1. Mapping PPD Keywords to PWG Job Ticket Elements

PPD keywords are separated into main keywords and option keywords. Main keywords are the primary selector and generally map to one or more PWG elements. Option keywords provide the value for a main keyword and generally correspond to one or more PWG element values.

This mapping information is based on the work done for CUPS [CUPSPPD] to support IPP-based printing using PPD files.

Table - PPD Keywords to PWG Elements

| **PPD Main Keyword** | **PWG Element** | **Section** |
| --- | --- | --- |
| Collate | MultipleDocumentHandling | 1.1.1 |
| ColorModel | PrintColorMode | 1.1.2 |
| cupsIPPFinishings | Finishings | 1.1.3 |
| CustomPageSize | MediaCollection  MediaSize | 1.1.4 |
| HWMargins | MediaCollection  MediaSize  BottomMargin  LeftMargin  RightMargin  TopMargin | 1.1.4 |
| ParamCustomPageSize | Media | 1.1.4 |
| Duplex | Sides | 1.1.5 |
| ImageableArea | MediaCollection  MediaSize  BottomMargin  LeftMargin  RightMargin  TopMargin | 1.1.6 |
| PaperDimension | MediaCollection  MediaSize  XDimension  YDimension | 1.1.6 |
| PageSize | MediaCollection  MediaSizeName | 1.1.6 |
| InputSlot | MediaCollection  MediaSource | 1.1.7 |
| LeadingEdge | FeedDirection | 1.1.8 |
| MediaColor | MediaCollection  MediaColor | 1.1.9 |
| MediaType | MediaCollection  MediaType | 1.1.10 |
| MediaWeight | MediaCollection  MediaWeight | 1.1.11 |
| NumCopies | Copies | Note 1 |
| OutputBin | OutputBin | 1.1.12 |
| OutputMode | Quality | 1.1.13 |
| OutputOrder | PageDelivery | 1.1.14 |
| Resolution | Resolution | 1.1.15 |
| 1284DeviceID | DeviceId | 1.2.1 |
| ColorDevice | ColorSupported | 1.2.2 |
| cupsBackSide | PwgRasterDocumentSheetBack | 1.2.3 |
| cupsICCProfile | IccProfiles | 1.2.4 |
| cupsICCQualifier1 | IccProfiles | 1.2.4 |
| cupsICCQualifier2 | IccProfiles | 1.2.4 |
| cupsICCQualifier3 | IccProfiles | 1.2.4 |
| cupsUIConstraints | JobConstraintsSupported | 1.2.5 |
| cupsUIResolvers | JobResolversSupported | 1.2.5 |
| LandscapeOrientation | MediaCollection  MediaSourceProperties  FeedOrientation | 1.2.6 |
| NickName | MakeAndModel | 1.2.7 |
| PageStackOrder | [one of the MIB mappings?] | 1.2.8 |
| RenderingIntent | PrintRenderingIntent | 1.2.9 |
| Throughput | PagesPerMinute | 1.2.10 |

Note:

1 = Not actually a main keyword, but the name of the PostScript page device element that is used to set the number of copies.

* 1. Job Ticket Keywords

Job ticket keywords list all of the supported values of a printer. Each job ticket main keyword also includes a default main keyword, for example "DefaultDuplex" for "Duplex".

* + 1. Collate

The Collate main keyword determines whether copies are collated and corresponds to the PWG MultipleDocumentHandling element. The supported option keyword values are True and False, corresponding to SeparateDocumentsCollatedCopies and SeparateDocumentsUncollatedCopies, respectively.

* + 1. ColorModel

The ColorModel main keyword determines whether output is color or grayscale and corresponds to the PrintColorMode element. The supported option keyword values are Gray, RGB, and CMYK, corresponding to Monochrome, Color, and Color, respectively.

* + 1. cupsIPPFinishings

The cupsIPPFinishings main keyword provides a mapping for the Finishings element. Each option keyword corresponds to an integer value representing a FinishingType value.

