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The Printer Working Group

PWG Policy

Definition of the Standards Development Process



Version 2.0
March 27, 2003

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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-process20-20030327.pdf>, .doc

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85 and support services. The IEEE-ISTO provides a forum not only to develop standards, but also to facilitate activities
86 that support the implementation and acceptance of standards in the marketplace. The organization is affiliated with
87 the IEEE (<http://www.ieee.org/>) and the IEEE Standards Association (<http://standards.ieee.org/>).

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

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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150 **1 Introduction**

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

161
162 A PWG standard is a specification that is stable, well understood, technically competent and has multiple,
163 independent implementations with substantial operational experience, demonstrated interoperability and significant
164 public support. The PWG may issue a standard as a PWG standard and/or when appropriate submit the standard to
165 other standards organizations, such as the IETF, ISO, ITU, W3C, IEEE, or ECMA. In developing a standard, a
166 working group of the PWG may define durable documents such as WSDL, Schema or common industry semantics
167 that need to have well known, persistent filenames and file paths.

168
169 This process document establishes

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

175 **2 Organization of the PWG**

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

186

187 **2.1 PWG Officers**

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

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

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

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

207 **2.2 Working Group Officers**

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

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

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

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

226 **2.3 PWG Meetings**

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

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

234 **3 PWG Standards development and maintenance**

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

243

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

244

245 **4 Formal PWG standards-track publications**

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

255 **4.1 Editing Documents**

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

262 **4.2 Working Group Charter**

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

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

274 **4.3 Statement of Requirements**

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

286 A Working Group Statement of Requirements requires Formal Approval (see Section 7).
 287
 288

289 **4.4 Working Draft**

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

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

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

304 **4.4.1 Maturity Level**

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

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

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

313 Normally, the Working Drafts of a standard would progress from “Initial Draft” to “Final Review” in stages, although
 314 stages could be skipped for small standards efforts. However, it is possible for the Working Drafts to become less
 315 mature: if a large problem was found in a standard that was considered “Stable”, it might have to go back to
 316 “Development” while that problem is solved. Note also that for all four maturity levels, multiple, consecutive Working
 317 Drafts might have the same maturity level.
 318

319

320 **4.5 Candidate Standard**

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

329

330 When a document becomes a Candidate Standard, it is assigned an IEEE ISTO standard number, which it keeps
331 forever afterwards. To indicate the standard is at Candidate Standard status, the prefix "CS" is attached to the
332 standard number, resulting in a number such as "CS 5105.2". The "CS" prefix remains even if the document goes
333 back to Working Draft status for some time.

334

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

337

338 **4.6 Standard**

339 When a PWG Candidate Standard has passed Last Call, demonstrated interoperability and acquired Formal
340 Approval, it is promoted to the final status of a PWG Standard. At this point, the prefix "CS" is replaced by "STD" in
341 the IEEE ISTO standard number, resulting in a number such as "STD 5105.2".

342 **4.7 Extensions to standards**

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

347

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

351

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	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	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	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	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	Stable	2003/02/07	CS 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	Stable	* 2003/03/15	CS 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	Final Review	2003/03/15	CS 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	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	STD 510n.m	std-xyz10-20030820-510nm.doc	ftp://ftp.pwg.org/pub/pwg/standards/...

352 Table 2 - Sample flow of documents including versions and naming

353 5 Informal supporting PWG documents

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

356 5.1 White Papers and Technical Briefs

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

369 6 Publication of PWG documents

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

378
379 Charter – <ftp://ftp.pwg.org/pub/pwg/wg/charter/ch-wg10-yyyymmdd.pdf>
380 Requirements – <ftp://ftp.pwg.org/pub/pwg/wg/charter/rq-wg10-yyyymmdd.pdf>
381 Working Drafts – <ftp://ftp.pwg.org/pub/pwg/wg/wd/wd-wg10-yyyymmdd.pdf>
382 Candidate Standards – <ftp://ftp.pwg.org/pub/pwg/wg/cs-wg10-yyyymmdd-510nm.pdf>
383 Standards – <ftp://ftp.pwg.org/pub/pwg/standards/std-wg10-yyyymmdd-510nm.pdf>

384
385 Standards are not published in the Working Group path. PWG Standards are given a unique number and are
386 published in one, flat, namespace for ease of access.

