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The Printer Working Group

PWG Policy

Definition of the Standards Development Process



Version 2.0
~~March~~April ~~06~~3, 2004

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The Printer Working Group

PWG Policy Definition of the Standards Development Process

Version 2.0
MarchApril 063, 2004

Abstract: This document defines the standards development process that guides and controls the work of the ~~IEEE-~~ ~~ISTO~~-Printer Working Group, an organization developing open standards for the Print, Imaging, MFP and related Services industries. This document organizes the flow of standards creation from Brainstorming, Requirements gathering and Charter definition through Working Drafts, Candidate Standards and Standards. Herein are the guidelines for conducting Last Call, assuring interoperability and establishing levels of formal approval. PWG Process v2.0 builds on the original PWG Process document but has been rewritten for greater clarity. Sections relating to Intellectual Property and Confidentiality are unaltered but the overall process has been streamlined, compared to the original, and sound file naming and document versioning guidelines defined. This is a process defining document, not an industry standard.

This version of the PWG Standards Development Process is available electronically at:
<ftp://ftp.pwg.org/pub/pwg/standards/process/pwg-process20-20040406.pdf>, .doc

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83 **About the IEEE-ISTO**

84 The IEEE-ISTO is a not-for-profit corporation offering industry groups an innovative and flexible operational forum
 85 and support services. The IEEE Industry Standards and Technology Organization member organizations include
 86 printer manufacturers, print server developers, operating system providers, network operating systems providers,
 87 network connectivity vendors, and print management application developers. The IEEE-ISTO provides a forum not
 88 only to develop standards, but also to facilitate activities that support the implementation and acceptance of
 89 standards in the marketplace. The organization is affiliated with the IEEE (<http://www.ieee.org/>) and the IEEE
 90 Standards Association (<http://standards.ieee.org/>).

91 For additional information regarding the IEEE-ISTO and its industry programs visit <http://www.ieee-isto.org>.

92 **About the Printer Working GroupIEEE-ISTO PWG**

93 The Printer Working Group (or PWG) is a Program of the ~~IEEE-ISTO. All references to the PWG in this document~~
 94 ~~implicitly mean "The Printer Working Group, a Program of the IEEE ISTO."~~IEEE Industry Standards and Technology
 95 ~~Organization (ISTO) with member organizations including printer manufacturers, print server developers, operating~~
 96 ~~system providers, network operating systems providers, network connectivity vendors, and print management~~
 97 ~~application developers.~~ The PWGgroup is chartered to make printers and the applications and operating systems
 98 supporting them work together better. ~~All references to the PWG in this document implicitly mean "The Printer~~
 99 ~~Working Group, a Program of the IEEE ISTO."~~ In order to meet this objective, the PWG will document the results of
 100 their work as open standards that define print related protocols, interfaces, data models, procedures and
 101 conventions. Printer manufacturers and vendors of printer related software will benefit from the interoperability
 102 provided by voluntary conformance to these standards.

103 In general, a PWG standard is a specification that is stable, well understood, and is technically competent, has
 104 multiple, independent and interoperable implementations with substantial operational experience, and enjoys
 105 significant public support.

106 For additional information regarding the Printer Working Group visit: <http://www.pwg.org>

107 **Contact information:**

108 The Printer Working Group
 109 c/o The IEEE Industry Standards and Technology Organization
 110 445 Hoes Lane
 111 Piscataway, NJ 08854
 112 USA

114 PWG Web Page: <http://www.pwg.org/>
 115 PWG Mailing List: pwg@pwg.org

116 To subscribe to the PWG mailing list, send the following email:

- 117 1) send it to majordomo@pwg.org
- 118 2) leave the subject line blank
- 119 3) put the following two lines in the message body:
- 120 subscribe pwg
- 121 end
- 122

123 Members of the PWG and interested parties are encouraged to join the PWG Mailing List in order to participate in
 124 any discussions of clarifications or review of the PWG Process.

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178 **1 Introduction**

179 This document establishes the process that is followed as open industry standards are developed by the ~~IEEE-ISTO~~
 180 Printer Working Group. The Printer Working Group (or PWG) is a Program of the IEEE Industry Standards and
 181 Technology Organization (ISTO) and [all references to the PWG in this document implicitly mean “The Printer](#)
 182 [Working Group, a Program of the IEEE ISTO.”](#) The PWG is an alliance among printer manufacturers, print server
 183 developers, operating system providers, network operating systems providers, network connectivity vendors, print
 184 and print management application developers chartered to make printers and the applications and operating systems
 185 supporting them work together better. ~~All references to the PWG in this document implicitly mean “The Printer~~
 186 ~~Working Group, a Program of the IEEE ISTO.”~~ In order to meet this objective, the PWG will document the results of
 187 their work as open standards that define print related protocols, interfaces, procedures and conventions. Printer
 188 manufacturers, vendors of printer related software and the consuming public will benefit from the interoperability
 189 provided by voluntary conformance to these standards.

190
 191 A PWG standard is a specification that is stable, well understood, technically competent and has multiple,
 192 independent implementations with substantial operational experience, demonstrated interoperability and significant
 193 public support. The PWG may issue a standard as a PWG standard and/or when appropriate submit the standard to
 194 other standards organizations, such as the IETF, ISO, ITU, W3C, IEEE, or ECMA. In developing a standard, a
 195 working group of the PWG may define durable documents such as WSDL, Schema or common industry semantics
 196 that need to have well known, persistent filenames and file paths.

