

Comment Template for: Draft Profile of Responsible Use of Positioning, Navigation, and Timing

Please submit responses to: pnt-eo@list.nist.gov by November 23, 2020

Comment #	Organization Name	Submitted By (Name/Email)	Page #	Line #	Section	Comment (Include rationale for comment)	Suggested Change	Type of Comment (General/Editorial/Technical)
1	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	1	1		According to IEEE and IEC, a profile is a subset of a standard. The awkwardness	Either explain from which standard the document is a	Editorial
2	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	1	1		In general, the text is too verbose and self-praising	streamline the text	Editorial
3	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	1	249		"such as" is confusing	Remove "such as"	Editorial
4	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	2	271		"GPS" is too specific since diversity of time/position sources provides a protection and radio is not the only time distribution medium.	Use "GNSS" instead of GPS. Also consider other sources of time/position such as WWV or inertial, as line 326-328 says	Editorial
5	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	4	293		First paragraph is redundant text	Concentrate on "customization"	Editorial
6	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	5	337		IEC standards are missing	Consider IEC 62443 and IEC 62351	Editorial
7	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	5	341		redundant text	the sponsors should be named in the introduction	Editorial
8	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	9	406		detect disruption, etc...	use the identifier given in Table 1	Editorial
9	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	8	400		terms "custom-tailored", "custom profile", "tailored profile"	use only one term	Editorial
10	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	9	413		"high-level profile" , "sector-subsector profile" hints at a hierarchical "profiles"	Use only one term for the PNT "Profile" (with uppercase?)	Editorial
11	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	11	437		unique identifiers of Table 1 missing	name the unique identifiers, eg. ID.AM	Editorial
12	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	15			"Continuous calibration to UTC" UTC is legal time but is not a safe reference	Reference TAI time as distributed by GPS or IEEE 1588	Technical
13	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	15			Using antenna to find receivers is quite challenging. This applies only to PNT receivers that transmit radio signals.	Explain how antennas can be used to find PNT receivers.	Technical
14	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	17			What is meant by "relative precision" ?	Clarify	Editorial
15	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	18	AM3		Methods for resolving data discrepancies cannot be identified off-line	Indicate that there are several simultaneous PNT sources, and set criterial for "most beneficial" sources in face of cyber-threat.	Technical
16	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)		AM4		"locate all PNT antennas" presumes that the time distribution is via radio, which applies only to the grandmaster clocks.	Clarify how to identify the other PNT devices	Technical
17	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirmann (Switzerland)	21			Table 4 refers to "Business Environment" but it is unclear how this can relate to "business"	Is that "operational" ?	Editorial

18	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirrmann (Switzerland)	21		"link delays " are static, except when radio-connected objects are moving	Explain what "static and dynamic delay" means	Technical
19	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirrmann (Switzerland)	21		indeed, leap seconds can be handled differently and this is a source of confusion that should not exist in a well-designed PNT. Especially the "smeared leap second" supported by some NTP servers can cause serious disruptions as time differences of up to 1 s can exist during the leap. Beware that ITU-R can change the definition of the leap second in a way that is not backward compatible.	Require that leap second handling is uniform and checked throughout the system. Refer to the leap second handling in IEC 62439-3 (not in list) and IEC 61850-90-4. Recommend using TAI instead of UTC for all mission-critical systems (GPS uses it and could not work with UTC), and accept UTC only for human-readable displays.	
20	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirrmann (Switzerland)		Ref	IEC 62439-3 missing (doubly attached clocks in highly available networks).	include IEC 62439-3 Ed. 4 International Electrotechnical Commission, (2021) Industrial Communication Networks - High availability automation networks - Part 3: Parallel Redundancy Protocol (PRP) and High-availability Seamless Redundancy (HSR), available at at: https://webstore.iec.ch/publication/24447 (to be corrected after publication)	Editorial
21	IEC TC57 WG10 / IEC TC57 WG10	Hubert Kirrmann (Switzerland)		4	In general, the distinction between design phase, implementation phase, test phase, deployment, operation, maintenance and disposal is not adequately reflected in the categories.	The document would benefit from being organized according to the life-cycle rather than by categories such as identify, protect, detect, respond, recover. A checklist would be appreciated.	General