

1 INTERNET-DRAFT  
2 <draft-ietf-ipp-finishings-fold-trim-bale-010.txt>

T. Hastings  
Xerox Corporation  
D. Fullman  
Xerox Corporation

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9 Internet Printing Protocol/1.1: "~~finishings~~" ~~'fold', 'trim', and 'bale'~~ attribute values extension  
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11

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## 22 Abstract

23 This document specifies the additional enum values 'fold', 'trim', ~~and 'bale'~~, 'booklet-maker', 'jog-offset',  
24 'bind-left', 'bind-top', 'bind-right', and 'bind-bottom' ~~'booklet-maker'~~ for the IPP/1.1 "finishings" Job  
25 Template attribute for use with the Internet Printing Protocol/1.1 (IPP) [ipp-mod, ipp-pro]. This attribute  
26 permits the client to specify additional finishing options, including values that include a specification of a  
27 coordinate system for the placement of finishings operation with respect to the corners and edges of portrait  
28 and landscape documents.

29 The full set of IPP documents includes:

- 30 Design Goals for an Internet Printing Protocol [RFC2567]
- 31 Rationale for the Structure and Model and Protocol for the Internet Printing Protocol [RFC2568]
- 32 Internet Printing Protocol/1.1: Model and Semantics [ipp-mod]
- 33 Internet Printing Protocol/1.1: Encoding and Transport [ipp-pro]
- 34 Internet Printing Protocol/1.1: Implementer's Guide [ipp-iig]
- 35 Mapping between LPD and IPP Protocols [RFC2569]

36

37 The "Design Goals for an Internet Printing Protocol" document takes a broad look at distributed printing  
38 functionality, and it enumerates real-life scenarios that help to clarify the features that need to be included  
39 in a printing protocol for the Internet. It identifies requirements for three types of users: end users,  
40 operators, and administrators. It calls out a subset of end user requirements that are satisfied in IPP/1.0. A  
41 few OPTIONAL operator operations have been added to IPP/1.1.

42 The "Rationale for the Structure and Model and Protocol for the Internet Printing Protocol" document  
43 describes IPP from a high level view, defines a roadmap for the various documents that form the suite of  
44 IPP specification documents, and gives background and rationale for the IETF working group's major  
45 decisions.

46 The "Internet Printing Protocol/1.1: Encoding and Transport" document is a formal mapping of the abstract  
47 operations and attributes defined in the model document onto HTTP/1.1 [RFC2616]. It defines the  
48 encoding rules for a new Internet MIME media type called "application/ipp". This document also defines  
49 the rules for transporting over HTTP a message body whose Content-Type is "application/ipp". This  
50 document defines a new scheme named 'ipp' for identifying IPP printers and jobs.

51 The "Internet Printing Protocol/1.1: Implementer's Guide" document gives insight and advice to  
52 implementers of IPP clients and IPP objects. It is intended to help them understand IPP/1.1 and some of  
53 the considerations that may assist them in the design of their client and/or IPP object implementations. For  
54 example, a typical order of processing requests is given, including error checking. Motivation for some of  
55 the specification decisions is also included.

56 The "Mapping between LPD and IPP Protocols" document gives some advice to implementers of gateways  
57 between IPP and LPD (Line Printer Daemon) implementations.

58

59

60

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## 73 1 Additional values for the "finishings" Job Template attribute

### 74 1.1 Problem

75 Need additional enum values for finishing to specify which of four corners to put a single staple, which of  
76 four edges to put two staples, which of four edges to bind, and generic values for the following: fold, trim,  
77 bale, saddle stitch, ~~and~~-edge stitch, signature booklet maker and jog-offset.

### 78 1.2 Suggested solution

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

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

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

92 Additional (new) keyword symbolic names of these enum values are:

93 fold  
94 trim  
95 bale  
96 booklet-maker  
97 jog-offset  
98 bind-left  
99 bind-top  
100 bind-right  
101 bind-bottom

102

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

105 saddle-stitch-single-long  
106 saddle-stitch-single-short  
107 saddle-stitch-dual-long

108 saddle-stitch-dual-short  
 109 fold-in-half-long  
 110 fold-in-half-short  
 111 fold-in-thirds-long  
 112 fold-in-thirds-short  
 113 fold-z-long  
 114 fold-z-short  
 115

### 116 **1.3 Proposed Text**

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

#### 119 **4.2.6 finishings (1setOf type2 enum)**

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

123 Standard enum values are:

124	Value	Symbolic Name and Description
125		
126	'3'	'none': Perform no finishing
127	'4'	'staple': Bind the document(s) with one or more staples. The exact number and placement of 128 the staples is site-defined.
129	'5'	'punch': This value indicates that holes are required in the finished document. The exact 130 number and placement of the holes is site-defined. The punch specification MAY be 131 satisfied (in a site- and implementation-specific manner) either by drilling/punching, 132 or by substituting pre-drilled media.
133	'6'	'cover': This value is specified when it is desired to select a non-printed (or pre-printed) 134 cover for the document. This does not supplant the specification of a printed cover 135 (on cover stock medium) by the document itself.
136	'7'	'bind': This value indicates that a binding is to be applied to the document; the type and 137 placement of the binding is site-defined.
138	'8'	'saddle-stitch': Bind the document(s) with one or more staples (wire stitches) along the 139 middle fold. The exact number and placement of the staples and the middle fold is 140 implementation and/or site-defined.
141	'9'	'edge-stitch': Bind the document(s) with one or more staples (wire stitches) along one edge. 142 The exact number and placement of the staples is implementation and/or site- 143 defined.
144	'10'	'fold': Fold the document(s) with one or more folds. The exact number and orientations of 145 the folds is implementation and/or site-defined.
146	'11'	'trim': Trim the document(s) on one or more edges. The exact number of edges and the 147 amount to be trimmed is implementation and/or site-defined.

