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# The Printer Working Group

## PWG Policy

### Definition of the Standards Development Process



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**Version 2.0**  
**April 14, 2003**



# The Printer Working Group

## PWG Policy Definition of the Standards Development Process

**Version 2.0  
April 14, 2003**

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-process20-20030414.pdf>, .doc

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**89 About the IEEE-ISTO PWG**

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

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

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

**103 Contact information:**

104 PWG Web Page: <http://www.pwg.org/>  
105 PWG Mailing List: [pwg@pwg.org](mailto:pwg@pwg.org)

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

- 107 1) send it to [majordomo@pwg.org](mailto:majordomo@pwg.org)
- 108 2) leave the subject line blank
- 109 3) put the following two lines in the message body:  
110 subscribe pwg  
111 end

112  
113 Members of the PWG and interested parties are encouraged to join the PWG Mailing List in order to participate in  
114 any discussions of clarifications or review of the PWG Process.

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## 154 **1 Introduction**

155 This document establishes the process that is followed as open industry standards are developed by the IEEE ISTO  
156 Printer Working Group. The Printer Working Group (or PWG) is a Program of the IEEE Industry Standards and  
157 Technology Organization (ISTO) and is an alliance among printer manufacturers, print server developers, operating  
158 system providers, network operating systems providers, network connectivity vendors, print and print management  
159 application developers chartered to make printers and the applications and operating systems supporting them work  
160 together better. All references to the PWG in this document implicitly mean “The Printer Working Group, a Program  
161 of the IEEE ISTO.” In order to meet this objective, the PWG will document the results of their work as open  
162 standards that define print related protocols, interfaces, procedures and conventions. Printer manufacturers, vendors  
163 of printer related software and the consuming public will benefit from the interoperability provided by voluntary  
164 conformance to these standards.

165  
166 A PWG standard is a specification that is stable, well understood, technically competent and has multiple,  
167 independent implementations with substantial operational experience, demonstrated interoperability and significant  
168 public support. The PWG may issue a standard as a PWG standard and/or when appropriate submit the standard to  
169 other standards organizations, such as the IETF, ISO, ITU, W3C, IEEE, or ECMA. In developing a standard, a  
170 working group of the PWG may define durable documents such as WSDL, Schema or common industry semantics  
171 that need to have well known, persistent filenames and file paths.

172  
173 This process document establishes

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

## 179 **2 Organization of the PWG**

180 The Printer Working Group is composed of representatives from printer manufacturers, print server developers,  
181 operating system providers, network operating system providers, network connectivity vendors, and print and print  
182 management application developers. Member organizations are those companies, individuals or other groups (i.e. a  
183 university) that have agreed to participate and operate under the processes and procedures of the ISTO by-laws, the  
184 ISTO-PWG Program Participation Agreement and this document and have paid the annual assessment. Multiple  
185 individuals employed by the same company or other organization cannot join the PWG as individual members.  
186 Associates or affiliates of member organizations which are beneficially controlled or owned by said member  
187 organization with more than fifty percent (50%) of the voting stock or equity shall not be considered a separate entity  
188 and are not eligible for separate membership in the PWG. The annual assessment is set each year by the PWG  
189 itself.

190

### 191 **2.1 PWG Officers**

192 The PWG has a Chair position responsible for organizing the overall agenda of the PWG. The PWG chair is elected  
193 by a simple majority of the PWG members to a two-year term of office that begins on September 1<sup>st</sup>. Responsibilities  
194 of the PWG chair include creating working groups, appointing working group chairs, making local arrangements for  
195 PWG meetings (this may be delegated as appropriate), setting the high level PWG agenda, chairing the PWG  
196 plenary session, and assisting working group chairs to accomplish their tasks. The PWG Chair must be a  
197 representative of a PWG Member Organization. The PWG Chair is an ex officio member of all working groups.  
198

199 The PWG Vice Chair is elected by a simple majority of the PWG members to a two year term of office, beginning  
200 September 1<sup>st</sup>. The Vice Chair's responsibilities are to act in the absence of the chair and provide assistance to the  
201 Chair in carrying out his or her role, as required. The PWG Vice Chair must be a representative of a PWG Member  
202 Organization. The PWG Vice Chair is an ex officio member of all working groups.  
203

204 The PWG Secretary is elected to a two year term of office by a simple majority of the PWG members. It is the  
205 secretary's responsibility to record and distribute the minutes of all PWG plenary sessions and other meetings, as  
206 required, to support the PWG chair. The PWG Secretary must be a representative of a PWG Member Organization.  
207

208 The PWG Steering Committee is composed of the PWG chair, vice-chair, secretary, and chairs of all active working  
209 groups. The Steering Committee shall meet upon the call of the PWG Chair to discuss matters of concern of the  
210 PWG.

