

Annex C: Time and frequency measurements (normative)

C.1 General

This annex contains specific technical requirements not covered in ISO/IEC 17025 that are applicable to a laboratory recognized as competent to carry out time and frequency calibrations.

C.2 Measurement traceability

C.2.1 Because a waveform is a set of ordered pairs (i.e., time, voltage), traceability of both the time and voltage shall be in place.

NOTE This is normally demonstrated by calibration of a high-speed oscilloscope or calibration of a fast-rise generator by an external source meeting the requirements in NIST Handbook 150, Annex B.

C.2.2 Laboratories that utilize a Global Positioning System Disciplined Oscillator (GPSDO) to establish traceability shall:

- a) have procedures in place to ensure GPS is locked and working properly;
- b) consider the internal oscillator's short-term stability and measurement time in the laboratory's reported uncertainty.