387
388 Supporting documents (see Section 5.1) are posted in the root Working Group path or a subdivision of that path as
389 appropriate. Filename prefixes for common supporting documents are:

390
391 White Paper – wp
392 Technical Brief – tb
393 Developer's Guide – dg
394 Best Practice – bp
395 Hints and Tips – ht
396 FAQ – faq

397
398

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

402
403 When documents are posted to the PWG FTP site, a notice should also be posted to the Working Group mailing list.
404 It is recommended that Working Groups provide a web site where information about their activities is provided. The
405 Web site should provide links to current, relevant documents.
406

407 **7 Approval**

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

410 **7.1 Last Call**

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

416
417 All issues raised during Last Call must be answered in one of the following manners:

- 418 • Resolved - Document updated to reflect the resolution
- 419 • Resolved - No change required in the document
- 420 • Unresolved - Document will be approved as is

421

422 **7.2 Formal Approval**

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

427
428 Formal Approval requires

- 429
- 430 • approval by 2/3 of those casting votes (abstentions do not count) with no strong opposition
- 431 • approval by 80% of those casting votes (abstentions do not count), in the face of strong opposition

432

433 Strong opposition occurs when one or more companies formally calls for an 80% vote. It is the responsibility of the
434 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
435 WG Chair decision, he or she can appeal that decision to the PWG Steering Committee (first) and then to the
436 membership of the PWG at large if necessary.

437

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

441

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

444 7.3 Voting Rights

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

- 446
- 447 • A voter must be a representative of a PWG Member Organization.
- 448
- 449 • Votes are counted on an organization basis.
- 450
- 451 • At times it may become necessary to conduct a vote on internal WG matters. If so, eligibility is determined by an
- 452 organization attending two of the previous four meetings, where meetings include both face-to-face meetings and
- 453 conference calls. It is the responsibility of the Secretary to maintain the list of eligible voters and post this in the
- 454 meeting minutes. There is no history of attendance requirement, only a membership requirement, for voting at
- 455 PWG Plenary meetings.
- 456
- 457 • With a simple majority vote, the working group may confer voting rights to an individual or organization that is not
- 458 otherwise eligible to vote due to lack of attendance. This is done on a case-by-case basis and is intended to
- 459 address those individuals or companies who have made significant, on-going contributions to the group – but
- 460 have not been able to attend the required number of meetings. In no case may a representative of a non-
- 461 member company be conferred voting rights by the action of a working group.
- 462
- 463 • A simple majority is required to pass on administrative and operational issues. Otherwise Formal Approval, as
- 464 defined in section 7.2, is required on all voting.
- 465
- 466 • A working Group chair may declare that a sufficient quorum does not exist for voting purposes if at least 50% of
- 467 voting members are not present during the vote.
- 468
- 469 • Voting is not a requirement for declaring rough consensus.

470 8 Maintenance

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

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

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

479
480 Proposals for registrations and clarifications will follow the following process:

- 481 1. Each WG will appoint a Maintenance Editor for their PWG Standard.
- 482 2. Anyone can initiate a proposal for a clarification or registration by starting a discussion on the appropriate project
483 mailing list.
- 484 3. After there is some agreement on the mailing list for the need of a clarification or the suitability of a registration,
485 the proposer and the standard's Maintenance Editor work out a proposal. Such a proposal should include:
 - 486 • Status of the proposal, including previous reviews.
 - 487 • A description of the requirement being met or the problem being solved.
 - 488 • Description of the proposed solution.
 - 489 • The exact text to be incorporated into the standard at some future date.
- 490 4. To make the status of proposed registrations and clarifications clear to PWG participants and others, the
491 Maintenance Editor will keep them in the appropriate sub-directory
492 <ftp://ftp.pwg.org/pub/pwg/xxx/proposed-registrations>
493 <ftp://ftp.pwg.org/pub/pwg/xxx/proposed-clarifications>