* + 1. CustomPageSize, HWMargins, ParamCustomPageSize

The CustomPageSize, HWMargins, and ParamCustomPageSize main keywords indicate that the printer supports custom media sizes. The ParamCustomPageSize values associated with the Width and Height option keywords provide the minimum and maximum media dimensions in points.

* + 1. Duplex

The Duplex main keyword determines whether the output is simplex or duplex and corresponds to the Sides element. The supported option keyword values are None, DuplexNoTumble, and DuplexTumble, corresponding to OneSided, TwoSidedLongEdge, and TwoSidedShortEdge.

* + 1. ImageableArea, PageSize, and PaperDimension

The ImageableArea, PageSize, and PaperDimension main keywords determine the media and correspond to the MediaCol element. The PaperDimension main keyword values provide the media dimensions in points while the ImageableArea main keyword values provide the media margins in points. Common option keyword values are shown in Table 2, however a proper mapping should use the PaperDimension values to lookup the corresponding PWG media name.

Table - PPD and PWG Media Names

|  |  |
| --- | --- |
| **PPD Option Keyword** | **PWG Media Name** |
| Letter | na\_letter\_8.5x11in |
| Legal | na\_legal\_8.5x14in |
| Tabloid | na\_tabloid\_11x17in |
| 4x6 | na\_index-4x6\_4x6in |
| 5x7 | na\_2r\_5x7in |
| 3.5x5 | na\_r\_3.5x5in |
| 3x5 | na\_index-3x5\_3x5in |
| A3 | iso\_a3\_297x420mm |
| A4 | iso\_a4\_210x297mm |
| A5 | iso\_a5\_148x210mm |
| A6 | iso\_a6\_105x148mm |
| Env10 | na\_number-10\_4.125x9.5in |
| EnvDL | iso\_dl\_110x220mm |
| SuperB | na\_super-b\_13x19in |

* + 1. InputSlot

The InputSlot main keyword determines the media source and corresponds to the MediaSource element. The supported option keywords and the corresponding element values are shown in Table 3.

Table - PPD and PWG Media Sources

| **PPD InputSlot Option Keyword** | **PWG MediaSource Value** |
| --- | --- |
| Auto | auto |
| Cassette | main |
| CDTray | disc |
| LargeCapacity | large-capacity |
| Lower | bottom |
| Middle | middle |
| Multipurpose | alternate |
| PhotoTray | photo |
| Roll | main-roll |
| Roll1 | roll-1 |
| Roll2 | roll-2 |
| Side | side |
| Tray1 | tray-1 |
| Tray10 | tray-10 |
| Tray2 | tray-2 |
| Tray3 | tray-3 |
| Tray4 | tray-4 |
| Tray5 | tray-5 |
| Tray6 | tray-6 |
| Tray7 | tray-7 |
| Tray8 | tray-8 |
| Tray9 | tray-9 |
| Upper | top |

* + 1. LeadingEdge

The LeadingEdge main keyword specifies how the media is loaded and corresponds to the FeedDirection element. The supported option keyword values are Short and Long, corresponding to ShortEdgeFirst and LongEdgeFirst, respectively.

* + 1. MediaColor

The MediaColor main keyword specifies the color of the media and corresponds to the MediaColor element. The supported option keyword values are Title Case versions of the standard PWG media color names.

* + 1. MediaType

The MediaType main keyword specifies the type of the media and corresponds to the MediaType element. The supported option keyword values are shown in Table 4.

Table - PPD and PWG Media Types

| **PPD MediaType Option Keyword** | **PWG MediaType Value** |
| --- | --- |
| Auto | auto |
| Card | card-stock |
| Coated | stationery-coated |
| Env | envelope |
| Glossy | photographic-glossy |
| HighGloss | photographic-high-gloss |
| Inkjet | stationery-inkjet |
| Letterhead | stationery-letterhead |
| Matte | photographic-matte |
| Plain | stationery |
| Preprinted | stationery-preprinted |
| Recycled | stationery-recycled |
| Transparency | transparency |

* + 1. MediaWeight

The MediaWeight main keyword specifies the weight of the media and corresponds to the MediaWeight element. The option keyword values are integers in grams per square meter.

