

February 19, 2013
Implementation Guide: Working Draft



Printer Work Group

Implementation Guide

Printer Working Group: Print Job Ticket Support Levels (PWG:PJT – Support Levels)

Status: Initial

Abstract: This White Paper provides an implementation reference for three (3) levels of supports of the Print Working Group (PWG) Print Job Ticket (PJT). The first support level is intended for printing simply Print Jobs; the second support level is intended for modest to high-end office printing; and, finally, the third support level, supporting all the features of the PWG:PJT is intended for high-end office and production printing. Specifying a Support Level by a Print Client provides a Print Service with knowledge of the Print Client capabilities. End-User will benefit from (and/or with the capability to set) the Support Level by experiencing a consistent Print Client interface at Support Level. And, while a Printer's capabilities may not fully implement a specific Support Level; a Print Service can, through the use of Print Transforms, augment a Printer's capabilities to meet the requirements of a specific support level

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61 About the IEEE-ISTO PWG

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63 The Printer Working Group (or PWG) is a Program of the IEEE Industry
64 Standards and Technology Organization (ISTO) with member organizations
65 including printer manufacturers, print server developers, operating system
66 providers, network operating systems providers, network connectivity
67 vendors, and print management application developers. The group is
68 chartered to make printers and the applications and operating systems
69 supporting them work together better. All references to the PWG in this
70 document implicitly mean "The Printer Working Group, a Program of the
71 IEEE ISTO." In order to meet this objective, the PWG will document the results
72 of their work as open standards that define print related protocols, interfaces,
73 procedures and conventions. Printer manufacturers and vendors of printer
74 related software will benefit from the interoperability provided by voluntary
75 conformance to these standards.

76

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

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82 For additional information regarding the Printer Working Group visit:

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<http://www.pwg.org>

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About the Cloud Work Group and Semantic Model Work Group

For information regarding Cloud Work Group visit:

<http://www.pwg.org/cloud/>

For information regarding Multi-Semantic Model Work Group visit:

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Implementers of this specification are encouraged to join the Cloud Work Group and the Semantic Model Work Group mailing list in order to participate in any discussions of the specification. Suggested additions, changes, or clarification to this specification, should be sent to the Cloud Work Group and/or Semantic Model Work Group Mailing list for consideration.

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144

145

146 **1. Introduction**

147 To be supplied

148 **2. Terminology**149 **2.1 Conformance Terminology**

150 Capitalized terms, such as MUST, MUST NOT, RECOMMENDED, REQUIRED, SHOULD,
 151 SHOULD NOT, MAY, and OPTIONAL, have special meaning relating to conformance
 152 as defined in Key words for use in RFCs to Indicate Requirement Levels [RFC2119].
 153 The term CONDITIONALLY REQUIRED is additionally defined for a conformance
 154 requirement that applies to a particular capability or feature.

155 **2.2 Other Terminology**156 **2.3 Acronyms**

157 **2.4 Organizations**

IANA	Internet Assigned Numbers Authority	www.iana.org
IETF	Internet Engineering Task Force	www.ietf.org
ISO	International Organization for Standardization	www.iso.org
PWG	Printer Working Group	www.pwg.org

158

159 **3. Requirements**

160 **3.1 Rationale for PWG:PJT Support Levels Implementation Guide**

161 The Printer Working Group (PWG) Print Job Ticket (PJT) consist of a rich set of
162 printing objects, attributes, elements and values that support the simplest level of
163 printing to most complex. The PWG:PJT supports printing from/in embedded,
164 mobile, home-office, business office and production environments. However,
165 supporting the capabilities of the PWG:PJT by Applications and/or Print Clients in
166 the various environments is burdensome. While a Print Service only needs to
167 provide capability information that it supports; currently, there is an implicit
168 requirement that a Print Client support potentially all PWG:PJT objects, elements,
169 attributes and values that a Print Service could instantiate as a capability; this is just
170 not practical in all situations and environments.

171 **3.2 Use Cases**

172 Not acceptable for this implementation guide.

173 **3.3 Out of Scope**

174 This document identify Support Levels for the PWG: PJT but does identify

175

- 176 1. Vendor Extensions for Elements
- 177 2. Vendor Extensions for element Values

178 **3.4 Design Requirements**

179 < should put some words in here on why the three level and some brief design
180 rationale for only 3 level and what each level represents. Maybe (!) use-cases are
181 needed to identify the 3 levels???

182 **4. Specification**

183 All content in discussed in the document and, specifically, the Elements and Values
184 outlined in Section 5. Conformance is identified and defined in the PWG-5108.07-
185 2012 candidate Standard titled "PWG Print Job Ticket and Associated Capabilities
186 Version 1.0 (PJT)" [PWG5108.07].

187 **5. Conformance**

188 At the top level, the PWG:PJT consist of three required major elements; namely;

189

190 [Top] Print Job Ticket

191 .[Element]. Print Document Processing

192 .[Element]. Print Job Description

193 .[Element]. Print Job Processing.