## 211 **2.2 Working Group Officers**

212 Under the PWG chair are a number of working groups (WG) which are chartered for the purpose of developing a  
213 specific standard. Working groups are chartered as required to address specific areas of standardization. A working  
214 group is considered active until it satisfies its charter.  
215

216 The Chair of a WG is appointed by the PWG Chair, with approval (simple majority) of the PWG. The WG Chair's term  
217 is indefinite and would normally extend through the period of time during which there is active maintenance on the  
218 standard(s) developed by the working group. The Working Group Chair must be a representative of a PWG Member  
219 Organization. The working group Chair is responsible for creating the WG Charter, setting the agenda for meetings  
220 of the WG, chairing WG meetings, appointing editors for WG documents, driving the work of the WG to completion,  
221 and reporting status of the WG at PWG plenary sessions.  
222

223 The Vice Chair of a WG is appointed by the WG chair, with approval (simple majority) of the WG. The WG Vice  
224 Chair's term is indefinite. The Vice Chair acts in the absence of the Chair and assists, as appropriate, in carrying out  
225 the responsibilities of the Chair.  
226

227 A WG secretary is appointed by the WG Chair, with approval (simple majority) of the WG. The term of office is  
228 indefinite. The responsibilities of the Secretary are to record and distribute minutes of working group meetings and to  
229 record, maintain, and publish the voting rights for members of that working group.

## 230 **2.3 PWG Meetings**

231 The annual face-to-face meeting schedule for the PWG is set in October of each year. As a guideline, meetings are  
232 to be distributed geographically, and should be held approximately every 6 to 10 weeks, as needed. Meeting  
233 location details are to be published at least 4 weeks in advance of meetings. Decisions made at PWG  
234 administrative, business, or plenary meetings require a simple majority, 1 vote per member organization.  
235

236 Much of the core work of the PWG working groups is accomplished via telephone and web enabled conferencing.  
237 This allows a reduction in cost of the overall standards development process by minimizing travel.

## 238 **3 PWG Standards development and maintenance**

239 There are 3 main phases to standards development in the PWG – Charter, Development and Maintenance (Table 1).  
240 These phases are a guideline to the activities and types of documents a working group should expect to encounter.  
241 There are not specific exit criteria from these phases. Exit criteria apply to PWG Standards documents and are  
242 outlined in section 4.  
243  
244  
245  
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247

**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	PWG Working Drafts Candidate Standards Supporting durables s.a. WSDL, Schema
Maintenance	Maintain PWG Standard	Errata Registration of new keywords, enums	Standard Supporting durables

248

249 **4 Formal PWG standards-track publications**

250 Standards development is guided, largely, by the progression of documents used to define and articulate the  
 251 Standard. Formal documents consist of the Charter, a set of Requirements, Working Drafts, Candidate Standards  
 252 and, ultimately, the Standard, itself. Publication of these formal PWG standards-track documents requires Last Call  
 253 and/or Formal Approval (vote) by the membership of the PWG as described in Section 7. The standards process  
 254 may be augmented by a set of informal technical briefs and proposals reading on the standard. While helpful and  
 255 encouraged, these are not treated as formal documents and do not require formal approval. Standards-track  
 256 publications and the criteria for exit are defined below. Because the synchronization of Standard version, standard  
 257 document maturity, document naming, support file namespace and file path names can be quite complex, Table 2  
 258 provides an example of how these items are orchestrated throughout the standards process.

259 **4.1 Editing Documents**

260 The Working Group chair will appoint an editor for each standards-track document. The editor will be approved by a  
 261 simple majority vote of the working group. Normally an editor will work in this capacity throughout the life cycle of the  
 262 standard, although exceptions may occur. Editors are responsible for reflecting the decisions of the working group,  
 263 rather than their own personal views. Ultimately, the editor has responsibility for the quality of the document, making  
 264 sure that it is readable and has a coherent style, even when it has multiple authors or contributors.  
 265

266 **4.2 Working Group Charter**

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

276 A Working Group Charter requires Formal Approval (see Section 7).  
 277



278 **4.3 Statement of Requirements**

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

290 A Working Group Statement of Requirements requires Formal Approval (see Section 7).  
 291  
 292

293 **4.4 Working Draft**

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

300 Working Drafts and Candidate Standards correspond to a specific version of the Standard they are defining. Unless  
 301 the working group is engaged in an effort to revise an existing PWG Standard, the Working Drafts and Candidate  
 302 Standards are always defining PWG Standard Version 1.0.