197 This process document establishes

- 198 1. The stages, or maturity levels a standard will go through from Charter and Requirements through Drafts,
 199 Candidates and Standard to the final, Maintenance stage of an established standard.
- 200 2. Working documents naming and versioning
- 201 3. Standards naming and numbering
- 202 4. File name and path conventions for durable documents such as WSDL and schema.

203
 204
 205 ~~If this policy document can be updated, the and a new version can be subject to last call and formal approval as~~
 206 ~~described, herein, be produced.~~ As long as section 10 is not modified, the new version ~~must~~[may](#) be approved
 207 through the Formal Approval process described in section ~~8.3.17-3.4~~. If section 10 is modified, 100% of all PWG
 208 members must approve the new document (abstentions/non-votes are not allowed).

209 **2 Organization of the PWG**

210 The Printer Working Group is composed of representatives from printer manufacturers, print server developers,
 211 operating system providers, network operating system providers, network connectivity vendors, and print and print
 212 management application developers. Member organizations are those companies, individuals or other groups (i.e. a
 213 university) that have agreed to participate and operate under the processes and procedures of the ~~IEEE-ISTO~~-by-
 214 laws, the ~~ISTO-PWG~~[Printer Working Group](#) Program Participation Agreement and this document and have paid the
 215 annual assessment. Multiple individuals employed by the same company or other organization cannot join the PWG
 216 as individual members. Associates or affiliates of member organizations which are beneficially controlled or owned

217 by said member organization with more than fifty percent (50%) of the voting stock or equity shall not be considered
218 a separate entity and are not eligible for separate membership in the PWG. The annual assessment is set each year
219 by the PWG itself.
220

221 2.1 PWG Officers

222 The PWG has a Chair position responsible for organizing the overall agenda of the PWG. The PWG chair is elected
223 in odd numbered years by a simple majority of the PWG members to a two-year term of office that begins on
224 September 1st. Responsibilities of the PWG chair include creating working groups, appointing working group chairs,
225 assuring that working groups maintain adequate leadership, making local arrangements for PWG meetings (this may
226 be delegated as appropriate), setting the high level PWG agenda, chairing the PWG plenary session, ensuring that
227 the PWG web and FTP site are maintained (~~see section Error! Reference source not found.~~), and assisting
228 working group chairs to accomplish their tasks. The PWG Chair must be a representative of a PWG Member
229 Organization. The PWG Chair is an ex officio member of all working groups.
230

231 The PWG Vice Chair is elected in odd numbered years by a simple majority of the PWG members to a two-year term
232 of office, beginning September 1st. The Vice Chair's responsibilities are to act in the absence of the chair and
233 provide assistance to the Chair in carrying out his or her role, as required. The PWG Vice Chair must be a
234 representative of a PWG Member Organization. The PWG Vice Chair is an ex officio member of all working groups.
235

236 The PWG Secretary is elected in odd numbered years to a two-year term of office by a simple majority of the PWG
237 members. It is the Secretary's responsibility to record and distribute the minutes of all PWG plenary sessions and
238 other meetings, as required, to support the PWG chair. The PWG Secretary must be a representative of a PWG
239 Member Organization. The PWG Secretary is responsible, in cooperation with the IEEE ISTO, for managing number
240 blocks for standards naming and maintaining a PWG Member Organization roster including contact ~~information~~ and
241 company profile information, including logo, as it pertains to representation on the PWG web site. The PWG
242 Secratray is the only member authorized to install submissions or make changes to the "standards", "candidates" or
243 "informational" top-level permanent directories of the PWG.
244

245 The PWG Steering Committee is composed of the PWG Chair, Vice Chair, Secretary, and chairs of all active working
246 groups. The Steering Committee shall meet upon the call of the PWG Chair or by a majority of its members to
247 discuss matters of concern of the PWG. Where matters come to a vote in the Steering Committee, decisions are
248 made by simple majority of the entire committee (abstentions/non-votes are counted as no votes), with one vote per
249 person.

250 2.2 Working Group Officers

251 Under the PWG Chair are a number of working groups (WG), which are chartered for the purpose of developing a
252 specific standard. Working groups are chartered as required to address specific areas of standardization. A working
253 group is considered active until it satisfies its charter or is otherwise terminated by the Working Group Chair with the
254 agreement of the Steering Committee.
255

256 The PWG Chair appoints the Chair of a WG, with approval (simple majority) at a PWG plenary. The WG Chair's term
257 is indefinite and would normally extend through the period of time during which there is active maintenance on the
258 standard(s) developed by the working group. The Working Group Chair must be a representative of a PWG Member
259 Organization. The working group Chair is responsible for appointing a Vice Chair and Secretary for the WG, creating
260 the WG Charter, setting the agenda for meetings of the WG, chairing WG meetings, appointing editors for WG
261 documents, driving the work of the WG to completion, and reporting status of the WG at PWG plenary sessions.
262

263 The WG Chair appoints the Vice Chair of a WG, with approval (simple majority) of the WG. The WG Vice Chair's
264 term is indefinite. The Vice Chair acts in the absence of the Chair and assists, as appropriate, in carrying out the
265 responsibilities of the Chair.
266

267 The WG Chair appoints the Secretary for a WG, with approval (simple majority) of the WG. The term of office is
 268 indefinite. The responsibilities of the WG Secretary are to record and distribute minutes of working group meetings
 269 and to record attendance for members of that working group.