194

195 The details for each Support Level are elaborated in the following subsection.

196 5.1 Conformance: PWG:PJT Support Level – 1

197

198 [Top] Print Job Ticket

199

200 .[Element]. Print Document Processing

201 .[Element]. Number Up

202 .[Element]. Copies

203 .[Element]. Font Name Requested

204 .[Element]. Font Size Requested

205 .[Element]. Media Type

206 .[Element]. Media (= Media Size Name)

207 .[Element]. Orientation Requested

208 .<Value>. Landscape

209 .<Value>. Portrait

210 .<Value>. Reverse Landscape

211 .<Value>. Reverse Portrait

212 .<Value>. None

213 .[Element]. Output bin

214 .[Element]. Page Ranges

215 .<Value>. Lower Bound

216 .<Value>. Upper Bound

217 .<Value>. Vendor Extension

218 .[Element]. Print Content Optimize

219 .<Value>. Text

220 .<Value>. Graphics

221 .<Value>. Text and Graphics

222 .<Value>. Photo

223 .<Value>. Vendor Extension

224 .[Element]. Print Color Mode

225 .<Value>. Auto

226 .<Value>. Bi-Level (Only Required for B/W Printers)

227 .<Value>. Color

228 .<Value>. Monochrome

229 .<Value>. Process Bi-Leel

230 .<Value>. Process Monochrome

231 .<Value>. Vendor Extension

232 .[Element]. Print Rendering Intent

233 .<Value>. Auto

234 .<Value>. Perceptual

235 .[Element]. Vendor Extension

236	.[Element]. Quality
237	.<Value>. Draft
238	.<Value>. Normal
239	.<Value>. High
240	.<Value>. Vendor Extension
241	.[Element]. Resolution
242	.<Value>. Cross Feed Dir
243	.<Value>. Feed Dir
244	.[Element]. Resolution Unit
245	.<Value>. DPI
246	.<Value>. DPCM
247	.<Value>. Vendor Extension
248	.<Value>. Vendor Extension
249	.[Element]. Sheet Collate
250	.<Value>. Uncollated
251	.<Value>. Collated
252	.<Value>. Vendor Extension
253	.[Element]. Sides
254	.<Value>. One Sided
255	.<Value>. Two Sided Long Edge
256	.<Value>. Two Sided Short Edge
257	.<Value>. Vendor Extension
258	.[Element]. X Image Position
259	.<Value>. None
260	.<Value>. Center
261	.<Value>. Left
262	.<Value>. Right
263	.<Value>. Vendor Extension
264	.[Element]. X Image Shift
265	.[Element]. X Side 1 Image Shift
266	.[Element]. X Side 2 Image Shift
267	.[Element]. Y Image Position
268	.<Value>. None
269	.<Value>. Center
270	.<Value>. Top
271	.<Value>. Bottom
272	.<Value>. Vendor Extension
273	.[Element]. Y Image Shift
274	.[Element]. Y Side 1 Image Shift
275	.[Element]. Y Side 2 Image Shift
276	.[Element]. Vendor Extension
277	

278 .[Element]. Print Job Description
279 .[Element]. Job Accounting ID
280 .[Element]. Job Accounting User ID
281 .[Element]. Job More Info
282 .[Element]. Job Name
283 .[Element]. Job Originating User Name
284 .[Element]. Document Format Details Supplied
285 .[Element]. Document Format
286 .<Value>. Application PDF
287 .<Value>. Application VND PWG XHTML Print XML
288 .<Value>. Image JPEG
289 .<Value>. Text HTML
290 .<Value>. Text Plain
291 .<Value>. Text Plain Charset US ASCII
292 .<Value>. Text Plain Charset UTF 8
293 .[Element]. Document Format Version
294 .[Element]. Document Natural Language
295 .[Element]. Document Format Supplied
296 .<Value>. Application PDF
297 .<Value>. Application VND PWG XHTML Print XML
298 .<Value>. Image JPEG
299 .<Value>. Text HTML
300 .<Value>. Text Plain
301 .<Value>. Text Plain Charset US ASCII
302 .<Value>. Text Plain Charset UTF 8
303 .[Element]. Document Format Version Supplied
304 .[Element]. Document Name Supplied
305 .[Element]. Document URI
306 .[Element]. Job Collation Type
307 .<Value>. Uncollated
308 .<Value>. Collated
309 .<Value>. Vendor Extension
310 .[Element]. Page Order Received
311 .<Value>. 1 to N Order
312 .<Value>. N to 2 Order
313 .<Value>. Vendor Extension
314 .[Element]. Vendor Extension
315
316 .[Element]. Print Job Processing
317 .[Element]. Job Error Action
318 .<Value>. Abort Job
319 .<Value>. Cancel Job

- 320 .[Element]. Job Collation Type
- 321 .<Value>. Uncollated Sheets
- 322 .<Value>. Collated Documents
- 323 .<Value>. Uncollated Documents
- 324 .<Value>. Vendor Extension
- 325 .[Element]. Job Copies
- 326 .[Element]. Output Device
- 327 .[Element]. Vendor Extension
- 328
- 329

330 5.2 Conformance: PWG:PJT Support Level – 2

331 Note that items in blue are the elements and values that are added from Support
332 Level 1 to define Support Level 2.

