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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~~March 27~~, 2003



Industry Standards and Technology Organization (IEEE-ISTO)

445 Hoes Lane • P.O. Box 1331 • Piscataway, NJ 08855-1331, USA
Phone +1.732.981.3434 • Fax +1.732.562.1571 • <http://www.ieee-isto.org>

The Printer Working Group

PWG Policy Definition of the Standards Development Process

Version 2.0

April 14~~March 27~~, 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-process20-20030414327.pdf>, .doc

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87 the IEEE (<http://www.ieee.org/>) and the IEEE Standards Association (<http://standards.ieee.org/>).

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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

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

- 107 1) send it to 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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152 **1 Introduction**

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

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

171 This process document establishes

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

177 **2 Organization of the PWG**

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

189 **2.1 PWG Officers**

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

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

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

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

209 **2.2 Working Group Officers**

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

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

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

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

228 **2.3 PWG Meetings**

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

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

236 **3 PWG Standards development and maintenance**

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

245

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

246

247 **4 Formal PWG standards-track publications**

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

257 **4.1 Editing Documents**

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

264 **4.2 Working Group Charter**

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

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

276 **4.3 Statement of Requirements**

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

288 A Working Group Statement of Requirements requires Formal Approval (see Section 7).
 289
 290

291 **4.4 Working Draft**

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

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

301 A PWG Working Draft requires Last Call, ~~Intellectual Property Letters of Assurance,~~ and Formal Approval to
 302 transition to PWG Candidate Standard.
 303
 304
 305

306 **4.4.1 Maturity Level**

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

309 Maturity: <keyword>

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

314 **Table 2 – Maturity Level keywords**

<i>Maturity Level keyword</i>	<i>Indicates</i>
Initial-Draft	Initial attempt to specify the standard.
InterimDevelopment	Standard in development. Significant changes to the standard expected in the future.
PrototypeStable	Content of the standard is functionally complete and ready for prototyping. Overall direction and structure of the standard is stable. Ready for prototyping.
StableFinal-Review	Standard is very close to completion. Standard is either getting ready for, is in, or has completed Last Call.

315

316 | Normally, the Working Drafts of a standard would progress from “Initial-Draft” to “StableFinal-Review” in stages,
317 | although stages could be skipped for small standards efforts. However, it is possible for the Working Drafts to
318 | become less mature: if a large problem was found in a standard that was considered “PrototypeStable”, it might have
319 | to go back to “InterimDevelopment” while that problem is solved. Note also that for all four maturity levels, multiple,
320 | consecutive Working Drafts might have the 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”. The “CS” prefix
338 | remains even if the document goes back to Working Draft status for some time.

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

343 | **4.6 Standard**

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

348 | **4.7 Extensions to standards**

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

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

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

360 | **4.8 FTP site procedures**

361 | Table 3 below illustrates both the filename and the location on the PWG FTP site to be used for every version of a
362 | document. Because it is not always straightforward for a reader to find the latest version of a document, an

363 additional directory will be created on the FTP site for each working group, and the latest version of all documents
364 will be located there, with a durable URL. To go along with the example used in Table 3, the durable URL would be:
365 ftp://ftp.pwg.org/pub/pwg/xyz/xyz-latest.doc

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

368
369 An additional procedure to be followed on the FTP site is that in both the 'ftp://ftp.pwg.org/pub/pwg/candidates' and
370 'ftp://ftp.pwg.org/pub/pwg/standards' directories, an index file (index.txt) will be added that lists all standards
371 contained in the directory. Due to the fact that the files that correspond to published Candidate Standards and
372 Standards will remain in these directories forever, the index file will list the current status of each standard, so that
373 readers can realize at least the following:

- 374 • A Candidate Standard has been modified and is currently being worked on as a Working Draft.
 - 375 • A Candidate Standard has transitioned to Standard.
 - 376 • A new version of a Standard is currently being worked on (e.g. version 1.0 of the Standard is in the FTP
377 directory, but version 1.1 is currently being worked on).
- 378

In Filename	X	X	X			X		
In Path			X		(For WSDL)			
On title page	X	X		X		X	X	X
Publication	Spec Ver	Spec Doc Revision	Status	Maturity Level	WSDL Interface Namespace / Ver	PWG Num	Document Filename	Document Path
Working Draft	XYZ 1.0	2002/01/01	WD	Initial Draft	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 Development	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 Stable	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 Final Review	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 Stable	2003/02/07	PWG WDGS 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 Stable	* 2003/03/15	PWG WDGS 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 Final Review	2003/03/15	PWG WDGS 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/...