270 **2.3 PWG Meetings**

271 The annual face-to-face meeting schedule for the PWG is set in October of each year. As a guideline, it is common
 272 to hold face-to-face meetings every 6 to 10 weeks with phone and web based conferencing during the interim. Face-
 273 to-face meetings are to be distributed geographically to try and ~~distribute~~normalize the travel burden among
 274 members. Meeting schedule and locations are determined through a proposal / consensus process and no other
 275 specific process or guarantees are implied. Meeting location details are to be published at least 4 weeks in advance
 276 of meetings. New documents must not be introduced under any circumstances less than 1 week prior to a face-to-
 277 face as this only leads to confusion and ineffective meeting results. Decisions made at PWG administrative,
 278 business, or plenary meetings require a simple majority, 1 vote per member organization.

279
 280 Dial-up and web conference details, agenda and reference materials are to be published at least 48 hours in
 281 advance when work is being conducted via remote conferencing.
 282

283 **2.4 PWG Communications Infrastructure**

284 The PWG will maintain

- 285 1. A PWG web site <http://www.pwg.org> where PWG working group information, meeting schedules and
 286 document links and other pertinent information may be found.
- 287 2. A PWG ftp site <ftp://ftp.pwg.org> where PWG working drafts, standards, procedures, schema, templates and
 288 other useful and necessary documents may be accessed.
- 289 3. An e-mail reflector, including archive, for each active project.
 290

291 **3 PWG Standards development and maintenance**

292 There are 3 main phases to standards development in the PWG – Charter, Development and Maintenance (Table 1).
 293 These phases are a guideline to the activities and types of documents a working group should expect to encounter.
 294 There are no specific exit criteria from these phases. Exit criteria apply to PWG Standards documents and are
 295 outlined in section 43.
 296

297 **Table 1 - Three Phases to developing a PWG Standard**

Phase	Activities in this Stage	Internal Documents	PWG Standards Documents
Charter	Identify need Brainstorm Develop Charter Gather Requirements	White Papers	Charter Requirements Statement Preliminary Working Draft
Development	Develop PWG Working Drafts Prototype Promote to Candidate Standard Demonstrate Interoperability Promote to PWG Standard	White Papers Proposals Developer Guides Interop Test Plans <u>Interop Test Results</u>	PWG Working Drafts Candidate Standards Supporting durables such as WSDL, Schema

1949

Maintenance	Maintain PWG Standard	Errata Registration of new keywords, enums	Standard Supporting durables
-------------	-----------------------	--	---------------------------------

298

4 Formal PWG standards-track process

Standards development is guided, largely, by the progression of documents used to define and articulate the Standard. Formal documents consist of the Charter, a set of Requirements, Working Drafts, Candidate Standards and, ultimately, the Standard, itself. Due to their highly influential nature, informative documentation of Best Practice is also treated as a formal document. Publication of these formal PWG standards-track documents requires Last Call and/or Formal Approval (vote) by the membership of the PWG as described in Section 04. The standards process may be augmented by a set of informal technical briefs and proposals reading on the standard. While helpful and encouraged, these are not treated as formal documents and do not require formal approval. Standards-track publications and the criteria for exit are defined below. Because the synchronization of Standard version, standard document maturity, document naming, support file namespace and file path names can be quite complex, ~~Error! Reference source not found.~~ ~~a normative guide has been developed to orchestrate~~ ~~provides an example of how~~ these items ~~are orchestrated~~ throughout the standards process. See [WhatDoWeNameTheGuide?](http://ftp.pwg.org/pub/pwg/informational/WhatDoWeNameTheGuide?.pdf)

312

4.1 Editing Documents

The Working Group Chair will appoint an editor for each standards-track document. The editor will be approved by a simple majority vote of the working group. Normally an editor will work in this capacity throughout the life cycle of the standard, although exceptions may occur. Editors are responsible for reflecting the decisions of the working group, rather than their own personal views. Ultimately, the editor has responsibility for the quality of the document, making sure that it is readable and has a coherent style, even when it has multiple authors or contributors.

4.2 Organizing and Naming Documents

Early versions of a Working Group Charter, Requirements, whitepapers and other supporting documentation may circulate on the pwg@pwg.org e-mail reflector. Once a Working Group is formalizing their Charter and Requirements and, certainly, by the time an initial Working Draft is in progress, the Working Group will have chosen an abbreviation (usually 2 to 4 characters), which will be used to preface their document names. The Working Group can pick the abbreviation, which is subject to approval by the PWG Steering Committee.

4.3 Working Group Charter

The first order of business for any working group is to create a charter that clearly describes the scope of their work. Brainstorming, fact-finding, guest speakers and other enlightening activities often precede or coincide with Charter development. In addition to scope, the Charter should define milestones and schedule, including an expiration date. The PWG Steering Committee, based on perception of progress and commitment of the working group, may grant extensions. In some cases the working group may choose to publish their standard in affiliation with an outside standards organization such as the IETF or W3C. If this is evident, the Charter should indicate the desire for formal affiliation with another standards organization and include a liaison plan with the other organization. Charter definition, requirements gathering and outlining a preliminary Working Draft may occur simultaneously. In many cases, this is encouraged, as new information gleaned from these activities may alter perception of the Charter.

A Working Group Charter requires Formal Approval (see Section 04).