- 494 where xxx is the project.
- 495 5. All proposals must be published according to section 6 of this document.
- 496 6. Reviews of proposed registrations and clarifications may occur at a meeting or on the MAILING LIST.
- 497 7. The proposal will undergo sufficient reviews and updates until, in the opinion of the WG Chair, there is rough
- 498 consensus that the proposal is ready for Last Call as described in section 7.1 followed by Formal Approval as
- 499 described in section 7.2.
- 500 8. If, in the opinion of the WG Chair, the Last Call discussions and Formal Approval meet the voting requirements
- 501 described in section 7, the Maintenance Editor will move the approved registration or clarification to the
- 502 appropriate sub-directory for each project
- 503 ftp://ftp.pwg.org/pub/pwg/xxx/approved-registrations
- 504 ftp://ftp.pwg.org/pub/pwg/xxx/approved-clarifications
- 505 and announce the Formal Approval to the entire PWG via the PWG-ANNOUNCE MAILING LIST.
- 506 9. Periodically, the Maintenance Editor will incorporate the approved registrations and clarifications into the version
- 507 of the standard that the PWG keeps to record all approved registrations and clarifications. Such an updated
- 508 version of the standard will have a new minor version of the standard, along with a Change History Appendix that
- 509 lists each change.

510 **9 Intellectual Property and Confidentiality**

511 **9.1 Ownership of IP rights**

512 All patents, copyrights, or other intellectual property owned or created by any Member or member's affiliates

513 (hereinafter "Member or Associate") outside the PWG or its work within the PWG shall remain the property of that

514 Member or Associate hereunder and shall not be affected in any way by the Member or Associate's participation in

515 the PWG.

516 The PWG may, through its activities, generate intellectual property, and license such property to the Members and/or

517 Associates on reasonable and nondiscriminatory terms, conditions and prices; provided, however, that Members and

518 Associates receive more favorable pricing than non-Members or non-Associates.

519 All information and materials, and all copyrights thereto, contributed by Members and Associates and their

520 representatives and incorporated into a PWG Standard and Specification (here after "the Standard") shall be owned

521 by the contributing Member or Associate. The contributing Member or Associate shall grant PWG and its Members

522 and Associates an irrevocable license to use, reproduce, modify, distribute and sublicense the copyrighted work(s)

523 incorporated in the Standard on non-discriminatory basis and within reasonable terms and conditions.

524 Notwithstanding the above, any intellectual property independently created by a Member or Associate, but not

525 incorporated into a PWG standard, should remain the exclusive property of the original owner and no mandatory

526 license should be imposed.

527 Participants in the standard setting procedure shall disclose any known patents whose use would be required for

528 compliance with a proposed PWG standard. Prior to PWG's approval of the proposed standard, the PWG should

529 receive a written patent statement from the patent holder as described below in section 9.3.

534 **9.2 Intellectual Property Procedures**

535 The PWG is not in a position to give authoritative or comprehensive information about evidence, validity or scope of

536 patents or similar rights, but it is desirable that any available information should be disclosed. Therefore, all PWG

537 members shall, from the outset, draw PWG's attention to any relevant patents (hereinafter defined) either their own

538 or of other organizations including their Affiliates (hereinafter defined) that are known to the PWG members or any of

539 their Affiliates, although PWG is unable to verify the validity of any such information.

540

- 541 • “Relevant Patents” means any issued or registered patent, without use of which a PWG Candidate Standard or
542 PWG Standard cannot be practiced.
- 543 • “PWG Candidate Standard” means each proposal towards each PWG Standard, which is submitted to PWG
544 after the date of acceptance of these Procedures (hereinafter the Effective Date).
- 545 • “Affiliates or Associates,” means any entity that as of the Effective Date directly or indirectly is controlled by the
546 PWG member, so long as such control exists, where “Control” means beneficial ownership of more than fifty
547 percent (50%) of the voting stock or equity in an entity.
548

549 9.3 Patent Statement

550 When a proposal is submitted to the PWG, three different situations may arise with respect to relevant Patents and
551 Patent applications:
552