333

334

335 [Top] Print Job Ticket

336

337 .[Element]. Print Document Processing

338 .[Element]. Number Up

339 .[Element]. Copies

340 .[Element]. Cover Front

341 .[Element]. [Cover Type](#)

342 .<Value>. [No Cover](#)

343 .<Value>. [Print None](#)

344 .<Value>. [Print Front](#)

345 .<Value>. [Print Back](#)

346 .<Value>. [Print Both](#)

347 .<Value>. [Vendor Extension](#)

348 .[Element]. [Media Type](#)

349 .<Value>. [To – Be – Determined](#)

350 .[Element]. [Media](#)

351 .<Value>. [To – Be – Determined](#)

352 .[Element]. [Media Col](#)

353 .<Value>. [To – Be – Determined](#)

354 .[Element]. [Vendor Extension](#)

355 .[Element]. [Feed Orientation](#)

356 .<Value>. [Long Edge First](#)

357 .<Value>. [Short Edge First](#)

358 .<Value>. [Vendor Extension](#)

359 .[Element]. [Finishings](#)

360 .<Value>. [None](#)

361 .<Value>. [Jog Offset](#)

362 .<Value>. [Staple Top Left](#)

363 .<Value>. [Vendor Extension](#)

364 .[Element]. Font Name Requested

365 .[Element]. Font Size Requested

366 .[Element]. Media Type

367 .[Element]. Media (= Media Size Name)

368 .[Element]. [Media Col](#)

369 .<Value>. [To – Be – Determined](#)

- 370 .[Element]. Orientation Requested
- 371 .<Value>. Landscape
- 372 .<Value>. Portrait
- 373 .<Value>. Reverse Landscape
- 374 .<Value>. Reverse Portrait
- 375 .<Value>. None
- 376 .[Element]. Output bin
- 377 .[Element]. [Page Delivery](#)
- 378 .<Value>. [To – Be – Determined](#)
- 379 .[Element]. Page Ranges
- 380 .<Value>. Lower Bound
- 381 .<Value>. Upper Bound
- 382 .<Value>. Vendor Extension
- 383 .[Element]. Print Content Optimize
- 384 .<Value>. Text
- 385 .<Value>. Graphics
- 386 .<Value>. Text and Graphics
- 387 .<Value>. Photo
- 388 .<Value>. Vendor Extension
- 389 .[Element]. Print Color Mode
- 390 .<Value>. Auto
- 391 .<Value>. Bi-Level (Only Required for B/W Printers)
- 392 .<Value>. Color
- 393 .<Value>. Monochrome
- 394 .<Value>. Process Bi-Leel
- 395 .<Value>. Process Monochrome
- 396 .<Value>. Vendor Extension
- 397 .[Element]. Print Rendering Intent
- 398 .<Value>. Auto
- 399 .<Value>. [Absolute](#)
- 400 .<Value>. Perceptual
- 401 .<Value>. [Relative](#)
- 402 .<Value>. [Relative BPC](#)
- 403 .<Value>. Saturation
- 404 .[Element]. Vendor Extension
- 405 .[Element]. Quality
- 406 .<Value>. Draft
- 407 .<Value>. Normal
- 408 .<Value>. High
- 409 .<Value>. Vendor Extension
- 410 .[Element]. Resolution
- 411 .<Value>. Cross Feed Dir

412 .<Value>. Feed Dir
413 .[Element]. Resolution Unit
414 .<Value>. DPI
415 .<Value>. DPCM
416 .<Value>. Vendor Extension
417 .<Value>. Vendor Extension
418 .[Element]. [Separator Sheets](#)
419 .<Value>. [None](#)
420 .<Value>. [Slip Sheet](#)
421 .<Value>. [Start Sheet](#)
422 .<Value>. [End Sheet](#)
423 .<Value>. [Both Sheets](#)
424 .<Value>. [Vendor Extension](#)
425 .[Element]. Sheet Collate
426 .<Value>. Uncollated
427 .<Value>. Collated
428 .<Value>. Vendor Extension
429 .[Element]. Sides
430 .<Value>. One Sided
431 .<Value>. Two Sided Long Edge
432 .<Value>. Two Sided Short Edge
433 .<Value>. Vendor Extension
434 .[Element]. X Image Position
435 .<Value>. None
436 .<Value>. Center
437 .<Value>. Left
438 .<Value>. Right
439 .<Value>. Vendor Extension
440 .[Element]. X Image Shift
441 .[Element]. X Side 1 Image Shift
442 .[Element]. X Side 2 Image Shift
443 .[Element]. Y Image Position
444 .<Value>. None
445 .<Value>. Center
446 .<Value>. Top
447 .<Value>. Bottom
448 .<Value>. Vendor Extension
449 .[Element]. Y Image Shift
450 .[Element]. Y Side 1 Image Shift
451 .[Element]. Y Side 2 Image Shift
452 .[Element]. Vendor Extension
453

