

IEEE P1159.3 PQDIF Task Force Meeting

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January 9, 2012

Garden Grove, California, USA



Participants, Patents, and Duty to Inform

- All participants in this meeting have certain obligations under the IEEE-SA Patent Policy.
 - Participants [Note: Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2]:
 - “Shall inform the IEEE (or cause the IEEE to be informed)” of the identity of each “holder of any potential Essential Patent Claims of which they are personally aware” if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
 - “Personal awareness” means that the participant “is personally aware that the holder may have a potential Essential Patent Claim,” even if the participant is not personally aware of the specific patents or patent claims
 - “Should inform the IEEE (or cause the IEEE to be informed)” of the identity of “any other holders of such potential Essential Patent Claims” (that is, third parties that are not affiliated with the participant, with the participant’s employer, or with anyone else that the participant is from or otherwise represents)
 - The above does not apply if the patent claim is already the subject of an Accepted Letter of Assurance that applies to the proposed standard(s) under consideration by this group
 - Early identification of holders of potential Essential Patent Claims is strongly encouraged
 - No duty to perform a patent search

Patent Related Links

- All participants should be familiar with their obligations under the IEEE-SA Policies & Procedures for standards development.
- Patent Policy is stated in these sources:
 - IEEE-SA Standards Boards Bylaw
 - <http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6>
 - IEEE-SA Standards Board Operations Manual
 - <http://standards.ieee.org/develop/policies/opman/sect6.html#6.3>
 - Material about the patent policy is available at
 - <http://standards.ieee.org/about/sasb/patcom/materials.html>

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit <http://standards.ieee.org/about/sasb/patcom/index.html>

This slide set is available at <https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.ppt>

Call for Potentially Essential Patents

- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
 - Either speak up now or
 - Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or
 - Cause an LOA to be submitted

Other Guidelines for IEEE WG Meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
 - Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
 - Don't discuss specific license rates, terms, or conditions.
 - Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.
 - Technical considerations remain primary focus
 - Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
 - Don't discuss the status or substance of ongoing or threatened litigation.
 - Don't be silent if inappropriate topics are discussed ... do formally object.
- See IEEE-SA Standards Board Operations Manual, clause 5.3.10 and "Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy" for more details.

Meeting Agenda

- Introductions
- Overview
- Planned Task Force Activities
- Updates to PQDIF Values
- Next Steps
- Next Meeting

IEEE Std 1159.3 Task Force

IEEE Power & Energy Society

- Transmission and Distribution Committee
 - Power Quality Subcommittee
 - P1159 Working Group on Power Quality Monitoring
 - P1159.3 Task Force on Power Quality Data Interchange

Task Force Web Site: <http://grouper.ieee.org/groups/1159/3/>

What is IEEE PQDIF?

- PQDIF is an IEEE recommend practice for power quality data interchange format that allows exchange of measurements and simulation results between computer hardware and software systems.
- PQDIF is a binary file format that consists of three main records
 - A single container record
 - One or more data source records
 - One or more optional monitor settings records
 - One or more observation records

What is IEEE PQDIF?

- The PQDIF specification includes both optional and mandatory “tags”
 - tagVendorID
 - tagEquipmentID
 - tagQuantityMeasuredID
 - ID_QM_VOLTAGE, ID_QM_CURRENT, ID_QM_POWER, etc.
 - tagQuantityCharacteristicID
 - ID_QC_RMS, ID_QC_TOTAL_THD, ID_QC_FLKR_PST, etc.
 - tagPhaseID
- A vendor must use the mandatory tags for PQDIF file to be “compliant.” A vendor can include or exclude the optional tags, and is free to extend the standard using proprietary tags.
- A PQDIF reader is free to ignore proprietary tags.

IEEE Std 1159.3 PQDIF Milestones

- The IEEE P1159.3 Task Force was formed in 1996 by the IEEE P1159 Working Group to write a power quality data interchange format (PQDIF).
- The first version of the standard was completed in 2002 and affirmed by vote in 2003.
- The task force focused on promotion of the recommended practice from 2004 to 2008.
- A reaffirmation of the 2003 version was completed in March 2009.
- Work began in 2010 to write a revision.

Planned Task Force Activities during 2012-2013

- Complete editorial changes and corrections to 2003 edition of IEEE Std. 1159.3
- Add annex on PQDIF and IEC 61850
- Add new tags
- Add new ID values for existing or new tags
- Promote new IDs to software developers using PQDIF and solicit input and more active participation
- Apply for PAR for new version of IEEE Std 1159.3
- Promote PQDIF during a panel session at ICHPQ 2012 in Hong Kong in June 2012
 - Recruit new task force members from Asia

Recent P1159.3 Task Force Activities

Updates to PQDCOM4.DLL in July 2011

- PQDCOM4.DLL is the 32-bit PQDIF ActiveX/COM library that be used to read and write PQDIF files
 - Provides high-level functions for reading and writing PQDIF files
 - Includes more than twenty bug fixes in both the high-level C++ and the low-level C libraries
- PQDCOM4.DLL was updated numerous times from 2009 to 2011 but was distributed in object code only.
- However, the source code to PQDCOM4.DLL was posted to the web site in July 2011. This update incorporates nearly nine years of fixes and updates since the last posting of its source code was in 2002.