- 553 (1) In the event the proposal is adopted to become a PWG Standard, the patent holder or applicant waives his rights
554 under the Relevant Patents owned by him and hence, the proposal is freely accessible to everybody; no
555 particular conditions, no royalties due, etc., with respect to such Relevant Patents. The PWG Standard means
556 any PWG specifications that are officially published by PWG after October 1, 1999.
557
- 558 (2) In the event a proposal is adopted as a PWG Standard, the patent holder or applicant is not prepared to waive
559 his rights under the Relevant Patents owned by him but would be willing to grant licenses to other parties on a
560 non-discriminatory basis and on reasonable terms and conditions, provided a similar grant under the licensee's
561 patents within the scope of the license granted to the licensee is made available. Such license grants are left to
562 the parties concerned.
563
- 564 (3) In the event the proposal is adopted to become a PWG Standard, and the patent holder or applicant is not willing
565 to comply with the provisions of either paragraph (1) or (2), in such a case the Proposal cannot be established as
566 a PWG Standard.
567
- 568 (4) Whichever option from among paragraphs (1), (2) or (3) is chosen, any PWG member must provide a written
569 statement to be filed on behalf of itself and its Affiliates at the PWG secretariat with respect to the Relevant
570 Patents that are owned by the PWG member or any of its Affiliates and known to the PWG member or any of its
571 Affiliates. This statement must not include additional provisions, conditions, or any other exclusion clauses in
572 excess of what is provided for each case in paragraphs (1), (2) and (3).
573
- 574 (5) If no Relevant Patents that are owned or applied for by the PWG member or any of its Affiliates are known to the
575 PWG member or any of its Affiliates, an affirmative disclosure to that effect must be submitted before the end of
576 the Patent Statement deadline in lieu of the Patent Statement. Any Relevant Patents that are owned by the PWG
577 member or any of its Affiliates and are found after the Patent Statement deadline are automatically subject to
578 either paragraph (1) or (2) as described above.
579
- 580 (6) Format of Patent Statement/Patent Notice
581
- 582 (i) A Patent Statement should be submitted by all the PWG members for all Relevant Patents and Patent
583 applications which are known to the PWG members and their Affiliates and are owned by the PWG members
584 or their Affiliate, providing the following information:
585
 - 586 1. Proposal Name
 - 587 2. Organization: The organization that holds the patent which could include administrations, universities,
588 etc., and its contact address.
 - 589 3. Tel. No.: The contact telephone number of the organization.
 - 590 4. Fax. No.: The contact fax number of the organization.
 - 591 5. Patent Policy and Remarks: The declared patent policy of the organization in its communication to the
592 PWG. Most often the patent policy is given as "Pat. Policy. 9.3 (2)", which would mean that the
593 organization subscribes to paragraph 9.3 (2) of the PWG bylaws.

- 594 6. Patent Title: The title of a patent
- 595 7. Patent Number: The number of the patent (if known).
- 596 8. Patent Country: The country in which the patent has been obtained. If the patent is held in several
- 597 countries, a list of those countries is given.
- 598 9. Signature: Signature of an authorized representative of the company.
- 599
- 600 (ii) Further, a Patent Notice should be submitted by all the PWG members for Relevant Patents and Patent
- 601 applications which are known to the PWG members and their Affiliates and are not owned nor controlled by
- 602 the PWG members or their Affiliate, providing the following information:
- 603
- 604 1. Proposal Name
- 605 2. Organization: The organization that holds the patent which could include administrations, universities,
- 606 etc., and its contact address.
- 607 3. Patent Title: The title of a patent
- 608 4. Patent Number (if known)
- 609 5. Patent Country: The country in which the patent has been obtained. If the patent is held in several
- 610 countries, a list of those countries is given.
- 611 6. Signature: Signature of a representative of the company
- 612

613 See <http://www.pwg.org/chair/pwg-loa.doc> for a link to the PWG Letter of Assurance for Essential Patents.

- 614
- 615 (7) All voting members must submit a written patent statement between the proposal deadline and the
- 616 commencement of voting period. An LOA must be received from each voting member prior to transition of a
- 617 Working Draft to Candidate Standard.
- 618 (8) The working group chairman should provide an IP summary at the beginning of every face to face meeting
- 619 and/or discuss the need for IP LOAs in periodic conference calls or e-mail summaries (recommended at least
- 620 every 60 days).
- 621

622 **Issue 1 – Does this mean voting cannot proceed if someone has not submitted LOA?** Yes?

623 9.4 Non-confidentiality

624 The participation in the PWG by the Members and the Associates and their appointed representatives shall be on a

625 non-confidential basis; however, a PWG Member may with the approval of the Steering Committee, wherein such

626 approval shall not be unreasonably withheld, enter into written confidentiality agreements with all other PWG

627 Members which restricts the dissemination of specified confidential information and/or materials provided by any of

628 such Member, to Persons who are not Members or Associates.