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

380 5 Informal supporting PWG documents

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

383 5.1 White Papers and Technical Briefs

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

396 6 Publication of PWG documents

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

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

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

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

417
418 White Paper – wp
419 Technical Brief – tb
420 Developer's Guide – dg
421 Best Practice – bp
422 Hints and Tips – ht
423 FAQ – faq
424 [Last Call Review Comments - lcrc](#)
425

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

429
430 When documents are posted to the PWG FTP site, a notice should also be posted to the Working Group mailing list.
431 It is recommended that Working Groups provide a web site where information about their activities is provided. The
432 Web site should provide links to current, relevant documents.
433

434 **7 Approval**

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

437 **7.1 Last Call**

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

443
444 All issues raised during Last Call must be answered in one of the following manners:

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

448

449 **7.2 Formal Approval**

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

454

455 Formal Approval requires

456

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

459

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

464

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

468

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

471 7.3 Voting Rights

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

- 473 • A voter must be a representative of a PWG Member Organization.
- 474 • Votes are counted on an organization basis.
- 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 • With a simple majority vote, the working group may confer voting rights to an individual or organization that is not
- 481 otherwise eligible to vote due to lack of attendance. This is done on a case-by-case basis and is intended to
- 482 address those individuals or companies who have made significant, on-going contributions to the group – but
- 483 have not been able to attend the required number of meetings. In no case may a representative of a non-
- 484 member company be conferred voting rights by the action of a working group.
- 485 • A simple majority is required to pass on administrative and operational issues. Otherwise Formal Approval, as
- 486 defined in section 7.2, is required on all voting.
- 487 • A working Group chair may declare that a sufficient quorum does not exist for voting purposes if at least 50% of
- 488 voting members are not present during the vote.
- 489 • Voting is not a requirement for declaring rough consensus.

497 8 Maintenance

498 Many PWG standards are extensible and provide the ability for additional keyword or enumerated values to be

499 registered. When approved, these have the same status as the standard to which the feature is being added. In

500 addition, as implementation work proceeds, clarifications may be required to guarantee interoperability. This section

501 addresses the process to be followed for:

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

504 Major changes or additions to a standard are not considered maintenance, but require engagement of the PWG

505 standards development process described above.

506 Proposals for registrations and clarifications will follow the following process:

- 507 1. Each WG will appoint a Maintenance Editor for their PWG Standard.
- 508 2. Anyone can initiate a proposal for a clarification or registration by starting a discussion on the appropriate project
- 509 mailing list.
- 510 3. After there is some agreement on the mailing list for the need of a clarification or the suitability of a registration,
- 511 the proposer and the standard's Maintenance Editor work out a proposal. Such a proposal should include:
- 512 • Status of the proposal, including previous reviews.
- 513 • A description of the requirement being met or the problem being solved.
- 514 • Description of the proposed solution.
- 515 • The exact text to be incorporated into the standard at some future date.
- 516 4. To make the status of proposed registrations and clarifications clear to PWG participants and others, the
- 517 Maintenance Editor will keep them in the appropriate sub-directory
- 518 <ftp://ftp.pwg.org/pub/pwg/xxx/proposed-registrations>
- 519 <ftp://ftp.pwg.org/pub/pwg/xxx/proposed-clarifications>
- 520

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

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

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

549
 550 **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?**

551 **9 Intellectual Property and Confidentiality**

552 **9.1 Ownership of IP rights:**

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

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

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

570

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

574 **9.2 Intellectual Property Procedures**

575 The PWG is not in a position to give authoritative or comprehensive information about evidence, validity or scope of
 576 patents or similar rights, but it is desirable that any available information should be disclosed. Therefore, all PWG
 577 members shall, from the outset, draw PWG's attention to any relevant patents (hereinafter defined) either their own
 578 or of other organizations including their Affiliates (hereinafter defined) that are known to the PWG members or any of
 579 their Affiliates, although PWG is unable to verify the validity of any such information.
 580