454 .[Element]. Print Job Description
455 .[Element]. Job Accounting ID
456 .[Element]. Job Accounting User ID
457 .[Element]. Job More Info
458 .[Element]. Job Name
459 .[Element]. Job Originating User Name
460 .[Element]. [Job Originating User URI](#)
461 .[Element]. [Job Pages](#)
462 .[Element]. [K Octets](#)
463 .[Element]. Document Format Details Supplied
464 .[Element]. Document Format
465 .<Value>. Application PDF
466 .<Value>. Application VND PWG XHTML Print XML
467 .<Value>. [Application VND HP PCL](#)
468 .<Value>. Image JPEG
469 .<Value>. [Image TIFF](#)
470 .<Value>. [Image TIFF FX](#)
471 .<Value>. Text HTML
472 .<Value>. Text Plain
473 .<Value>. Text Plain Charset US ASCII
474 .<Value>. Text Plain Charset UTF 8
475 .<Value>. [Vendor Extension](#)
476 .[Element]. Document Format Version
477 .[Element]. [Document Format Device ID](#)
478 .[Element]. Document Natural Language
479 .[Element]. [Document Source Application Name](#)
480 .[Element]. [Document Source Application Version](#)
481 .[Element]. [Document Source OS Name](#)
482 .[Element]. [Document Source OS Version](#)
483 .[Element]. Document Format Supplied
484 .<Value>. Application PDF
485 .<Value>. Application VND PWG XHTML Print XML
486 .<Value>. [Application VND HP PCL](#)
487 .<Value>. Image JPEG
488 .<Value>. [Image TIFF](#)
489 .<Value>. [Image TIFF FX](#)
490 .<Value>. Text HTML
491 .<Value>. Text Plain
492 .<Value>. Text Plain Charset US ASCII
493 .<Value>. Text Plain Charset UTF 8
494 .<Value>. [Vendor Extension](#)
495 .[Element]. Document Format Version Supplied

496 .[Element]. Document Name Supplied
497 .[Element]. Document URI
498 .[Element]. [Impressions](#)
499 .[Element]. Job Collation Type
500 .<Value>. Uncollated
501 .<Value>. Collated
502 .<Value>. Vendor Extension
503 .[Element]. [Media Sheets](#)
504 .[Element]. Page Order Received
505 .<Value>. 1 to N Order
506 .<Value>. N to 2 Order
507 .<Value>. Vendor Extension
508 .[Element]. Vendor Extension
509
510 .[Element]. Print Job Processing
511 .[Element]. [Job Delay Output Until](#)
512 .[Element]. [No Hold](#)
513 .[Element]. [Indefinite](#)
514 .[Element]. [Vendor Extension](#)
515 .[Element]. Job Error Action
516 .<Value>. Abort Job
517 .<Value>. Cancel Job
518 .[Element]. [Job Hold Until](#)
519 .[Element]. [No Hold](#)
520 .[Element]. [Indefinite](#)
521 .[Element]. [Vendor Extension](#)
522 .[Element]. [Job Priority](#)
523 .[Element]. [Job Recipient Name](#)
524 .[Element]. [Job Accounting Sheets](#)
525 .[Element]. [Job Accounting Sheets Type](#)
526 .<Value>. [None](#)
527 .<Value>. [Standard](#)
528 .<Value>. [Vendor Extension](#)
529 .[Element]. [Job Accounting Output Bin](#)
530 .<Value>. [To – Be – Determined](#)
531 .[Element]. [Media](#)
532 .<Value>. [To – Be – Determined](#)
533 .[Element]. [Media Type](#)
534 .<Value>. [To – Be – Determined](#)
535 .[Element]. [Media Col](#)
536 .<Value>. [To – Be – Determined](#)
537 .[Element]. Job Collation Type

538 .<Value>. Uncollated Sheets
539 .<Value>. Collated Documents
540 .<Value>. Uncollated Documents
541 .<Value>. Vendor Extension
542 .[Element]. Job Copies
543 .[Element]. Job Cover Front
544 .[Element]. Cover Type
545 .<Value>. No Cover
546 .<Value>. Print None
547 .<Value>. Print Front
548 .<Value>. Print Back
549 .<Value>. Print Both
550 .<Value>. Vendor Extension
551 .[Element]. Media Type
552 .<Value>. To – Be – Determined
553 .[Element]. Media
554 .<Value>. To – Be – Determined
555 .[Element]. Media Col
556 .[Element]. To – Be – Determined
557 .[Element]. Job Error Sheet
558 .[Element]. Job Error Sheet Type
559 .<Value>. None
560 .<Value>. Standard
561 .<Value>. Vendor Extension
562 .[Element]. Job Error Sheet When
563 .<Value>. On Error
564 .<Value>. Always
565 .<Value>. Vendor Extension
566 .[Element]. Media Type
567 .<Value>. To – Be – Determined
568 .[Element]. Media
569 .<Value>. To – Be – Determined
570 .[Element]. Media Col
571 .<Value>. To – Be – Determined
572 .[Element]. Job Finishings
573 .<Value>. None
574 .<Value>. Jog Offset
575 .<Value>. Staple Top Left
576 .[Element]. Job Sheets
577 .<Value>. None
578 .<Value>. Standard
579 .<Value>. Vendor Extension