Recent P1159.3 Task Force Activities

Updates to PQDCOM4.DLL in July 2011

- Updated to fix a problem where exported IDs represented as GUIDs could be mishandled. This problem was preventing the export of values logs containing samples of Pst, Plt, and TDD.
- Includes zLib 1.2.5 compression library
 - bug fixes, speed enhancements
- Better handling when reading PQDIF files where nominal values, precision, and resolution are not defined in the PQDIF file
- Allow read of series with up to one million samples. In previous versions, the number of samples that could be imported was limited to one megabyte

Recent P1159.3 Task Force Activities

Updates to P1159.3 Database in January 2012

- Revised a Microsoft Access database that was first built during the development of IEEE Std. 1159.3-2003 that was used to maintain the ID values that define PQDIF itself and be used to produce source code files for C++, C#, Java, and VB6.
 - Updated to allow use with Access 2007
 - Added records to support a new “PQDIF Version 1.6”
 - Added new values for vendor IDs, equipment IDs, and phase IDs that were submitted to the task force in 2010 and 2011.
 - Built new source code using the PQDIF Version 1.6 values

New tagVendorID Values in Draft Version of PQDIF Version 1.6

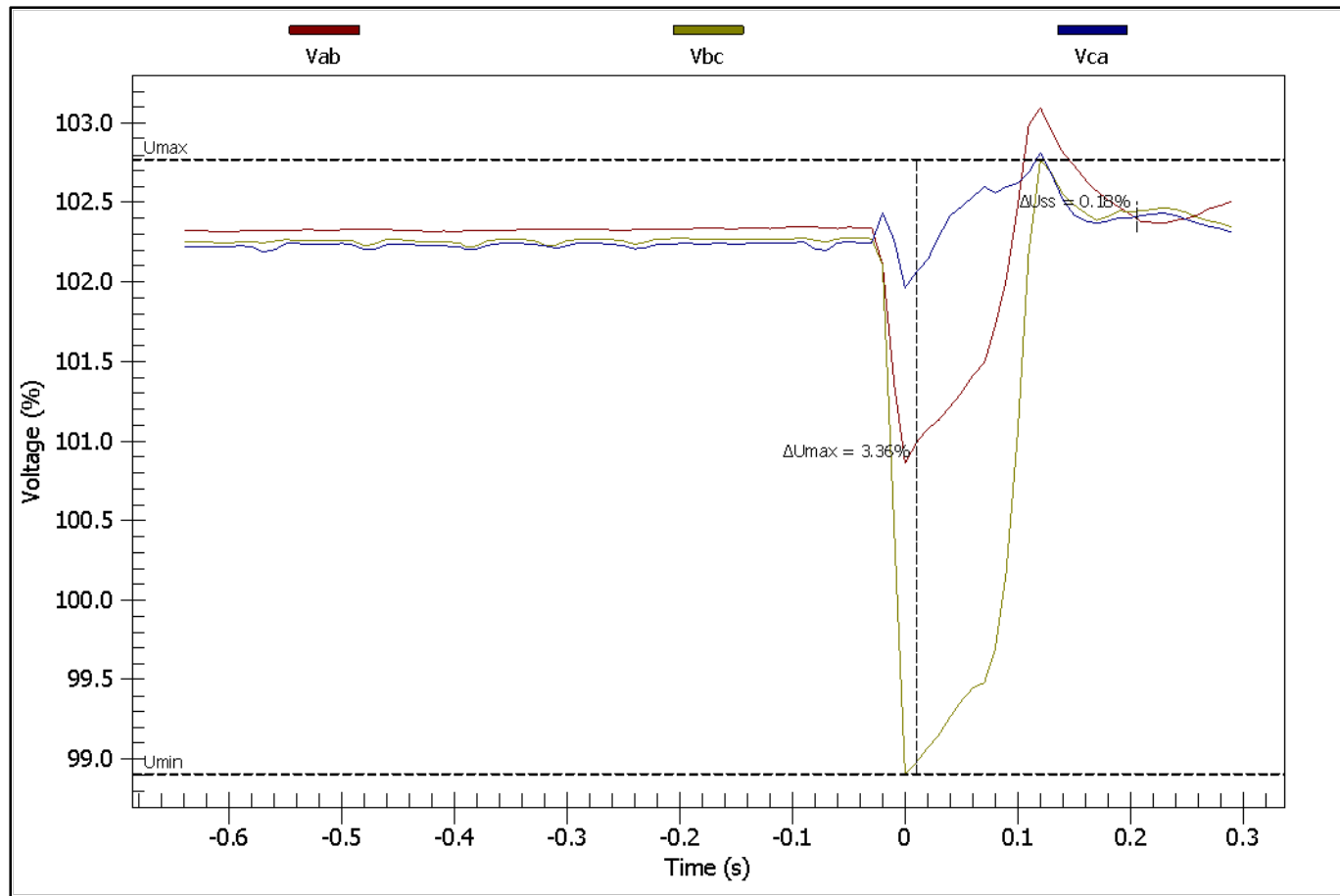
- ID_VENDOR_A_EBERLE
- ID_VENDOR_ALPESTECHNOLOGIES
- ID_VENDOR_AMETEK
- ID_VENDOR_ARBITER
- ID_VENDOR_CESINEL
- ID_VENDOR_ELECTRO_INDUSTRIES
- ID_VENDOR_ELSPEC
- ID_VENDOR_EMAX
- ID_VENDOR_ENERNEX
- ID_VENDOR_HIOKI
- ID_VENDOR_LANDIS_GYR
- ID_VENDOR_METRUM
- ID_VENDOR_NEXANT
- ID_VENDOR_ORL
- ID_VENDOR_PSL
- ID_VENDOR_SST
- ID_VENDOR_UNIPOWER

