It cites ITU 460-5 as the normative reference that specifies UTC. In other words, there is a mandated standard that references a retired one. ITU 460-5 should not have been retired without inclusion of ITU 460-6. This CR is to rectify that oversight.

Standard Abstract

2008-03-27

Recommends that all standard-frequency and time-signal emissions conform as closely as possible to Coordinated Universal Time (UTC) (see Annex I); that the time signals should not deviate from UTC by more than one millisecond; that the standard frequencies should not deviate by more than 1 part in 10, and that the time signals emitted from each transmitting station should bear a known relation to the phase of the carrier; 2. that standard-frequency and time-signal emissions, and other time-signal emissions intended for scientific applications (with the

possible exception of those dedicated to special systems) should contain information on the difference between UT1 and UTC (see Annexes I and II); 3. that this document be transmitted by the Director, CCIR, to all administrations Members of the ITU, to IMO, ICAO, the CGPM, the BIPM, the IERS, the International Union of Geodesy and Geophysics (IUGG), the International Union of Radio Science (URSI) and the International Astronomical Union (IAU); 4. that the standard-frequency and time-signal emissions should conform to RECOMMENDS 1 and 2 above as from 1 January 1975.

Profiling Questions

GEOINT: Geospatial • Does your system require precision time?

Products Incorporating This Standard

DoD Systems

Relevant Information

None

Implementation Guidance

DoDD 4650.05, USNO

Standard Selection Criteria

Net-Centric Interoperability

Coordinated Universal Time (UTC), traceable to the UTC U.S. Naval Observatory (USNO) and maintained by the USNO, shall be used for time-of-day information exchanged among DoD systems. Time-of-day information is exchanged for numerous purposes including time-stamping events, determining ordering, and synchronizing clocks. Traceability to UTC USNO may be achieved by various means depending on system-specific accuracy requirements. These means may range from a direct reference via a GPS time code receiver to a manual interface involving an operator, wristwatch, and telephone-based time service. The UTC definition contained in this standard, traceable to UTC USNO, needs to be mandated.

Technical Maturity

This standard has been used in the realization of UTC since it was first implemented in 1972. It has undergone six revisions in an ongoing process by the ITU to improve the standard. The latest revision was ratified in 2002 and has been in use in DoD systems since that time.

Public Availability

See ITU web site

Implementability

This standard is supported by the USNO, which is chartered to maintain Precision Time and Time Interval Standards (PTTI) for DoD. The standard has been used in the realization of UTC since it was first implemented in 1972 and is in use in a wide range of DoD programs, systems, and operations.

Authority

DoDD 4650.05 (August 2007) states, "The Secretary of the Navy shall direct the U.S. Naval Observatory to: (4.13.1) Develop and maintain the standards for Precise Time and Time Interval (PTTI) services and the celestial reference frame for the DoD Components (4.13.2) Provide representatives to PNT committees and working groups, as required (4.13.3) Serve as the DoD PTTI Manager." In support this directive the Navy has supported development of the key PTTI standard ITU-R TF.460-6 Standard-frequency and time-signal emissions, 2002.

Standard Type Non-Military

Keywords for Search None