580 .[Element]. [Job Sheets Col](#)
581 .[Element]. [Job Sheets](#)
582 .<Value>. [None](#)
583 .<Value>. [Standard](#)
584 .<Value>. [Vendor Extension](#)
585 .[Element]. [Media Type](#)
586 .<Value>. [To – Be – Determined](#)
587 .[Element]. [Media](#)
588 .<Value>. [To – Be – Determined](#)
589 .[Element]. [Media Col](#)
590 .<Value>. [To – Be – Determined](#)
591 .[Element]. [Vendor Extension](#)
592 .[Element]. [Multiple Documents Handle](#)
593 .<Value>. [Separate Documents Collated Copies](#)
594 .<Value>. [Separate Documents Uncollated Copies](#)
595 .<Value>. [Single Document](#)
596 .<Value>. [Single Document New Sheet](#)
597 .<Value>. [Vendor Extension](#)
598 .[Element]. [Output Device](#)
599 .[Element]. [Overrides](#)
600 .<Value>. [To – Be – Determined](#)
601 .[Element]. [Vendor Extension](#)
602
603

604 5.3 Conformance: PWG:PJT Support Level – 3

605 Note that items in blue are the elements and values that are added from Support
606 Level 1 and Level 2 to define Support Level 3.

607

608

609 [Top] Print Job Ticket

610 .[Element]. Print Document Processing

611 .[Element]. Number Up

612 .[Element]. [Presentation Direction Up](#)

613 .<Value>. [To Right To Bottom](#)

614 .<Value>. [To Bottom To Right](#)

615 .<Value>. [To left To Bottom](#)

616 .<Value>. [To Bottom To Left](#)

617 .<Value>. [To Right To Top](#)

618 .<Value>. [To Top To Right](#)

619 .<Value>. [To Left To Top](#)

620 .<Value>. [To Tope To Left](#)

621 .<Value>. [Vendor Extension](#)

622 .[Element]. Copies

623 .[Element]. [Cover Back](#)

624 .[Element]. [Cover Type](#)

625 .<Value>. [No Cover](#)

626 .<Value>. [Print None](#)

627 .<Value>. [Print Front](#)

628 .<Value>. [Print Back](#)

629 .<Value>. [Print Both](#)

630 .<Value>. [Vendor Extension](#)

631 .[Element]. [Media Type](#)

632 .<Value>. [To – Be – Determined](#)

633 .[Element]. [Media](#)

634 .<Value>. [To – Be – Determined](#)

635 .[Element]. [Media Col](#)

636 .<Value>. [To – Be – Determined](#)

637 .[Element]. [Vendor Extension](#)

638 .[Element]. Cover Front

639 .[Element]. Cover Type

640 .<Value>. [No Cover](#)

641 .<Value>. [Print None](#)

642 .<Value>. [Print Front](#)

643 .<Value>. [Print Back](#)

644 .<Value>. Print Both
645 .<Value>. Vendor Extension
646 .[Element]. Media Type
647 .<Value>. To – Be – Determined
648 .[Element]. Media
649 .<Value>. To – Be – Determined
650 .[Element]. Media Col
651 .<Value>. To – Be – Determined
652 .[Element]. Feed Orientation
653 .<Value>. Long Edge First
654 .<Value>. Short Edge First
655 .<Value>. Vendor Extension
656 .[Element]. Finishings
657 .<Value>. None
658 .<Value>. [Staple](#)
659 .<Value>. [Punch](#)
660 .<Value>. [Cover](#)
661 .<Value>. [Bind](#)
662 .<Value>. [Saddle Stitch](#)
663 .<Value>. [Edge Stitch](#)
664 .<Value>. [Fold](#)
665 .<Value>. [Trim](#)
666 .<Value>. [Bale](#)
667 .<Value>. [Booklet Maker](#)
668 .<Value>. Jog Offset
669 .<Value>. Staple Top Left
670 .<Value>. [Staple Bottom Left](#)
671 .<Value>. [Staple Top Right](#)
672 .<Value>. [Staple Bottom Right](#)
673 .<Value>. [Edge Stitch Left](#)
674 .<Value>. [Edge Stitch Top](#)
675 .<Value>. [Edge Stitch Right](#)
676 .<Value>. [Edge Stitch Bottom](#)
677 .<Value>. [Staple Dual Left](#)
678 .<Value>. [Staple Dual Top](#)
679 .<Value>. [Staple Dual Right](#)
680 .<Value>. [Staple Dual Bottom](#)
681 .<Value>. [Bind Left](#)
682 .<Value>. [Bind Top](#)
683 .<Value>. [Bind Right](#)
684 .<Value>. [Bind Bottom](#)
685 .<Value>. Vendor Extension