337

338 **4.4 Statement of Requirements**

339 Prior to completion of the first Working Draft, a clear statement of requirements for the standard to be produced is
 340 required. A requirements statement documents the best effort collection of known requirements on a particular
 341 protocol, interface, procedure or convention. The requirements statement is important as it leads to a clear, common
 342 understanding of the goals, provides a guide for developing the standard, and can be used as a final test to measure
 343 the completeness of the resulting specification. It is not necessary that the resulting standard meet every stated
 344 requirement, but the standard should be explicit about which requirements it does not meet, and why. Requirements
 345 may be updated during the development of the standard, as they become clearer. As with Charter (above),
 346 brainstorming, fact-finding and associated activities frequently accompany the process of requirements gathering.
 347 Often, at the beginning of a project, the Charter, Requirements and early versions of an initial Working Draft are all
 348 undergoing simultaneous revision until a clear direction emerges and the Charter and Requirements are formally
 349 approved.

350 A Working Group Statement of Requirements requires Formal Approval (see Section 04).
 351
 352

353 **4.5 Working Draft**

354 When rough consensus has been reached on the Charter, Requirements and general approach, and there is
 355 sufficient information to begin writing a standard, the initial Working Draft will be written. Charter and Requirements
 356 must be formally approved prior to completion of the first Working Draft. A PWG Working Draft facilitates reaching
 357 consensus on how to approach the PWG Standard and provides a backdrop for discussion and agreement on details
 358 of the specification. The initial Working Draft should be reasonably complete and drives a stake in the ground as the
 359 basis for further work on the Standard.

360 Working Drafts correspond to a specific version of the Standard they are defining. Unless the working group is
 361 engaged in an effort to revise an existing PWG Standard, the Working Drafts are always defining PWG Standard
 362 Version 1.0.

363 A PWG Working Draft cannot progress ahead of any given normative reference that it contains.
 364

365 A PWG Working Draft requires Last Call, and Formal Approval to transition to PWG Candidate Standard.
 366
 367
 368

369 **4.5.1 Maturity Level**

370 In the interest of providing some subjective indication of the maturity of a PWG Working Draft, a Maturity Level will
 371 appear on the title page as:

372 Maturity: <keyword>
 373

374 Although the maturity level will not appear on PWG Candidate Standards or PWG Standards, if a Candidate
 375 Standard needs to be revised, any resulting PWG Working Drafts will have a maturity level indicated on their title
 376 page.

377 **Table 2 – Maturity Level keywords**

<i>Maturity Level keyword</i>	<i>Indicates</i>
Initial	Initial attempt to specify the standard.
Interim	Standard in development. Significant changes to the standard expected in the future.
Prototype	Content of the standard is functionally complete and ready for prototyping.
Stable	Standard is very close to completion. Standard is either getting ready for, is in, or has completed Last Call.

378

1949

379 Normally, the Working Drafts of a standard would progress from “Initial” to “Stable” in stages, although stages could
380 be skipped for small standards efforts. However, it is possible for the Working Drafts to become less mature: if a
381 large problem was found in a standard that was considered “Prototype”, it might have to go back to “Interim” while
382 that problem is solved. Note also that for all four maturity levels, multiple, consecutive Working Drafts might have the
383 same maturity level.

384

385 The current maturity level of a Working Draft will be decided upon by the working group.

386

387 Table 2 above should appear in the “boilerplate” of every Working Draft as a handy reference for readers to
388 understand the significance of the maturity level keyword on the title page.

4.6 Candidate Standard

390 When agreement has been reached among the participants about the details of a Standard, the current Working
391 Draft is ready to transition to a PWG Candidate Standard. A Candidate Standard should not be approved unless it is
392 supported by prototypes and thought to be ready for implementation. As each type of standard may differ, the PWG
393 process does not define specific, measurable prototype criteria beyond the commonly held notion of a test-of-
394 principle model or early version of a technological device or process. The purpose of prototyping is to generate
395 information that will help design or perfect the final standard.

396

397 A PWG Candidate Standard forms the basis for comments from outside of the working group and the PWG, and
398 provides the foundation for initial product development and interoperability testing. Implementations can comfortably
399 proceed from a PWG Candidate Standard, knowing that it will not undergo significant change as it matures to a PWG
400 Standard. However, should changes to a Candidate Standard be necessary, these changes will be accomplished via
401 Working Drafts that must once again go through Last Call and Formal Approval. The Working Draft will then and only
402 then regain Candidate Standard status.

403

404 Candidate Standards correspond to a specific version of the Standard they are defining. Unless the working group is
405 engaged in an effort to revise an existing PWG Standard, the Candidate Standards are always defining PWG
406 Standard Version 1.0.

407

408 When a document becomes a Candidate Standard, it is assigned an IEEE-ISTO standard number, which it keeps
409 forever. To indicate the standard is at Candidate Standard status, the prefix “CS” is attached to the standard
410 number, resulting in a number such as “PWG CS 5105.2”. If the Candidate Standard goes back to Working Draft
411 status, “WD” replaces the prefix “CS”, resulting in a number such as “PWG WD 5105.2”. IEEE-ISTO standard
412 numbers are tracked and assigned by the PWG Secretary.

413

414 A PWG Candidate Standard cannot progress ahead of any given normative reference that it contains.

415

416

417 A PWG Candidate Standard requires Last Call, demonstration of Interoperability and Formal Approval to transition to
418 PWG Standard.

