
Development of IEEE Standard P2664 – Communications for time series data (STTP)

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COMMUNICATION STANDARDS FOR SYNCHROPHASORS

- **IEEE 1344**
 - Original standard, based on lab development and field tests
- **IEEE C37.118**
 - Originally developed for serial as well as network
 - Minimized amount of data (reduce bandwidth) & data re-processing (reduce processor loads)
 - Extended and added features with C37.118.2 in 2011
 - A revision of C37.118.2 is in progress with significant changes
- **IEC 61850, TR 90-5**
 - Part of the 61850 complex, now integrated into Rev 2
 - Not widely deployed
- **Other standardized methods used including DNP-3, IEC, ModBus, and OPC**

COMMUNICATION AND POWER SYSTEM HAVE EVOLVED

- Almost all communication is network based
 - Wide bandwidth available
- Processors are orders of magnitude more capable
 - Processors can do much more error checking and alignment in real-time
- PMUs are much more widely deployed
 - Produce huge volume of data
- Data systems use more on-line configuration, need security
- **Communications has evolved to serve new requirements**

P2664 DIFFERENCES FROM CURRENT STTP

- Added higher time precision options
 - STTP native precision uses 100 ns time ticks
 - Offsets are used to reduce timestamp size and precision
 - Higher time precision may now be specified – expressed using offsets
- **Modified/added some commands such as—**
 - Define Operational Modes requires a publisher response
 - Get Primary Metadata Schema and Signal Selection Metadata Schema
- **Includes recommendations for Metadata and Publisher/Subscriber APIs**

DEVELOPMENT AND PUBLICATION TIMELINE FOR IEEE P2664

- Development started in 2018, PSCCC sponsor, WG P10
- Completion date has been extended to December 2024
- P10 has produced a complete draft
 - Current draft is approved by WG membership
 - WG will resolve comments this month (April)
- **Plan going to ballot in May or June**
 - Forming ballot body in May
 - *If you want to ballot, let me know and I'll be sure you get an invitation*
 - Ballot will probably open in June
- **Anticipate publication by December 2023 (end of this year)**

Thank you!

QUESTIONS?



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