686 .[Element]. [Finishings Col](#)
687 .<Value>. [Finishing Template](#)
688 .[Element]. [Stitching](#)
689 .<Value>. [Bottom](#)
690 .<Value>. [Top](#)
691 .<Value>. [Left](#)
692 .<Value>. [Right](#)
693 .<Value>. [Vendor Extension](#)
694 .[Element]. Font Name Requested
695 .[Element]. Font Size Requested
696 .[Element]. [Force Front Side](#)
697 .[Element]. [Imposition Template](#)
698 .<Value>. [None](#)
699 .<Value>. [Signature](#)
700 .<Value>. [Z Fold](#)
701 .<Value>. [Same Up](#)
702 .<Value>. [Vendor Extension](#)
703 .[Element]. [Insert Sheet](#)
704 .<Value>. [Insert After Page Number](#)
705 .<Value>. [Insert Count](#)
706 .[Element]. [Media Type](#)
707 .<Value>. [To – Be – Determined](#)
708 .[Element]. [Media](#)
709 .<Value>. [To – Be – Determined](#)
710 .[Element]. [Media Col](#)
711 .<Value>. [To – Be – Determined](#)
712 .[Element]. Media Type
713 .[Element]. Media (= Media Size Name)
714 .[Element]. Media Col
715 .<Value>. [To – Be – Determined](#)
716 .[Element]. [Media Input Tray Check](#)
717 .[Element]. Orientation Requested
718 .<Value>. [Landscape](#)
719 .<Value>. [Portrait](#)
720 .<Value>. [Reverse Landscape](#)
721 .<Value>. [Reverse Portrait](#)
722 .<Value>. [None](#)
723 .<Value>. [Vendor Extension](#)
724 .[Element]. Output bin
725 .[Element]. Page Delivery
726 .<Value>. [To – Be – Determined](#)
727 .[Element]. Page Ranges

728	.<Value>. Lower Bound
729	.<Value>. Upper Bound
730	.<Value>. Vendor Extension
731	.[Element]. Pdl Init File
732	.[Element]. Print Content Optimize
733	.<Value>. Text
734	.<Value>. Graphics
735	.<Value>. Text and Graphics
736	.<Value>. Photo
737	.<Value>. Vendor Extension
738	.[Element]. Print Color Mode
739	.<Value>. Auto
740	.<Value>. Bi-Level (Only Required for B/W Printers)
741	.<Value>. Color
742	.<Value>. Monochrome
743	.<Value>. Process Bi-Level
744	.<Value>. Process Monochrome
745	.<Value>. Vendor Extension
746	.[Element]. Print Rendering Intent
747	.<Value>. Auto
748	.<Value>. Absolute
749	.<Value>. Perceptual
750	.<Value>. Relative
751	.<Value>. Relative BPC
752	.<Value>. Saturation
753	.[Element]. Vendor Extension
754	.[Element]. Quality
755	.<Value>. Draft
756	.<Value>. Normal
757	.<Value>. High
758	.<Value>. Vendor Extension
759	.[Element]. Resolution
760	.<Value>. Cross Feed Dir
761	.<Value>. Feed Dir
762	.[Element]. Resolution Unit
763	.<Value>. DPI
764	.<Value>. DPCM
765	.<Value>. Vendor Extension
766	.<Value>. Vendor Extension
767	.[Element]. Separator Sheets
768	.<Value>. None
769	.<Value>. Slip Sheet

770	.<Value>. Start Sheet
771	.<Value>. End Sheet
772	.<Value>. Both Sheets
773	.<Value>. Vendor Extension
774	.[Element]. Sheet Collate
775	.<Value>. Uncollated
776	.<Value>. Collated
777	.<Value>. Vendor Extension
778	.[Element]. Sides
779	.<Value>. One Sided
780	.<Value>. Two Sided Long Edge
781	.<Value>. Two Sided Short Edge
782	.<Value>. Vendor Extension
783	.[Element]. X Image Position
784	.<Value>. None
785	.<Value>. Center
786	.<Value>. Left
787	.<Value>. Right
788	.<Value>. Vendor Extension
789	.[Element]. X Image Shift
790	.[Element]. X Side 1 Image Shift
791	.[Element]. X Side 2 Image Shift
792	.[Element]. Y Image Position
793	.<Value>. None
794	.<Value>. Center
795	.<Value>. Top
796	.<Value>. Bottom
797	.<Value>. Vendor Extension
798	.[Element]. Y Image Shift
799	.[Element]. Y Side 1 Image Shift
800	.[Element]. Y Side 2 Image Shift
801	.[Element]. Vendor Extension
802	
803	.[Element]. Print Job Description
804	.[Element]. Job Accounting ID
805	.[Element]. Job Accounting User ID
806	.[Element]. Job Message From Operator
807	.[Element]. Job Message To Operator
808	.[Element]. Job More Info
809	.[Element]. Job Name
810	.[Element]. Job Originating User Name
811	.[Element]. Job Originating User URI

812	.[Element]. Job Pages
813	.[Element]. K Octets
814	.[Element]. Template Creator User Name
815	.[Element]. Template ID
816	.[Element]. Template Info
817	.[Element]. Template Name
818	.[Element]. Template Type
819	.<Value>. None
820	.<Value>. Vendor Extension
821	.[Element]. Compression Supplied
822	.<Value>. Deflate
823	.<Value>. GZIP
824	.<Value>. Compress
825	.<Value>. None
826	.<Value>. Vendor Extension
827	.[Element]. Document Charset Supplied
828	.<Value>. To – Be – Determined
829	.[Element]. Document Digital Signature Supplied
830	.<Value>. DSS
831	.<Value>. None
832	.<Value>. PGP
833	.<Value>. SMIME
834	.<Value>. XDSIG
835	.<Value>. Vendor Extension
836	.[Element]. Document Format Details Supplied
837	.[Element]. Document Format
838	.<Value>. Application Octet Stream
839	.<Value>. Application PDF
840	.<Value>. Application POSTSCRIPT
841	.<Value>. Application VND PWG XHTML Print XML
842	.<Value>. Application VND HP PCL
843	.<Value>. Image G3 FAX
844	.<Value>. Image JPEG
845	.<Value>. Image TIFF
846	.<Value>. Image TIFF FX
847	.<Value>. Text HTML
848	.<Value>. Text Plain
849	.<Value>. Text Plain Charset ISO 8859 1
850	.<Value>. Text Plain Charset US ASCII
851	.<Value>. Text Plain Charset UTF 8
852	.<Value>. Vendor Extension
853	.[Element]. Document Format Version