303 A PWG Working Draft requires Last Call, and Formal Approval to transition to PWG Candidate Standard.  
 304  
 305  
 306

307 **4.4.1 Maturity Level**

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

310 Maturity: <keyword>  
 311

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

315 Normally, the Working Drafts of a standard would progress from “Initial” to “Stable” in stages, although stages could  
 316 be skipped for small standards efforts. However, it is possible for the Working Drafts to become less mature: if a  
 317 large problem was found in a standard that was considered “Prototype”, it might have to go back to “Interim” while  
 318

319 that problem is solved. Note also that for all four maturity levels, multiple, consecutive Working Drafts might have the  
320 same maturity level.

321  
322 Table 2 above should appear in the “boilerplate” of every Working Draft as a handy reference for readers to  
323 understand the significance of the maturity level keyword on the title page.

#### 324 **4.5 Candidate Standard**

325 When agreement has been reached among the participants about the details of a Standard, the current Working  
326 Draft is ready to transition to a PWG Candidate Standard. A Candidate Standard should not be approved unless it is  
327 supported by prototypes and thought to be ready for implementation. A PWG Candidate Standard forms the basis for  
328 comments from outside of the working group and the PWG, and provides the foundation for initial product  
329 development and interoperability testing. Implementations can comfortably proceed from a PWG Candidate  
330 Standard, knowing that it will not undergo significant change as it matures to a PWG Standard. Should changes to a  
331 Candidate Standard be necessary, however, these will be accomplished via Working Drafts that must go back  
332 through Last Call and Formal Approval to regain Candidate Standard status.

333  
334 When a document becomes a Candidate Standard, it is assigned an IEEE-ISTO standard number, which it keeps  
335 forever afterwards. To indicate the standard is at Candidate Standard status, the prefix “CS” is attached to the  
336 standard number, resulting in a number such as “PWG CS 5105.2”. If the Candidate Standard goes back to Working  
337 Draft status, the prefix “CS” is replaced by “WD”, resulting in a number such as “PWG WD 5105.2”.

338  
339 A PWG Candidate Standard requires Last Call, demonstration of Interoperability and Formal Approval to transition to  
340 PWG Standard.

341

#### 342 **4.6 Standard**

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

#### 347 **4.7 Extensions to standards**

348 When a document has reached the PWG Candidate Standard or PWG Standard status, documents can be written  
349 that are extensions to that standard. Such extension documents start immediately at Working Draft status and then  
350 follow all rules above for progression to Candidate Standard and Standard. Note that the extension to a Candidate  
351 Standard cannot progress to Standard before the Candidate Standard it is extending has progressed to Standard.

352  
353 It is also possible that the PWG will decide to formalize PWG extensions for any (IETF, IEEE, or other printing  
354 industry) external standard (e.g. RFC2911). As above, such extension documents start immediately at Working Draft  
355 status and then follow all rules in earlier sections above for progression to Candidate Standard and Standard.

356  
357 **Issue 1: Do we want to somehow allow “one-off” standards that are created without following the full working group  
358 process (such as Character Repertoires is doing at the moment)?**

#### 359 **4.8 FTP site procedures**

360 Table 3 below illustrates both the filename and the location on the PWG FTP site to be used for every version of a  
361 document. Because it is not always straightforward for a reader to find the latest version of a document, an  
362 additional directory will be created on the FTP site for each working group, and the latest version of all documents  
363 will be located there, with a durable URL. To go along with the example used in Table 3, the durable URL would be:

364 <ftp://ftp.pwg.org/pub/pwg/xyz/xyz-latest.doc>

365 Therefore, for every row in Table 3, the new version of the document would be stored with the filename and location  
366 shown in the table, *and also* would be stored with the filename and location of the durable URL.

367

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An additional procedure to be followed on the FTP site is that in both the 'ftp://ftp.pwg.org/pub/pwg/candidates' and 'ftp://ftp.pwg.org/pub/pwg/standards' directories, an index file (index.txt) will be added that lists all standards contained in the directory. Due to the fact that the files that correspond to published Candidate Standards and Standards will remain in these directories forever, the index file will list the current status of each standard, so that readers can realize at least the following:

- A Candidate Standard has been modified and is currently being worked on as a Working Draft.
- A Candidate Standard has transitioned to Standard.
- A new version of a Standard is currently being worked on (e.g. version 1.0 of the Standard is in the FTP directory, but version 1.1 is currently being worked on).