419

4.7 Standard

421 When a PWG Candidate Standard has passed Last Call, demonstrated interoperability and acquired Formal
422 Approval, it is promoted to the final status of a PWG Standard. At this point, “STD” replaces the prefix “CS” in the
423 IEEE-ISTO standard number and “PWG” is replaced by “IEEE-ISTO”, resulting in a number such as “IEEE-ISTO
424 STD 5105.2”.

4.8 Extensions to standards

426 When a document has reached the PWG Candidate Standard or PWG Standard status, documents can be written
427 that are extensions to that standard. Such extension documents start immediately at Working Draft status and then

428 follow all rules above for progression to Candidate Standard and Standard. Note that the extension to a Candidate
 429 Standard cannot progress to Standard before the Candidate Standard it is extending has progressed to Standard.
 430

431 It is also possible that the PWG will decide to formalize PWG extensions for any (IETF, IEEE, or other printing
 432 industry) external standard (e.g. RFC2911). As above, such extension documents start immediately at Working Draft
 433 status and then follow all rules in earlier sections above for progression to Candidate Standard and Standard.

434 **4.9 Best Practices**

435 Best Practice documents, while not normative, are often heavily referenced during implementation. Because we want
 436 Best Practice to be reliable and accurate we treat these as formal Working Group documents that under go naming,
 437 Last Call and Formal Approval just like a Working Draft.

438 **5 Informal supporting PWG documents**

439 The following are considered informal, working documents that contribute to the development or clarification of a
 440 PWG Standard. As such, these documents require no Formal Approval process.

441 **5.1 White Papers, ~~and~~ Technical Briefs and other non-normative documents**

442 During the standards process, PWG members are encouraged to document their proposals for various elements of a
 443 standard in a White Paper or Technical Brief. These documents provide an informal means of communicating
 444 technical proposals among PWG members. It is strongly recommended that ~~anyone topic item be opened~~ for
 445 discussion on the PWG agenda ~~of a PWG meeting without first having~~ have supporting been ~~documentation made~~
 446 ed and made available for review at least one week prior to the meeting where the paper is to be discussed. White
 447 Papers are particularly useful when two or more approaches to a standard exist and need to be debated. White
 448 Papers may be updated to reflect group consensus or individual positions on a particular topic. Since a white paper
 449 represents current thought and individual contribution, they do not require any form of approval and have no formal
 450 status. White Papers, ~~and~~ Technical Briefs and other documents, such as Best Practices, Hints, Tips, Developer's
 451 Guides and FAQ, are subject to change or withdrawal at any time. ~~Other documents, such as Best Practices, Hints,~~
 452 ~~Tips, Developer's Guides and FAQ fall into the same category as White Papers and Technical Briefs.~~ These
 453 documents should be posted to the PWG FTP site and announced on the working group mailing list prior to
 454 discussion at a PWG meeting. Discussion will be most fruitful when people have taken adequate time to review the
 455 papers prior to the meeting.
 456

457 **6 Modifications to process**

458 To handle exceptional cases, the Steering Committee may decide that some or all of the steps in the standards
 459 process may be shortened or eliminated.

460 **7 Publication of PWG documents**

461 All of the PWG standards-track and supporting documents described in sections 43 and 54 must be available in
 462 either PDF or HTML format (others may be provided as well) and published on the PWG FTP site. Any document
 463 identified as PWG Charter, PWG Requirements, PWG Working Draft, PWG Candidate Standard or PWG Standard
 464 represents a formal PWG approved document, which will be published in a durable location with well-known path
 465 after achieving the appropriate Last Call and/or Formal Approval. Listed are examples of the directory structure using
 466 v1.0 Standards as an example. In use, "wg" would be replaced by the abbreviation for a particular working group (ex.
 467 pmp, psi, ipp etc.). Note the prefix conventions established for these documents as reflected in the file name prefix in
 468 the examples below.
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- 470 Charter – <ftp://ftp.pwg.org/pub/pwg/wg/charter/ch-wg10-yyyymmdd.pdf>
- 471 Requirements – <ftp://ftp.pwg.org/pub/pwg/wg/charter/rq-wg10-yyyymmdd.pdf>
- 472 Working Drafts – <ftp://ftp.pwg.org/pub/pwg/wg/wd/wd-wg10-yyyymmdd.pdf>
- 473 Candidate Standards – <ftp://ftp.pwg.org/pub/pwg/wg/cs-wg10-yyyymmdd-510nm.pdf>
- 474 Standards – <ftp://ftp.pwg.org/pub/pwg/standards/std-wg10-yyyymmdd-510nm.pdf>

475
476 Standards are not published in the Working Group path. PWG Standards are given a unique number and are
477 published in one, flat, namespace, managed by the PWG Secretary, for ease of access, accuracy and durability.

478
479 Supporting documents (see Section 54) are posted in the root Working Group path or a subdivision of that path as
480 appropriate. Filename prefixes for common supporting documents are:

- 481
- 482 White Paper – wp
- 483 Technical Brief – tb
- 484 Developer’s Guide – dg
- 485 Best Practice – bp
- 486 Hints and Tips – ht
- 487 FAQ – faq
- 488 Last Call Review Comments - lcrc

489
490 Internal working versions of PWG documents should be available in an agreed upon, widely available word
491 processing format, to provide for collaboration between document editors and contributors. For example, Microsoft
492 WORD and HTML are common revisable formats in use, today.

493
494 When documents are posted to the PWG FTP site, a notice should also be posted to the Working Group mailing list.
495 It is recommended that Working Groups provide a web site where information about their activities is provided. The
496 Web site should provide links to current, relevant documents.