* + 1. OutputBin

The OutputBin main keyword specifies the output bin, finisher, mailbox, or other collection point for the output and corresponds to the OutputBin element. The supported option keyword values are Title Case versions of the standard PWG output bin names.

* + 1. OutputMode

The OutputMode main keyword specifies the print quality and corresponds to the Quality element. The supported option keyword values are Draft, Normal, and High, corresponding to the same PWG quality names.

* + 1. OutputOrder

The OutputOrder main keyword specifies the order of printed pages and corresponds to the PageDelivery element. Supported option keyword values are Normal and Reverse, corresponding to the SameOrderFaceDown/Up and ReverseOrderFaceDown/Up values, respectively.

* + 1. Resolution

The Resolution main keyword specifies the output resolution and corresponds to the Resolution element. Supported option keyword values are of the form "Hdpi" or "HxVdpi", where "H" is the integer Cross Feed resolution and "V" is the integer Feed resolution in dots per inch.

* 1. Capability and Description Keywords
     1. 1284DeviceID

The 1284DeviceID main keyword specifies the IEEE 1284 device ID string and corresponds to the DeviceId element.

* + 1. ColorDevice

The ColorDevice main keyword specifies whether the printer supports color output and corresponds to the ColorSupported element.

* + 1. cupsBackSide

The cupsBackSide main keyword specifies how the back side image of duplex sheets must be rendered for the printer and corresponds to the PwgRasterDocumentSheetBack element.

* + 1. cupsICCProfile, cupsICCQualifier1, cupsICCQualifier2, cupsICCQualifier3

The cupsICCProfile, cupsICCQualifier1, cupsICCQualifier2, and cupsICCQualifier main keywords specify the device ICC profiles for the printer and correspond to the IccProfiles element. The option keywords for the cupsICCProfile main keyword are of the form "Qualifier1.Qualifier2.Qualifier3", where each of the qualifier strings may be empty or one of the supported option keyword values for the main keyword specified by the values of the cupsICCQualifier1, cupsICCQualifier2, and cupsICCQualifier3 main keywords.

* + 1. cupsUIConstraints, cupsUIResolver

The cupsUIConstraints and cupsUIResolver main keywords specify constraints between job ticket elements and correspond to the JobConstraintsSupported and JobResolversSupported elements, respectively. The option keywords for each specify the ResolverName element while the values provide a whitespace-delimited list of job ticket elements and values of the form "\*MainKeyword OptionKeyword" or, in the case of cupsUIConstraints values, "\*MainKeyword" without an option keyword when all option keywords conflict except None, False, or NotInstalled.

* + 1. LandscapeOrientation

The LandscapeOrientation main keyword specifies the expected orientation of landscape media such as envelopes and corresponds to the FeedOrientation element. The supported option keyword values are Plus90 and Minus90, corresponding to the Landscape and ReverseLandscape values, respectively.

* + 1. NickName

The NickName main keyword specifies the make and model of the printer and corresponds to the MakeAndModel element.

* + 1. PageStackOrder

The PageStackOrder main keyword specifies whether output is face up in a given output bin and corresponds to the ??? element. The option keyword is an OutputBin option keyword and the value is Normal or Reverse corresponding to FaceDown or FaceUp.

* + 1. RenderingIntent

The RenderingIntent main keyword specifies the supported colorimetric rendering intents for the printer and corresponds to the PrintRenderingIntent element. The option keywords correspond directly to element values.

* + 1. Throughput

The ThroughPut main keyword specifies the speed of the printer in pages per minute and corresponds to the PagesPerMinute element. There is no differentiation for black-and-white versus color printing speed.

1. References
   1. Normative References

[ADOBE5003] Adobe, "PostScript Printer Description File Format Specfication Version 4.3", February 1996, Adobe TechNote 5003

[CUPSPPD] M. Sweet, "CUPS PPD Extensions", http://www.cups.org/documentation.php/spec-ppd.html