In Filename	X	X	X			X		
In Path			X		(For WSDL)			
On title page	X	X		X		X	X	X
<b>Publication</b>	<b>Spec Ver</b>	<b>Spec Doc Revision</b>	<b>Status</b>	<b>Maturity Level</b>	<b>WSDL Interface Namespace / Ver</b>	<b>PWG Num</b>	<b>Document Filename</b>	<b>Document Path</b>
Working Draft	XYZ 1.0	2002/01/01	WD	Initial	2002/01/01	N/A	wd-xyz10-20020101.doc	ftp://ftp.pwg.org/pub/pwg/xyz/wd/
Working Draft	XYZ 1.0	2002/01/15	WD	Interim	2002/01/15	N/A	wd-xyz10-20020115.doc	ftp://ftp.pwg.org/pub/pwg/xyz/wd/...
Working Draft	XYZ 1.0	2002/07/15	WD	Prototype	2002/07/15	N/A	wd-xyz10-20020715.doc	ftp://ftp.pwg.org/pub/pwg/xyz/wd/...
Working Draft - Last Call, Formal Approval	XYZ 1.0	2003/02/07	WD	Stable	2003/02/07	N/A	wd-xyz10-20030207.doc	ftp://ftp.pwg.org/pub/pwg/xyz/wd/...
Candidate Standard	XYZ 1.0	2003/02/21	CS	N/A	2003/02/07	PWG CS 510n.m	cs-xyz10-20030221-510nm.doc	ftp://ftp.pwg.org/pub/pwg/candidates/...
Working Draft, no interface changes	XYZ 1.0	2003/03/01	WD	Prototype	2003/02/07	PWG WD 510n.m	wd-xyz10-20030301-510nm.doc	ftp://ftp.pwg.org/pub/pwg/xyz/wd/...
Working Draft, * interface change	XYZ 1.0	2003/03/15	WD	Prototype	* 2003/03/15	PWG WD 510n.m	wd-xyz10-20030315-510nm.doc	ftp://ftp.pwg.org/pub/pwg/xyz/wd/...
Working Draft, no interface change - Last Call, Formal Approval	XYZ 1.0	2003/04/15	WD	Stable	2003/03/15	PWG WD 510n.m	wd-xyz10-20030415-510nm.doc	ftp://ftp.pwg.org/pub/pwg/xyz/wd/...
Candidate Standard – Interop Last Call, Formal Approval	XYZ 1.0	2003/06/20	CS	N/A	2003/03/15	PWG CS 510n.m	cs-xyz10-20030620-510nm.doc	ftp://ftp.pwg.org/pub/pwg/candidates/...
Standard	XYZ 1.0	2003/08/20	STD	N/A	2003/03/15	IEEE-ISTO STD 510n.m	std-xyz10-20030820-510nm.doc	ftp://ftp.pwg.org/pub/pwg/standards/...

377 Table 3 - Sample flow of documents including versions and naming

## 378 **5 Informal supporting PWG documents**

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

### 381 **5.1 White Papers and Technical Briefs**

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

## 394 **6 Publication of PWG documents**

395 All of the PWG standards-track and supporting documents described in sections 4 and 5 must be available in either  
396 PDF or HTML format (others may be provided as well) and published on the PWG FTP site. Any document identified  
397 as PWG Charter, PWG Requirements, PWG Working Draft, PWG Candidate Standard or PWG Standard represents  
398 a formal PWG approved document, which will be published in a durable location with well known path after achieving  
399 the appropriate Last Call and/or Formal Approval. Listed are examples of the directory structure using v1.0  
400 Standards as an example. In use, "wg" would be replaced by the abbreviation for a particular working group (ex.  
401 pmp, psi, ipp etc.). Note the prefix conventions established for these documents as reflected in the file name prefix in  
402 the examples below.

403  
404 Charter – <ftp://ftp.pwg.org/pub/pwg/wg/charter/ch-wg10-yyyymmdd.pdf>  
405 Requirements – <ftp://ftp.pwg.org/pub/pwg/wg/charter/rq-wg10-yyyymmdd.pdf>  
406 Working Drafts – <ftp://ftp.pwg.org/pub/pwg/wg/wd/wd-wg10-yyyymmdd.pdf>  
407 Candidate Standards – <ftp://ftp.pwg.org/pub/pwg/wg/cs-wg10-yyyymmdd-510nm.pdf>  
408 Standards – <ftp://ftp.pwg.org/pub/pwg/standards/std-wg10-yyyymmdd-510nm.pdf>

409  
410 Standards are not published in the Working Group path. PWG Standards are given a unique number and are  
411 published in one, flat, namespace for ease of access.