497

498 **8 Approval**

499 **8.1 Last Call**

500 Last Call represents a final opportunity for issues to be raised against a document. The WG Chair announces a Last
501 Call on a document with rough consensus of the working group. Last Calls are posted to all members of the PWG via
502 the PWG-ANNOUNCE mailing list. A successful Last Call indicates a higher level of maturity during the development
503 of a Standard. The Last Call period may vary, based upon the content, complexity, holidays or other circumstances,
504 but must be at least 16 full working days (minimum 22 calendar days). A working day is a normal business day and is
505 considered to end at 10 PM USPST (Los Angeles, CA, USA). . Every Last Call must conclude at a PWG Plenary
506 meeting with an overview of the draft or standards document and a review of detailed issues and their resolutions. All
507 issues raised during Last Call must be either resolved or rejected as follows:

- 508 • Resolved - Document updated to reflect the resolution
- 509 • Rejected - No change required in the document

510 All issues and their resolution must be published in the Formal Approval announcement

512

513 **8.2 Formal Review**

514 Last Call results must be reviewed by the PWG Steering Committee to validate that the Last Call process has been
515 conducted properly, prior to the initialization of Formal Approval.

516 **8.3 Formal Approval**

517 **8.3.1 Formal Approval Process**

518 Once all of the Last Call issues have been ~~resolved~~resolved or rejected, and the PWG Steering Committee has
 519 reviewed Last Call, the PWG Secretary must announce a vote for Formal Approval to transition the document to the
 520 next maturity level. Formal approval voting must be announced and conducted via the PWG-ANNOUNCE mailing list
 521 and the announcement must contain all issues and their resolution, which occurred during Last Call. The formal
 522 approval period must last at least 16 full working days (~~minumum~~minimum 22 calendar days) and may be longer at
 523 the discretion of the WG Chair. A working day is a normal business day and is considered to end at 10 PM USPST
 524 (Los Angeles, CA, USA).
 525 The PWG Secretary will administer the Formal Approval process with the assistance of the working group chair and
 526 the ISTO.

527
 528 Formal Approval requires

- 529 • Quorum defined by as minimum of 25% of active eligible members actually casting a vote
- 530 • approval by 2/3 of those casting votes (abstentions do not count) with no strong opposition
- 531 • approval by 80% of those casting votes (abstentions do not count), in the face of strong opposition

532
 533 Strong opposition occurs when one or more companies formally calls for an 80% vote. It is the responsibility of the
 534 WG chair to ensure that the results of a vote are fair and representative. If a member of the PWG has an issue with a
 535 WG Chair decision, he or she can appeal that decision to the PWG Steering Committee (first) and then to the
 536 membership of the PWG at large if necessary.

537
 538 A no vote on a standards-track document requires the voter to state the reason for the no vote, and a description of
 539 the changes that would be required to the document to turn the no vote to a yes. These will be documented on the
 540 PWG-ANNOUNCE mailing list.

541
 542 Formal approval is not granted until the PWG Steering Committee reviews the process used to achieve Last Call and
 543 Vote insuring the PWG process was followed with fidelity.

544
 545 **8.3.2 Formal Approval voting rights**

546 The following voting rights policy applies to all Formal Approval voting:

- 547 • A voter must be a representative of a PWG Member Organization.
- 548 • Votes are counted on an organization basis.

549
 550
 551 **8.3.2.1 Definition of quorum**

552 For Formal Approval a quorum is necessary and is defined at 25% of eligible member companies actually casting a
 553 vote.

554
 555
 556 **8.4 Publishing Of Approved Document**

557 The PWG Secretary, with assistance from the WG Chair, must edit documents that have passed Formal Approval to
 558 update the document number, format and the final publication date. The PWG Secretary must then publish the
 559 document in the appropriate locations (~~see section XXX~~) with the appropriate file names.

560

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561 **8.5 Approval with a Working Group**

562 **8.5.1 Working Group approval process**

563 For technical issues, a 2/3 majority of those casting votes (abstentions do not count) is required. A simple majority of
564 those casting votes (abstentions do not count) is required to pass on administrative and operational issues.

565 **8.5.2 Working Group approval voting rights**

566 The following voting rights policy applies to all voting done within the PWG Working Groups:
567

- 568 • A voter must be a representative of a PWG Member Organization.
- 569 • Votes are counted on an organization basis.
- 570
- 571 • At times it may become necessary to conduct a vote on internal WG matters. If so, eligibility is determined by an
572 organization attending two of the previous four face-to-face meetings, or two of the previous four conference
573 calls. It is the responsibility of the Secretary to maintain the list of eligible voters.
- 574
- 575 • With a simple majority vote, the working group may confer voting rights to an individual or organization that is not
576 otherwise eligible to vote due to lack of attendance. This is done on a case-by-case basis and is intended to
577 address those individuals or companies who have made significant, on-going contributions to the group – but
578 have not been able to attend the required number of meetings. In no case may a representative of a non-
579 member company be conferred voting rights by the action of a working group.
- 580
- 581 • A Working Group Chair may declare that a sufficient quorum does not exist for voting purposes if at least 50% of
582 potential voting members are not present during the vote.
- 583
- 584 • Voting is not a requirement for declaring rough consensus, unless specifically requested by a member with voting
585 rights.
- 586
- 587

588 **8.6 Approval at a PWG Plenary**

589 **8.6.1 PWG Plenary approval process**

590 A simple majority of those casting votes (abstentions do not count) is required.

591 **8.6.2 PWG Plenary approval voting rights**

592 The following voting rights policy applies to all voting done within the PWG plenary:
593

- 594 • A voter must be a representative of a PWG Member Organization.
- 595
- 596 • Votes are counted on an organization basis.
- 597
- 598 • Plenary voting occurs at plenary sessions, so participation in the plenary is required for voting.
- 599
- 600 • Voting is not a requirement for declaring rough consensus, unless specifically requested by a member with voting
601 rights.