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

588 **9.3 Patent Statement**

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

- 591 (1) In the event the PWG Proposed Standard is adopted to become a PWG Standard, the patent holder waives his
 592 rights under the Relevant Patents owned by him and hence, the Proposed PWG Standard is freely accessible to
 593 everybody; no particular conditions, no royalties due, etc., with respect to such Relevant Patents. The PWG
 594 Standard means any PWG specifications that are officially published by PWG after October 1, 1999.
 595
- 596 (2) In the event a PWG Proposed Standard is adopted as a PWG Standard, the patent holder is not prepared to
 597 waive his rights under the Relevant Patents owned by him but would be willing to grant licenses to other parties
 598 on a non-discriminatory basis and on reasonable terms and conditions, provided a similar grant under the
 599 licensee's patents within the scope of the license granted to the licensee is made available. Such license grants
 600 are left to the parties concerned.
 601
- 602 (3) In the event the Proposed Standard is adopted to become a PWG Standard, and the patent holder is not willing
 603 to comply with the provisions of either paragraph 9.3 (1) or (2), in such a case the Proposal cannot be
 604 established as a PWG Standard.
 605
- 606 (4) Whichever option from among paragraphs 9.3 (1), (2) or (3) is chosen, any PWG member must provide a written
 607 statement to be filed on behalf of itself and its Affiliates at the PWG secretariat with respect to the Relevant
 608 Patents that are owned by the PWG member or any of its Affiliates and known to the PWG member or any of its
 609 Affiliates. This statement must not include additional provisions, conditions, or any other exclusion clauses in
 610 excess of what is provided for each case in paragraphs 9.3 (1), (2) and (3).
 611
- 612 (5) If no Relevant Patents that are owned by the PWG member or any of its Affiliates are known to the PWG
 613 member or any of its Affiliates, an affirmative disclosure to that effect must be submitted before the end of the
 614 Patent Statement deadline in lieu of the Patent Statement. Any Relevant Patents that are owned by the PWG
 615 member or any of its Affiliates and are found after the Patent Statement deadline are automatically subject to
 616 either paragraph 9.3 (1) or (2) as described above.
 617
- 618 (6) Format of Patent Statement/Patent Notice
 619
 620