412  
413 Supporting documents (see Section 5.1) are posted in the root Working Group path or a subdivision of that path as  
414 appropriate. Filename prefixes for common supporting documents are:

415  
416 White Paper – wp  
417 Technical Brief – tb  
418 Developer's Guide – dg  
419 Best Practice – bp  
420 Hints and Tips – ht  
421 FAQ – faq  
422 Last Call Review Comments - lcrc  
423

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

427  
428 When documents are posted to the PWG FTP site, a notice should also be posted to the Working Group mailing list.  
429 It is recommended that Working Groups provide a web site where information about their activities is provided. The  
430 Web site should provide links to current, relevant documents.  
431

## 432 **7 Approval**

433 There are several forms of approval designed to assure integrity of the Standard as documents are promoted  
434 through the process. The application of these approvals are described in Section 4 and summarized in Table 2.

### 435 **7.1 Last Call**

436 Last Call represents a final opportunity for issues to be raised against a document. The WG chair announces a Last  
437 Call on a document with rough consensus of the working group. Last Calls are posted to all members of the PWG via  
438 the PWG-ANNOUNCE mailing list. A successful Last Call indicates a higher level of maturity during the development  
439 of a Standard. The Last Call period may vary, based upon the content, complexity, or other circumstances, but must  
440 be at least ten full working days. A working day is considered to end at 5 PM in NYC.

441  
442 All issues raised during Last Call must be answered in one of the following manners:

- 443 • Resolved - Document updated to reflect the resolution
- 444 • Resolved - No change required in the document
- 445 • Unresolved - Document will be approved as is

446

### 447 **7.2 Formal Approval**

448 Once all of the Last Call issues have been responded to, a vote is taken on approval of the resulting document and  
449 transition to the next maturity level. Formal approval voting must be announced and conducted via the PWG-  
450 ANNOUNCE mailing list. Each organization represented on the PWG has one vote. The formal approval voting  
451 period must last at least 10 full working days and may be longer at the discretion of the WG Chair.

452

453 Formal Approval requires

454

- 455 • approval by 2/3 of those casting votes (abstentions do not count) with no strong opposition
- 456 • approval by 80% of those casting votes (abstentions do not count), in the face of strong opposition

457

458 Strong opposition occurs when one or more companies formally calls for an 80% vote. It is the responsibility of the  
459 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  
460 WG Chair decision, he or she can appeal that decision to the PWG Steering Committee (first) and then to the  
461 membership of the PWG at large if necessary.

462

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

466

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

### 469 7.3 Voting Rights

470 The following policy applies to all voting done within the PWG and its Working Groups:

- 471 • A voter must be a representative of a PWG Member Organization.
- 472
- 473 • Votes are counted on an organization basis.
- 474
- 475 • At times it may become necessary to conduct a vote on internal WG matters. If so, eligibility is determined by an
- 476 organization attending two of the previous four meetings, where meetings include both face-to-face meetings and
- 477 conference calls. It is the responsibility of the Secretary to maintain the list of eligible voters and post this in the
- 478 meeting minutes. There is no history of attendance requirement, only a membership requirement, for voting at
- 479 PWG Plenary meetings.
- 480
- 481 • With a simple majority vote, the working group may confer voting rights to an individual or organization that is not
- 482 otherwise eligible to vote due to lack of attendance. This is done on a case-by-case basis and is intended to
- 483 address those individuals or companies who have made significant, on-going contributions to the group – but
- 484 have not been able to attend the required number of meetings. In no case may a representative of a non-
- 485 member company be conferred voting rights by the action of a working group.
- 486
- 487 • A simple majority is required to pass on administrative and operational issues. Otherwise Formal Approval, as
- 488 defined in section 7.2, is required on all voting.
- 489
- 490 • A working Group chair may declare that a sufficient quorum does not exist for voting purposes if at least 50% of
- 491 voting members are not present during the vote.
- 492
- 493 • Voting is not a requirement for declaring rough consensus.
- 494

## 495 8 Maintenance

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

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

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

504  
 505 Proposals for registrations and clarifications will follow the following process:

- 506 1. Each WG will appoint a Maintenance Editor for their PWG Standard.
- 507 2. Anyone can initiate a proposal for a clarification or registration by starting a discussion on the appropriate project  
 508 mailing list.
- 509 3. After there is some agreement on the mailing list for the need of a clarification or the suitability of a registration,  
 510 the proposer and the standard's Maintenance Editor work out a proposal. Such a proposal should include:
  - 511 • Status of the proposal, including previous reviews.
  - 512 • A description of the requirement being met or the problem being solved.
  - 513 • Description of the proposed solution.
  - 514 • The exact text to be incorporated into the standard at some future date.
- 515 4. To make the status of proposed registrations and clarifications clear to PWG participants and others, the  
 516 Maintenance Editor will keep them in the appropriate sub-directory  
 517 `ftp://ftp.pwg.org/pub/pwg/xxx/proposed-registrations`  
 518 `ftp://ftp.pwg.org/pub/pwg/xxx/proposed-clarifications`