602 9 Maintenance

603 Many PWG standards are extensible and provide the ability for additional keyword or enumerated values to be
 604 registered. When approved, these have the same status as the standard to which the feature is being added. In
 605 addition, as implementation work proceeds, clarifications may be required to guarantee interoperability. This section
 606 addresses the process to be followed for:

- 607 • registrations of new operations and type 2 enums, keywords, and attributes, and
- 608 • clarifications of the standard and any approved registrations

609 Major changes or additions to a standard are not considered maintenance, but require engagement of the PWG
 610 standards development process described above.

611
 612 Proposals for registrations and clarifications will follow the following process:

- 613 1. Each WG will appoint a Maintenance Editor for their PWG Standard.
- 614 2. Anyone can initiate a proposal for a clarification or registration by starting a discussion on the appropriate project
 615 mailing list.
- 616 3. After there is some agreement on the mailing list for the need of a clarification or the suitability of a registration,
 617 the proposer and the standard's Maintenance Editor work out a proposal. Such a proposal should include:
 - 618 • Status of the proposal, including previous reviews.
 - 619 • A description of the requirement being met or the problem being solved.
 - 620 • Description of the proposed solution.
 - 621 • The exact text to be incorporated into the standard at some future date.
- 622 4. To make the status of proposed registrations and clarifications clear to PWG participants and others, the
 623 Maintenance Editor will keep them in the appropriate sub-directory
 624 `ftp://ftp.pwg.org/pub/pwg/xxx/proposed-registrations`
 625 `ftp://ftp.pwg.org/pub/pwg/xxx/proposed-clarifications`
 626 where xxx is the project.
- 627 5. All proposals must be published according to section ~~65~~ of this document.
- 628 6. Reviews of proposed registrations and clarifications may occur at a meeting or on the MAILING LIST.
- 629 7. The proposal will undergo sufficient reviews and updates until, in the opinion of the WG Chair, there is rough
 630 consensus that the proposal is ready for Last Call as described in section ~~8.17.4~~ followed by Formal Approval as
 631 described in section ~~8.37.3~~.
- 632 8. If, in the opinion of the WG Chair, the Last Call discussions and Formal Approval meet the voting requirements
 633 described in section ~~04~~, the Maintenance Editor will move the approved registration or clarification to the
 634 appropriate sub-directory for each project
 635 `ftp://ftp.pwg.org/pub/pwg/xxx/approved-registrations`
 636 `ftp://ftp.pwg.org/pub/pwg/xxx/approved-clarifications`
 637 and announce the Formal Approval to the entire PWG via the PWG-ANNOUNCE MAILING LIST.
- 638 9. Periodically, the Maintenance Editor will incorporate the approved registrations and clarifications into the version
 639 of the standard that the PWG keeps to record all approved registrations and clarifications. Such an updated
 640 version of the standard will have a new minor version of the standard, along with a Change History Appendix that
 641 lists each change.

644 10 Intellectual Property and Confidentiality

645 Note: The Intellectual Property and Confidentiality section has been preserved in its entirety. During the evolution of
 646 PWG Process Document versions, this section has remained unchanged so as not to disrupt established legal
 647 reviews and approvals established among out members.

648 10.1 Ownership of IP rights:

649 All patents, copyrights, or other intellectual property owned or created by any Member or member's affiliates
 650 ("hereinafter "Member or Associate") outside the PWG or its work within the PWG shall remain the property of that

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651 Member or Associate thereunder and shall not be affected in any way by the Member or Associate's participation in
652 the PWG.

653
654 The PWG may, through its activities, generate intellectual property, and license such property to the Members and/or
655 Associates on reasonable and nondiscriminatory terms, conditions and prices; provided, however, that Members and
656 Associates receive more favorable pricing than non-Members or non-Associates.

657
658 All information and materials, and all copyrights thereto, contributed by Members and Associates and their
659 representatives and incorporated into a PWG Standard and Specification (here after "the Standard") shall be owned
660 by the contributing Member or Associate. The contributing Member or Associate shall grant PWG and its Members
661 and Associates an irrevocable license to use, reproduce, modify, distribute and sublicense the copyrighted work(s)
662 incorporated in the Standard on non-discriminatory basis and within reasonable terms and conditions.

663 Notwithstanding the above, any intellectual property independently created by a Member or Associate, but not
664 incorporated into a PWG standard, should remain the exclusive property of the original owner and no mandatory
665 license should be imposed.

666
667 Participants in the standard setting procedure shall disclose any known patents whose use would be required for
668 compliance with a proposed PWG standard. Prior to PWG's approval of the proposed standard, the PWG should
669 receive a written patent statement from the patent holder as described below in section 10.3.

670 10.2 Intellectual Property Procedures

671 The PWG is not in a position to give authoritative or comprehensive information about evidence, validity or scope of
672 patents or similar rights, but it is desirable that any available information should be disclosed. Therefore, all PWG
673 members shall, from the outset, draw PWG's attention to any relevant patents (hereinafter defined) either their own
674 or of other organizations including their Affiliates (hereinafter defined) that are known to the PWG members or any of
675 their Affiliates, although PWG is unable to verify the validity of any such information.