854	.[Element]. Document Format Device ID
855	.[Element]. Document Natural Language
856	.[Element]. Document Source Application Name
857	.[Element]. Document Source Application Version
858	.[Element]. Document Source OS Name
859	.[Element]. Document Source OS Version
860	.[Element]. Vendor Extension
861	.[Element]. Document Format Supplied
862	.<Value>. Application Octet Stream
863	.<Value>. Application PDF
864	.<Value>. Application POSTSCRIPT
865	.<Value>. Application VND PWG XHTML Print XML
866	.<Value>. Application VND HP PCL
867	.<Value>. Image G3 FAX
868	.<Value>. Image JPEG
869	.<Value>. Image TIFF
870	.<Value>. Image TIFF FX
871	.<Value>. Text HTML
872	.<Value>. Text Plain
873	.<Value>. Text Plain Charset ISO 8859 1
874	.<Value>. Text Plain Charset US ASCII
875	.<Value>. Text Plain Charset UTF 8
876	.<Value>. Vendor Extension
877	.[Element]. Document Format Version Supplied
878	.[Element]. Document Message Supplied
879	.[Element]. Document Meta Data
880	.[Element]. Document Name Supplied
881	.[Element]. Document URI
882	.[Element]. Impressions
883	.[Element]. Job Collation Type
884	.<Value>. Uncollated
885	.<Value>. Collated
886	.<Value>. Vendor Extension
887	.[Element]. Media Sheets
888	.[Element]. Page Order Received
889	.<Value>. 1 to N Order
890	.<Value>. N to 2 Order
891	.<Value>. Vendor Extension
892	.[Element]. Vendor Extension
893	
894	.[Element]. Print Job Processing
895	.[Element]. Job Delay Output Until

896	. [Element]. No Hold
897	. [Element]. Indefinite
898	. [Element]. Day Time
899	. [Element]. Evening
900	. [Element]. Night
901	. [Element]. Weekend
902	. [Element]. Second Shift
903	. [Element]. Third Shift
904	. [Element]. Vendor Extension
905	. [Element]. Job Delay Output Until Time
906	. [Element]. Job Error Action
907	. <Value>. Abort Job
908	. <Value>. Cancel Job
909	. <Value>. Continue Job
910	. <Value>. Suspend Job
911	. <Value>. Vendor Extension
912	. [Element]. Job Hold Until
913	. [Element]. No Hold
914	. [Element]. Indefinite
915	. [Element]. Day Time
916	. [Element]. Evening
917	. [Element]. Night
918	. [Element]. Weekend
919	. [Element]. Second Shift
920	. [Element]. Third Shift
921	. [Element]. Vendor Extension
922	. [Element]. Job Hold Until Time
923	. [Element]. Job Phone Number
924	. [Element]. Job Priority
925	. [Element]. Job Recipient Name
926	. [Element]. Job Accounting Sheets
927	. [Element]. Job Accounting Sheets Type
928	. <Value>. None
929	. <Value>. Standard
930	. <Value>. Vendor Extension
931	. [Element]. Job Accounting Output Bin
932	. <Value>. To - Be - Determined
933	. [Element]. Media
934	. <Value>. To - Be - Determined
935	. [Element]. Media Type
936	. <Value>. To - Be - Determined
937	. [Element]. Media Col

938 .<Value>. To – Be – Determined
 939 .[Element]. Job Collation Type
 940 .<Value>. Uncollated Sheets
 941 .<Value>. Collated Documents
 942 .<Value>. Uncollated Documents
 943 .<Value>. Vendor Extension
 944 .[Element]. Job Copies
 945 .[Element]. [Job Cover Back](#)
 946 .[Element]. [Cover Type](#)
 947 .<Value>. [No Cover](#)
 948 .<Value>. [Print None](#)
 949 .<Value>. [Print Front](#)
 950 .<Value>. [Print Back](#)
 951 .<Value>. [Print Both](#)
 952 .<Value>. [Vendor Extension](#)
 953 .[Element]. [Media Type](#)
 954 .<Value>. [To – Be – Determined](#)
 955 .[Element]. [Media](#)
 956 .<Value>. [To – Be – Determined](#)
 957 .[Element]. [Media Col](#)
 958 .<Value>. [To – Be – Determined](#)
 959 .[Element]. [Vendor Extension](#)
 960 .[Element]. Job Cover Front
 961 .[Element]. Cover Type
 962 .<Value>. No Cover
 963 .<Value>. Print None
 964 .<Value>. Print Front
 965 .<Value>. Print Back
 966 .<Value>. Print Both
 967 .<Value>. [Vendor Extension](#)
 968 .[Element]. Media Type
 969 .<Value>. To – Be – Determined
 970 .[Element]. Media
 971 .<Value>. To – Be – Determined
 972 .[Element]. Media Col
 973 .[Element]. To – Be – Determined
 974 .[Element]. Job Error Sheet
 975 .[Element]. Job Error Sheet Type
 976 .<Value>. None
 977 .<Value>. Standard
 978 .<Value>. Vendor Extension
 979 .[Element]. Job Error Sheet When