- 519 where xxx is the project.
- 520 5. All proposals must be published according to section 6 of this document.
- 521 6. Reviews of proposed registrations and clarifications may occur at a meeting or on the MAILING LIST.
- 522 7. The proposal will undergo sufficient reviews and updates until, in the opinion of the WG Chair, there is rough
- 523 consensus that the proposal is ready for Last Call as described in section 7.1 followed by Formal Approval as
- 524 described in section 7.2.
- 525 8. If, in the opinion of the WG Chair, the Last Call discussions and Formal Approval meet the voting requirements
- 526 described in section 7, the Maintenance Editor will move the approved registration or clarification to the
- 527 appropriate sub-directory for each project
- 528 ftp://ftp.pwg.org/pub/pwg/xxx/approved-registrations
- 529 ftp://ftp.pwg.org/pub/pwg/xxx/approved-clarifications
- 530 and announce the Formal Approval to the entire PWG via the PWG-ANNOUNCE MAILING LIST.
- 531 9. Periodically, the Maintenance Editor will incorporate the approved registrations and clarifications into the version
- 532 of the standard that the PWG keeps to record all approved registrations and clarifications. Such an updated
- 533 version of the standard will have a new minor version of the standard, along with a Change History Appendix that
- 534 lists each change.
- 535

536 Issue 2: The following is the "Intellectual Property and Confidentiality" section from the original PWG process  
 537 document, dated 10/21/99. The changes shown below are changes between the original document and this  
 538 document (v2.0 of the process), NOT the changes since the last version of this document. Currently, the only  
 539 changes are updates of section numbers, since this section is now section 9 rather than section 8, as it was in the  
 540 original process.

541  
 542 The issue, then, is whether any further changes are necessary at this time. I believe that NO further changes are  
 543 necessary at this time. In section 9.2, the term "Proposed PWG Standard" is defined, and then used in section 9.3.  
 544 As such, the IP section creates its own term, defines what it means, then uses it. This means that the IP section is  
 545 actually self-sufficient (as I'm sure the lawyers would want it to be): we could define any process we wanted in the  
 546 rest of this document, and this IP section would be unaffected.

547  
 548 So is it OK to leave it alone for now and avoid getting any lawyers involved in the effort to create v2.0 of the process?

## 549 9 Intellectual Property and Confidentiality

### 550 9.1 Ownership of IP rights:

551 All patents, copyrights, or other intellectual property owned or created by any Member or member's affiliates  
 552 ("hereinafter "Member or Associate) outside the PWG or its work within the PWG shall remain the property of that  
 553 Member or Associate thereunder and shall not be affected in any way by the Member or Associate's participation in  
 554 the PWG.

555  
 556 The PWG may, through its activities, generate intellectual property, and license such property to the Members and/or  
 557 Associates on reasonable and nondiscriminatory terms, conditions and prices; provided, however, that Members and  
 558 Associates receive more favorable pricing than non-Members or non-Associates.

559  
 560 All information and materials, and all copyrights thereto, contributed by Members and Associates and their  
 561 representatives and incorporated into a PWG Standard and Specification (here after "the Standard") shall be owned  
 562 by the contributing Member or Associate. The contributing Member or Associate shall grant PWG and its Members  
 563 and Associates an irrevocable license to use, reproduce, modify, distribute and sublicense the copyrighted work(s)  
 564 incorporated in the Standard on non-discriminatory basis and within reasonable terms and conditions.  
 565 Notwithstanding the above, any intellectual property independently created by a Member or Associate, but not  
 566 incorporated into a PWG standard, should remain the exclusive property of the original owner and no mandatory  
 567 license should be imposed.

568



569 Participants in the standard setting procedure shall disclose any known patents whose use would be required for  
570 compliance with a proposed PWG standard. Prior to PWG's approval of the proposed standard, the PWG should  
571 receive a written patent statement from the patent holder as described below in section 9.3.

## 572 **9.2 Intellectual Property Procedures**

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

- 578
- 579 • "Relevant Patents" means any issued or registered patent, without use of which a Proposed PWG Standard
- 580 cannot be practiced.
- 581 • "Proposed PWG Standard" means each proposal towards each PWG specification, which proposal is submitted
- 582 to PWG after the date of acceptance of these Procedures (hereinafter the Effective Date).
- 583 • "Affiliates or Associates," with respect to section 9.2, means any entity that as of the Effective Date directly or
- 584 indirectly is controlled by the PWG member, so long as such control exists, where "Control" means beneficial
- 585 ownership of more than fifty percent (50%) of the voting stock or equity in an entity.

