1 INTERNET-DRAFT
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11   Internet Printing Protocol/1.1: "finishings" attribute values extension

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14   Status of this Memo

26   **Abstract**

27   This document specifies additional enum values for the IPP/1.1~~0~~ "finishings" Job
28   Template attribute for use with the Internet Printing Protocol/1.1~~0~~ (IPP) ~~[ipp-mod, ipp-~~
29   ~~pro]~~. This attribute permits the client to specify additional finishing options, including
30   values that include a specification of a coordinate system for the placement of finishings
31   operation with respect to the corners and edges of portrait and landscape documents.

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1   Additional values for the "finishings" Job Template attribute

1.1   Problem

Need additional enum values for finishing to specify which of four corners to put a single staple, which of four edges to put two staples, and generic values for the following: fold, trim, bale, saddle stitch and edge stitch generic values.

1.2   Suggested solution

This solution has been proposed at two previous meetings with comments returned and incorporated. The suggestion is to add additional enum values to the "finishings" Job Template attributes (also applies to "finishings-default" and "finishings-supported" attributes).

Coordination with the Finisher MIB has been done. There appears to be no direct way to use the same enum values, since the Finisher MIB divides up finishing into separate enum values by type. So all the stapling is done as a separate enum. Also all the punching is done as a separate enum.

The coordinate system scheme has been selected to agree with the Finisher MIB which in turn follows the ISO DPA approach of using a coordinate system as if the document were portrait. The approach for coordinate system being relative to the intended reading direction depends on the device being able to understand the orientation embedded in the PDL, which is too problematic for many PDLs. The approach for the coordinate system of being relative to the media feed direction is to dependent on the way the device is currently set up, i.e., pulling short edge first vs. long edge first, and can vary between different output-bins in the same device.

Additional (new) keyword symbolic names of these enum values are:
                                        fold
                                        trim
                                        bale

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68   Although not a part of this specification, more specific values for saddle-stitch and fold
69   could be considered once adequate definitions have been developed. Some examples are:

70   saddle-stitch-single-long
71   saddle-stitch-single-short
72   saddle-stitch-dual-long
73   saddle-stitch-dual-short
74   fold-in-half-long
75   fold-in-half-short
76   fold-in-thirds-long
77   fold-in-thirds-short
78   fold-z-long
79   fold-z-short
80

81   **1.3   Proposed Text**

82   Add the following paragraphs indicated with revision marks to the description of the
83   "finishings" Job Template attribute, section 4.2.6, so that the entire section would be:

84   **4.2.6 finishings (1setOf type2 enum)**

85   This attribute identifies the finishing operations that the Printer uses for each copy of
86   each printed document in the Job. For Jobs with multiple documents, the "multiple-
87   document-handling" attribute determines what constitutes a "copy" for purposes of
88   finishing.

89   Standard enum values are:

90   Value   Symbolic Name and Description
91
92   '3'   'none': Perform no finishing
93   '4'   'staple': Bind the document(s) with one or more staples. The exact number
94   and placement of the staples is site-defined.
95   '5'   'punch': This value indicates that holes are required in the finished
96   document. The exact number and placement of the holes is site-
97   defined The punch specification MAY be satisfied (in a site- and
98   implementation-specific manner) either by drilling/punching, or by
99   substituting pre-drilled media.
100   '6'   'cover': This value is specified when it is desired to select a non-printed
101   (or pre-printed) cover for the document. This does not supplant the
102   specification of a printed cover (on cover stock medium) by the
103   document itself.
104   '7'   'bind': This value indicates that a binding is to be applied to the document;
105   the type and placement of the binding is site-defined.

106	'8'	'saddle-stitch': Bind the document(s) with one or more staples (wire
107		stitches) along the middle fold. The exact number and placement
108		of the staples and the middle fold is implementation and/or site-
109		defined.
110	'9'	'edge-stitch': Bind the document(s) with one or more staples (wire
111		stitches) along one edge. The exact number and placement of the
112		staples is implementation and/or site-defined.
113	'10'	'fold': Fold the document(s) with one or more folds ~~parallel to one edge~~.
114		The exact number and orientations of the folds is implementation
115		and/or site-defined.
116	'11'	'trim': Trim the document(s) on one or more edges. The exact number of
117		edges and the amount to be trimmed is implementation and/or site-
118		defined.
119	'12'	'bale': Bale the document(s). The type of baling is implementation and/or
120		site-defined.
121	'13~~2~~'-'19'	reserved for future generic finishing enum values.

122 The following values are more specific stapling and stitching values; they indicate a
123 corner or an edge as if the document were a portrait document (see section 1.3.1):

124	'20'	'staple-top-left': Bind the document(s) with one or more staples in the top
125		left corner.
126	'21'	'staple-bottom-left': Bind the document(s) with one or more staples in the
127		bottom left corner.
128	'22'	'staple-top-right': Bind the document(s) with one or more staples in the
129		top right corner.
130	'23'	'staple-bottom-right': Bind the document(s) with one or more staples in
131		the bottom right corner.
132	'24'	'edge-stitch-left': Bind the document(s) with one or more staples (wire
133		stitches) along the left edge. The exact number and placement of
134		the staples is implementation and/or site-defined.
135	'25'	'edge-stitch-top': Bind the document(s) with one or more staples (wire
136		stitches) along the top edge. The exact number and placement of
137		the staples is implementation and/or site-defined.
138	'26'	'edge-stitch-right': Bind the document(s) with one or more staples (wire
139		stitches) along the right edge. The exact number and placement of
140		the staples is implementation and/or site-defined.
141	'27'	'edge-stitch-bottom': Bind the document(s) with one or more staples (wire
142		stitches) along the bottom edge. The exact number and placement
143		of the staples is implementation and/or site-defined.
144	'28'	'staple-dual-left': Bind the document(s) with two staples (wire stitches)
145		along the left edge.
146	'29'	'staple-dual-top': Bind the document(s) with two staples (wire stitches)
147		along the top edge.
148	'30'	'staple-dual-right': Bind the document(s) with two staples (wire stitches)
149		along the right edge.

150   '31'   'staple-dual-bottom': Bind the document(s) with two staples (wire
151   stitches) along the bottom edge.
152   '32'-'79'   reserved for future specific stapling, stitching and folding enum values.

153 1.3.1   Coordinate system for enum values

154   The values, for which the symbolic name contains "top", "bottom", "left" and "right",
155   are specified with respect to the document as if the document were a portrait document.
156   If the document is actually a landscape or a reverse-landscape document, the client
157   supplies the appropriate transformed value. This applies to values such as 'staple-xxx'
158   and 'edge-stitch-xxx'. For example, to position a staple in the upper left hand corner of a
159   landscape document when held for reading, the client supplies the 'staple-bottom-left'
160   value (since landscape is defined as a +90 degree rotation from portrait, i.e., anti-
161   clockwise). On the other hand, to position a staple in the upper left hand corner of a
162   reverse-landscape document when held for reading, the client supplies the 'staple-top-
163   right' value (since reverse-landscape is defined as a -90 degree rotation from portrait, i.e.,
164   clockwise).

165   The angle (vertical, horizontal, angled) of each staple with respect to the document
166   depends on the implementation which may in turn depend on the value of the attribute.

167   Note: The effect of this attribute on jobs with multiple documents is controlled by the
168   "multiple-document-handling" job attribute (section 4.2.4) and the relationship of this
169   attribute and the other attributes that control document processing is described in section
170   16.3.

171   If the client supplies a value of 'none' along with any other combination of values, it is the
172   same as if only that other combination of values had been supplied (that is the 'none'
173   value has no effect).