980	.<Value>. On Error
981	.<Value>. Always
982	.<Value>. Vendor Extension
983	.[Element]. Media Type
984	.<Value>. To – Be – Determined
985	.[Element]. Media
986	.<Value>. To – Be – Determined
987	.[Element]. Media Col
988	.<Value>. To – Be – Determined
989	.[Element]. Job Finishings
990	.<Value>. None
991	.<Value>. Staple
992	.<Value>. Punch
993	.<Value>. Cover
994	.<Value>. Bind
995	.<Value>. Saddle Stitch
996	.<Value>. Edge Stitch
997	.<Value>. Fold
998	.<Value>. Trim
999	.<Value>. Bale
1000	.<Value>. Booklet Maker
1001	.<Value>. Jog Offset
1002	.<Value>. Staple Top Left
1003	.<Value>. Staple Bottom Left
1004	.<Value>. Staple Top Right
1005	.<Value>. Staple Bottom Right
1006	.<Value>. Edge Stitch Left
1007	.<Value>. Edge Stitch Top
1008	.<Value>. Edge Stitch Right
1009	.<Value>. Edge Stitch Bottom
1010	.<Value>. Staple Dual Left
1011	.<Value>. Staple Dual Top
1012	.<Value>. Staple Dual Right
1013	.<Value>. Staple Dual Bottom
1014	.<Value>. Bind Left
1015	.<Value>. Bind Top
1016	.<Value>. Bind Right
1017	.<Value>. Bind Bottom
1018	.<Value>. Vendor Extension
1019	.[Element]. Finishings Col
1020	.<Value>. Finishing Template
1021	.[Element]. Stitching

1022	.<Value>. Bottom
1023	.<Value>. Top
1024	.<Value>. Left
1025	.<Value>. Right
1026	.<Value>. Vendor Extension
1027	.<Value>. Vendor Extension
1028	.[Element]. Job Save Disposition
1029	.[Element]. Save Disposition
1030	.<Value>. None
1031	.<Value>. Save Only
1032	.<Value>. Print Save
1033	.<Value>. Vendor Extension
1034	.[Element]. Save Info
1035	.<Value>. Save Document Format
1036	.<Value>. Save Location
1037	.<Value>. Save Name
1038	.<Value>. Vendor Extension
1039	.[Element]. Vendor Extension
1040	.[Element]. Job Sheet message
1041	.[Element]. Job Sheets
1042	.<Value>. None
1043	.<Value>. Standard
1044	.<Value>. Vendor Extension
1045	.[Element]. Job Sheets Col
1046	.[Element]. Job Sheets
1047	.<Value>. None
1048	.<Value>. Standard
1049	.<Value>. Vendor Extension
1050	.[Element]. Media Type
1051	.<Value>. To - Be - Determined
1052	.[Element]. Media
1053	.<Value>. To - Be - Determined
1054	.[Element]. Media Col
1055	.<Value>. To - Be - Determined
1056	.[Element]. Vendor Extension
1057	.[Element]. Multiple Documents Handle
1058	.<Value>. Separate Documents Collated Copies
1059	.<Value>. Separate Documents Uncollated Copies
1060	.<Value>. Single Document
1061	.<Value>. Single Document New Sheet
1062	.<Value>. Vendor Extension
1063	.[Element]. Output Device

1064 .[Element]. Overrides
1065 .<Value>. To – Be – Determined
1066 .[Element]. [Pages Per Subset](#)
1067 .[Element]. [Proof Print](#)
1068 .[Element]. [Proof Print Copies](#)
1069 .[Element]. [Media Type](#)
1070 .<Value>. [To – Be – Determined](#)
1071 .[Element]. [Media](#)
1072 .<Value>. [To – Be – Determined](#)
1073 .[Element]. [Media Col](#)
1074 .<Value>. [To – Be – Determined](#)
1075 .[Element]. Vendor Extension
1076
1077

1078 **6. Internationalization**

1079 For interoperability and basic support for multiple languages, conforming
1080 implementations MUST support the Universal Character Set (UCS) Transformation
1081 Format -- 8 bit (UTF-8) [RFC3629] encoding of Unicode [UNICODE] [ISO10646] and
1082 the Unicode Format for Network Interchange [RFC5198].
1083

1084 **7. Security Considerations**

1085 Not acceptable for this implementation guide.
1086

1087 **8. IANA Registration Information**

1088 Not acceptable for this implementation guide.

1089 **9. References**

1090 **9.1 Normative References**

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1091

1092 **9.2 Informative References**

1093

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