## 586 **9.3 Patent Statement**

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

- 589
- 590 (1) In the event the PWG Proposed Standard is adopted to become a PWG Standard, the patent holder waives his
- 591 rights under the Relevant Patents owned by him and hence, the Proposed PWG Standard is freely accessible to
- 592 everybody; no particular conditions, no royalties due, etc., with respect to such Relevant Patents. The PWG
- 593 Standard means any PWG specifications that are officially published by PWG after October 1, 1999.
- 594
- 595 (2) In the event a PWG Proposed Standard is adopted as a PWG Standard, the patent holder is not prepared to
- 596 waive his rights under the Relevant Patents owned by him but would be willing to grant licenses to other parties
- 597 on a non-discriminatory basis and on reasonable terms and conditions, provided a similar grant under the
- 598 licensee's patents within the scope of the license granted to the licensee is made available. Such license grants
- 599 are left to the parties concerned.
- 600
- 601 (3) In the event the Proposed Standard is adopted to become a PWG Standard, and the patent holder is not willing
- 602 to comply with the provisions of either paragraph 9.3 (1) or (2), in such a case the Proposal cannot be
- 603 established as a PWG Standard.
- 604
- 605 (4) Whichever option from among paragraphs 9.3 (1), (2) or (3) is chosen, any PWG member must provide a written
- 606 statement to be filed on behalf of itself and its Affiliates at the PWG secretariat with respect to the Relevant
- 607 Patents that are owned by the PWG member or any of its Affiliates and known to the PWG member or any of its
- 608 Affiliates. This statement must not include additional provisions, conditions, or any other exclusion clauses in
- 609 excess of what is provided for each case in paragraphs 9.3 (1), (2) and (3).
- 610
- 611 (5) If no Relevant Patents that are owned by the PWG member or any of its Affiliates are known to the PWG
- 612 member or any of its Affiliates, an affirmative disclosure to that effect must be submitted before the end of the
- 613 Patent Statement deadline in lieu of the Patent Statement. Any Relevant Patents that are owned by the PWG
- 614 member or any of its Affiliates and are found after the Patent Statement deadline are automatically subject to
- 615 either paragraph 9.3 (1) or (2) as described above.
- 616
- 617 (6) Format of Patent Statement/Patent Notice
- 618

- 619 (i) A Patent Statement should be submitted by all the PWG members for all Relevant Patents which are known  
620 to the PWG members and their Affiliates and are owned by the PWG members or their Affiliate, providing the  
621 following information:  
622
- 623 1. Proposal Name
  - 624 2. Organization: The organization that holds the patent which could include administrations, universities,  
625 etc., and its contact address.
  - 626 3. Tel. No.: The contact telephone number of the organization.
  - 627 4. Fax. No.: The contact fax number of the organization.
  - 628 5. Patent Policy and Remarks: The declared patent policy of the organization in its communication to the  
629 PWG. Most often the patent policy is given as "Pat. Policy. 9.3 (2)", which would mean that the  
630 organization subscribes to paragraph 9.3 (2) of the PWG bylaws.
  - 631 6. Patent Title: The title of a patent
  - 632 7. Patent Number: The number of the patent.
  - 633 8. Patent Country: The country in which the patent has been obtained. If the patent is held in several  
634 countries, a list of those countries is given.
  - 635 9. Signature: Signature of an authorized representative of the company.
- 636
- 637 (ii) Further, a Patent Notice should be submitted by all the PWG members for Relevant Patents which are  
638 known to the PWG members and their Affiliates and are not owned nor controlled by the PWG members or  
639 their Affiliate, providing the following information:  
640
- 641 1. Proposal Name
  - 642 2. Organization: The organization that holds the patent which could include administrations, universities,  
643 etc., and its contact address.
  - 644 3. Patent Title: The title of a patent
  - 645 4. Patent Number
  - 646 5. Patent Country: The country in which the patent has been obtained. If the patent is held in several  
647 countries, a list of those countries is given.
  - 648 6. Signature: Signature of a representative of the company
- 649
- 650 (7) All members must submit a written patent statement according to section 8.4(6) between the proposal deadline  
651 and the commencement of voting period.