New tagEquipmentID Values in Draft Version of PQDIF Version 1.6

- ID_EQUIP_ARBITER_1133A
- ID_EQUIP_ELSPEC_PQSCADA
- ID_EQUIP_EMAX_DIRECTOR
- ID_EQUIP_ETK_PQDIFFRACTOR
- ID_EQUIP_LANDIS_GYR_MAXCOM
- ID_EQUIP_ORL_AP300
- ID_EQUIP_ORL_OTHER
- ID_EQUIP_ORL_PM1000
- ID_EQUIP_ORL_PM1200
- ID_EQUIP_ORL_PM2000
- ID_EQUIP_ORL_PM2200
- ID_EQUIP_ORL_PM3000
- ID_EQUIP_ORL_PM3006
- ID_EQUIP_ORL_PM4000
- ID_EQUIP_ORL_PM6000
- ID_EQUIP_ORL_PM7000
- ID_EQUIP_ORL_RANGER_II
- ID_EQUIP_ORL_RANGER_III
- ID_EQUIP_ORL_RANGER_IV
- ID_EQUIP_ORL_RANGERHA5000
- ID_EQUIP_ORL_RANGERMETER_SOCKET
- ID_EQUIP_ORL_RANGERRR1250
- ID_EQUIP_ORL_RANGERSCOUT
- ID_EQUIP_PQUBE
- ID_EQUIP_SST_IGRID
- ID_EQUIP_GPT_61000
- ID_EQUIP_GPT_ES210
- ID_EQUIP_GPT_ES230

New tagQuantityCharacteristicID Value in Draft Version of PQDIF Version 1.6

- ID_QC_RAPID_VOLTAGE_CHANGE



New tagPhaseID Values in Draft Version of PQDIF Version 1.6

- ID_PHASE_LN_MAX
- ID_PHASE_LN_MIN
- ID_PHASE_LL_MAX
- ID_PHASE_LL_MIN

*The existing version already includes
ID_PHASE_LN_AVG and ID_PHASE_LL_AVG*

Recent Task Force Activities

Updates to PQDiffraction in January 2012

- A new version of the PQDiffraction® software application was released in January 2012 to support the draft PQDIF 1.6 ID values.
 - PQDiffraction is a free software application for viewing measurements within PQDIF files using interactive charts and tables.
 - It also provides a diagnostic mode for assessing noncompliance with IEEE Std 1159.3-2003.
- Available to download on the IEEE P1159.3 Web Site

Next Task Force Activities

Review by Task Force Members

- We need some volunteers to review the list of ID values in the existing IEEE Std 1159.3-2003 and to identify values that need to be added or deleted.
- The review should be completed over the next eight weeks.

Next Task Force Activities: Tag Review

- tagPhaseID
 - ID_PHASE_AN, ID_PHASE_BN, and ID_PHASE_CN, etc.
- tagQuantityMeasuredID
 - ID_QM_VOLTAGE, ID_QM_CURRENT, etc.
- tagQuantityUnitsID
 - ID_QU_AMPS, ID_QU_PERUNIT, ID_QU_TESLAS
- tagVendorID
- tagEquipmentID
- tagQuantityCharacteristicID
 - ID_QC_RMS, ID_QC_THD, ID_QC_FLKR_PST, etc.
- tagDisturbanceCategoryID
- tagQuantityTypeID
 - ID_QT_WAVEFORM, ID_QT_PHASOR, ID_QT_MAGDUR, etc.

Next Task Force Activities

Coordination with Correspondence Liaisons

- Known third parties will be notified that there is a new draft of the standard and source code available for review.
- Apply for a PAR to revise IEEE 1159.3
- Should we have a web meeting?
 - Electrotek can provide Microsoft Live Meeting for hosting the presentation. Can someone volunteer to assist with hosting the conference call?

Next Task Force Activities

- Apply for PAR for new version of IEEE Std 1159.3
- Promote PQDIF during a panel session at ICHPQ 2012 in Hong Kong in June 2012
 - Recruit new task force members from Asia

Next Task Force Meeting

- IEEE/PES 2012 General Committee Meeting
 - Monday, July 23, 2012
 - Manchester Grand Hyatt in San Diego