- 676
- 677 • "Relevant Patents" means any issued or registered patent, without use of which a Proposed PWG Standard
678 cannot be practiced.
 - 679 • "Proposed PWG Standard" means each proposal towards each PWG specification, which proposal is submitted
680 to PWG after the date of acceptance of these Procedures (hereinafter the Effective Date).
 - 681 • "Affiliates or Associates," with respect to section 10.2, means any entity that as of the Effective Date directly or
682 indirectly is controlled by the PWG member, so long as such control exists, where "Control" means beneficial
683 ownership of more than fifty percent (50%) of the voting stock or equity in an entity.

684 10.3 Patent Statement

685 If a Proposed PWG Standard is submitted to the PWG, three different situations may arise with respect to the
686 relevant Patents:

- 687
- 688 (1) In the event the PWG Proposed Standard is adopted to become a PWG Standard, the patent holder waives his
689 rights under the Relevant Patents owned by him and hence, the Proposed PWG Standard is freely accessible to
690 everybody; no particular conditions, no royalties due, etc., with respect to such Relevant Patents. The PWG
691 Standard means any PWG specifications that are officially published by PWG after October 1, 1999.
 - 692 (2) In the event a PWG Proposed Standard is adopted as a PWG Standard, the patent holder is not prepared to
693 waive his rights under the Relevant Patents owned by him but would be willing to grant licenses to other parties
694 on a non-discriminatory basis and on reasonable terms and conditions, provided a similar grant under the
695 licensee's patents within the scope of the license granted to the licensee is made available. Such license grants
696 are left to the parties concerned.
 - 697 (3) In the event the Proposed Standard is adopted to become a PWG Standard, and the patent holder is not willing
698 to comply with the provisions of either paragraph 10.3 (1) or (2), in such a case the Proposal cannot be
699 established as a PWG Standard.
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- (4) Whichever option from among paragraphs 10.3 (1), (2) or (3) is chosen, any PWG member must provide a written statement to be filed on behalf of itself and its Affiliates at the PWG secretariat with respect to the Relevant Patents that are owned by the PWG member or any of its Affiliates and known to the PWG member or any of its Affiliates. This statement must not include additional provisions, conditions, or any other exclusion clauses in excess of what is provided for each case in paragraphs 10.3 (1), (2) and (3).
- (5) If no Relevant Patents that are owned by the PWG member or any of its Affiliates are known to the PWG member or any of its Affiliates, an affirmative disclosure to that effect must be submitted before the end of the Patent Statement deadline in lieu of the Patent Statement. Any Relevant Patents that are owned by the PWG member or any of its Affiliates and are found after the Patent Statement deadline are automatically subject to either paragraph 10.3 (1) or (2) as described above.
- (6) Format of Patent Statement/Patent Notice
- (i) A Patent Statement should be submitted by all the PWG members for all Relevant Patents which are known to the PWG members and their Affiliates and are owned by the PWG members or their Affiliate, providing the following information:
1. Proposal Name
 2. Organization: The organization that holds the patent which could include administrations, universities, etc., and its contact address.
 3. Tel. No.: The contact telephone number of the organization.
 4. Fax. No.: The contact fax number of the organization.
 5. Patent Policy and Remarks: The declared patent policy of the organization in its communication to the PWG. Most often the patent policy is given as "Pat. Policy. 10.3 (2)", which would mean that the organization subscribes to paragraph 10.3 (2) of the PWG bylaws.
 6. Patent Title: The title of a patent
 7. Patent Number: The number of the patent.
 8. Patent Country: The country in which the patent has been obtained. If the patent is held in several countries, a list of those countries is given.
 9. Signature: Signature of an authorized representative of the company.
- (ii) Further, a Patent Notice should be submitted by all the PWG members for Relevant Patents which are known to the PWG members and their Affiliates and are not owned nor controlled by the PWG members or their Affiliate, providing the following information:
1. Proposal Name
 2. Organization: The organization that holds the patent which could include administrations, universities, etc., and its contact address.
 3. Patent Title: The title of a patent
 4. Patent Number
 5. Patent Country: The country in which the patent has been obtained. If the patent is held in several countries, a list of those countries is given.
 6. Signature: Signature of a representative of the company
- (7) All members must submit a written patent statement according to section 10.3(6) between the proposal deadline and the commencement of voting period.

10.4 Non-Confidentiality.

The participation in the PWG by the Members and the Associates and their appointed representatives shall be on a non-confidential basis; however, a PWG Member may with the approval of the Steering Committee, wherein such approval shall not be unreasonably withheld, enter into written confidentiality agreements with all other PWG

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754 Members which restricts the dissemination of specified confidential information and/or materials provided by any of
755 such Member, to Persons who are not Members or Associates.
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757 Subject only to valid patents and copyrights, all PWG Members and Associates shall be free to use all information
758 received or publicly disclosed from the PWG, its Members or Associates in connection with the normal business
759 including the processes described herein, without obligation regardless of markings including but not limited to
760 "Proprietary" or "Confidential."

761 11 PWG Process Diagram

762 A diagrammatic representation of the PWG process is located at
763 <ftp://ftp.pwg.org/pub/pwg/general/process/PWGProcessDiagram.pdf>
764

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