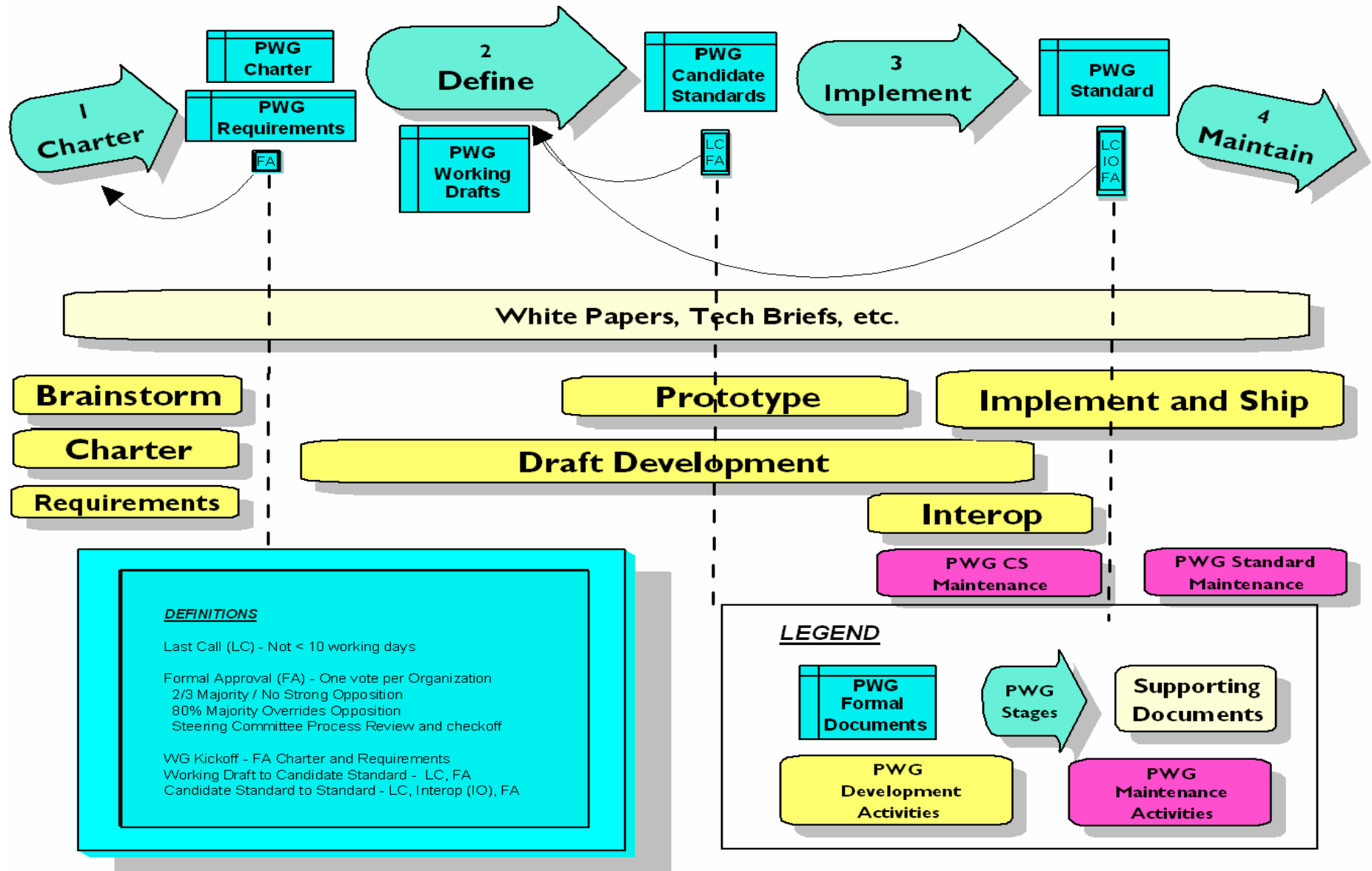
#### 652 **9.4 Non-Confidentiality.**

653 The participation in the PWG by the Members and the Associates and their appointed representatives shall be on a  
654 non-confidential basis; however, a PWG Member may with the approval of the Steering Committee, wherein such  
655 approval shall not be unreasonably withheld, enter into written confidentiality agreements with all other PWG  
656 Members which restricts the dissemination of specified confidential information and/or materials provided by any of  
657 such Member, to Persons who are not Members or Associates.

658

659 Subject only to valid patents and copyrights, all PWG Members and Associates shall be free to use all information  
660 received or publicly disclosed from the PWG, its Members or Associates in connection with the normal business  
661 including the processes described herein, without obligation regardless of markings including but not limited to  
662 "Proprietary" or "Confidential."  
663

664 **10 PWG Process Diagram**



665

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