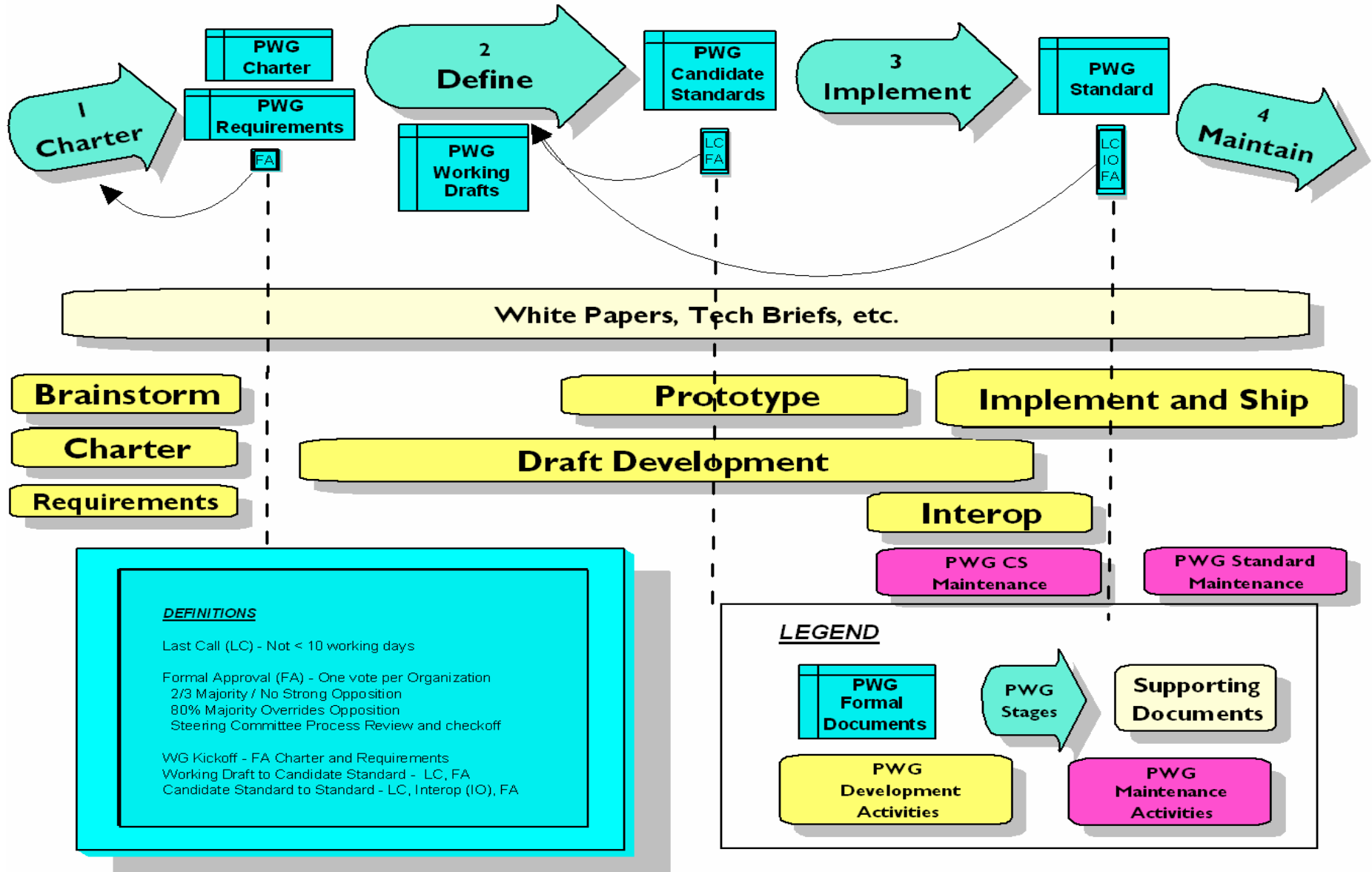
- 621 (i) A Patent Statement should be submitted by all the PWG members for all Relevant Patents which are known
622 to the PWG members and their Affiliates and are owned by the PWG members or their Affiliate, providing the
623 following information:
624
- 625 1. Proposal Name
 - 626 2. Organization: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

654 **9.4 Non-Confidentiality.**

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

660
661 Subject only to valid patents and copyrights, all PWG Members and Associates shall be free to use all information
662 received or publicly disclosed from the PWG, its Members or Associates in connection with the normal business
663 including the processes described herein, without obligation regardless of markings including but not limited to
664 "Proprietary" or "Confidential."
665

666 10 PWG Process Diagram



667

668 **11 Author's Address**

669 Dennis Carney
670 IBM Printing Systems
671 6300 Diagonal Highway
672 Boulder, CO 80301
673 Phone: 303 924 0565
674 Fax: 303 924 7434
675 e-mail: dcarney@us.ibm.com
676

677 David Hall
678 Hewlett-Packard
679 Vancouver Division
680 18110 SE 34th Street
681 Vancouver, WA 98683
682 Phone: 360 212 4228
683 Fax: 360 212 6886
684 e-mail: dhall@hp.com
685

686 Harry Lewis
687 IBM Printing Systems
688 6300 Diagonal Highway
689 Boulder, CO 80301
690 Phone: 303 924 5337
691 Fax: 303 924 7434
692 e-mail: harryl@us.ibm.com
693

694
695 Additional contributors:

696 Alan Berkema, HP
697 Elliott Bradshaw, Oak Technology
698 Lee Farrell, Canon
699 Dave Hall, HP
700 Tom Hastings, Xerox
701 Ira McDonald, High North
702 Gail Songer, Peerless
703 Jerry Thrasher, Lexmark
704 Bill Wagner, NetSilicon
705 Don Wright, Lexmark
706 Peter Zehler, Xerox
707