629

630 Subject only to valid patents and copyrights, all PWG Members and Associates shall be free to use all information

631 received or publicly disclosed from the PWG, its Members or Associates in connection with the normal business

632 including the processes described herein, without obligation regardless of markings including but not limited to

633 “Proprietary” or “Confidential.”

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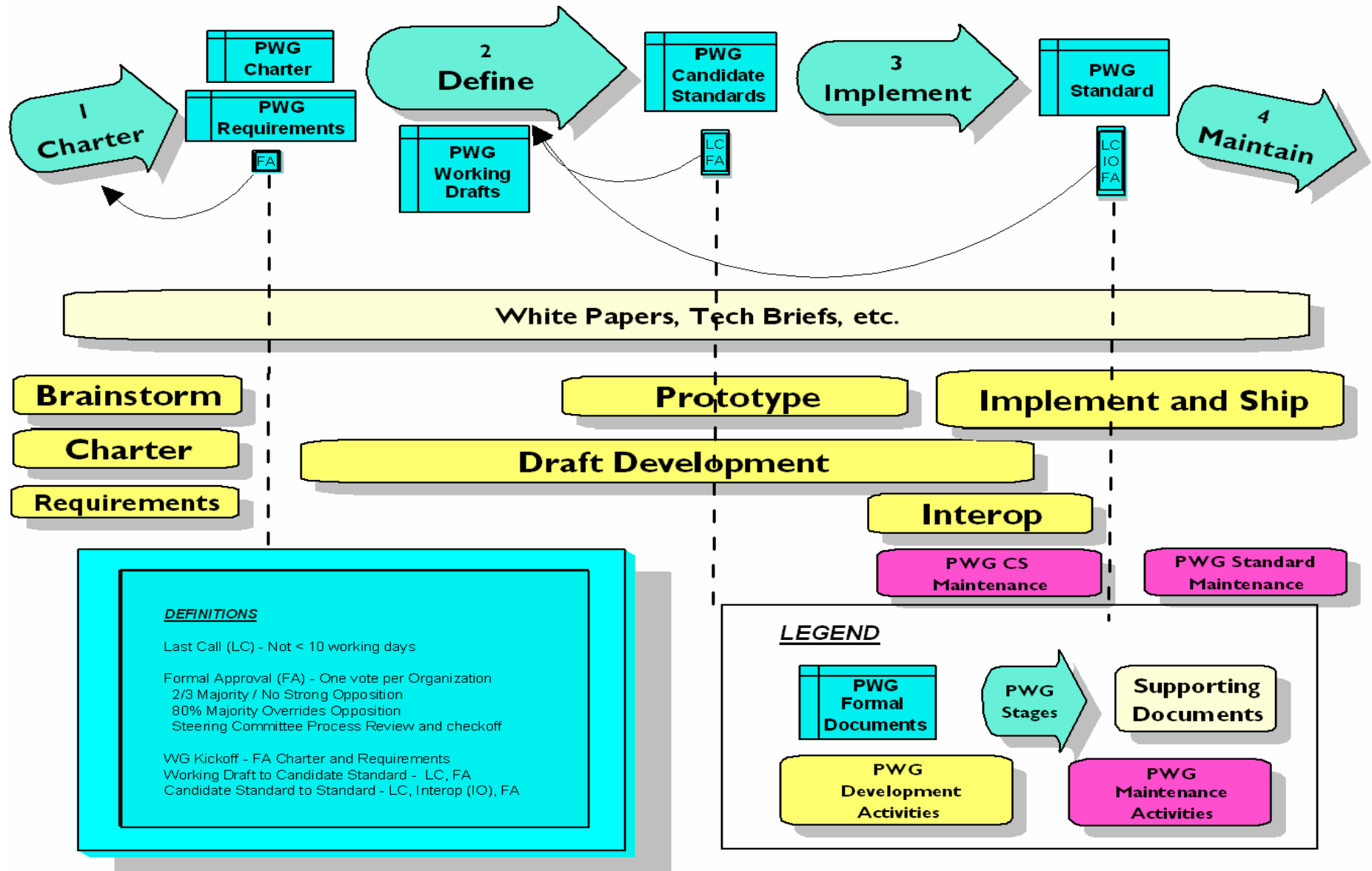
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651 **10 PWG Process Diagram**



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