- 148 '12' 'bale': Bale the document(s). The type of baling is implementation and/or site-defined.  
 149 '13' 'booklet-maker': Deliver the document(s) to the signature booklet maker. This value is a  
 150 short cut for specifying a job that is to be folded, trimmed and then saddle-stitched.  
 151 '14' 'jog-offset': Shift each copy of an output document from the previous copy by a small  
 152 amount which is device dependent. This value has no effect on the "job-sheet". This  
 153 value SHOULD NOT have an effect if each copy of the job consists of one sheet.  
 154 '1543'-19' reserved for future generic finishing enum values.
- 155 The following values are more specific stapling, ~~and~~-stitching and binding values; they indicate a corner or  
 156 an edge as if the document were a portrait document (see section 4.2.6.1-4.3.4):
- 157 '20' 'staple-top-left': Bind the document(s) with one or more staples in the top left corner.  
 158 '21' 'staple-bottom-left': Bind the document(s) with one or more staples in the bottom left  
 159 corner.  
 160 '22' 'staple-top-right': Bind the document(s) with one or more staples in the top right corner.  
 161 '23' 'staple-bottom-right': Bind the document(s) with one or more staples in the bottom right  
 162 corner.  
 163 '24' 'edge-stitch-left': Bind the document(s) with one or more staples (wire stitches) along the  
 164 left edge. The exact number and placement of the staples is implementation and/or  
 165 site-defined.  
 166 '25' 'edge-stitch-top': Bind the document(s) with one or more staples (wire stitches) along the  
 167 top edge. The exact number and placement of the staples is implementation and/or  
 168 site-defined.  
 169 '26' 'edge-stitch-right': Bind the document(s) with one or more staples (wire stitches) along the  
 170 right edge. The exact number and placement of the staples is implementation and/or  
 171 site-defined.  
 172 '27' 'edge-stitch-bottom': Bind the document(s) with one or more staples (wire stitches) along  
 173 the bottom edge. The exact number and placement of the staples is implementation  
 174 and/or site-defined.  
 175 '28' 'staple-dual-left': Bind the document(s) with two staples (wire stitches) along the left edge.  
 176 '29' 'staple-dual-top': Bind the document(s) with two staples (wire stitches) along the top edge.  
 177 '30' 'staple-dual-right': Bind the document(s) with two staples (wire stitches) along the right  
 178 edge.  
 179 '31' 'staple-dual-bottom': Bind the document(s) with two staples (wire stitches) along the bottom  
 180 edge.  
 181 '37'-49' reserved for future specific stapling and stitching enum values.  
 182  
 183 '50' 'bind-left': Bind the document(s) along the left edge; the type of the binding is site-defined.  
 184 '51' 'bind-top': Bind the document(s) along the top edge; the type of the binding is site-defined.  
 185 '52' 'bind-right': Bind the document(s) along the right edge; the type of the binding is site-  
 186 defined.  
 187 '53' 'bind-bottom': Bind the document(s) along the bottom edge; the type of the binding is site-  
 188 defined.  
 189 '54'-MAX reserved for future specific binding enum values and other groups of enum values, such as  
 190 folding, trimming, and baling.

#### 191 **4.2.6.1 Coordinate system for enum values**

192 The values, for which the symbolic name contains "top", "bottom", "left" and "right", are specified with  
193 respect to the document as if the document were a portrait document. If the document is actually a  
194 landscape or a reverse-landscape document, the client supplies the appropriate transformed value. This  
195 applies to values such as 'staple-xxx' and 'edge-stitch-xxx'. For example, to position a staple in the upper  
196 left hand corner of a landscape document when held for reading, the client supplies the 'staple-bottom-left'  
197 value (since landscape is defined as a +90 degree rotation from portrait, i.e., anti-clockwise). On the other  
198 hand, to position a staple in the upper left hand corner of a reverse-landscape document when held for  
199 reading, the client supplies the 'staple-top-right' value (since reverse-landscape is defined as a -90 degree  
200 rotation from portrait, i.e., clockwise).

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

203 Note: The effect of this attribute on jobs with multiple documents is controlled by the "multiple-document-  
204 handling" job attribute (section 4.2.4) and the relationship of this attribute and the other attributes that  
205 control document processing is described in section ~~15.3~~ ~~16.3~~.

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

## 208 **2 IANA Considerations**

209 These "finishings" type2 enum attribute values will be published by IANA according to the procedures in  
210 RFC 2566 [rfc2566] section 6.1 with the following URL:

211 `ftp.isi.edu/iana/assignments/ipp/attribute-values/finishings/fold-trim-bale.txt`

## 212 **3 Internationalization Considerations**

213 Normally a client will provide localization of the enum values of this attribute to the language of the user.

## 214 **4 Security Considerations**

215 This extension poses no additional security threats or burdens than those in IPP/1.0 [RFC2566, RFC2565]  
216 and IPP/1.1 [ipp-mod, ipp-pro]. However, implementations MAY support different access control to  
217 various finishing features, depending on the identity of the job submitting user.

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## 245 6 Author's Addresses

246 Tom Hastings  
247 Xerox Corporation  
248 737 Hawaii St. ESAE 231



249 El Segundo, CA 90245  
250  
251 Phone: 310-333-6413  
252 Fax: 310-333-5514  
253 e-mail: [hastings@cp10.es.xerox.com](mailto:hastings@cp10.es.xerox.com)  
254

255 Don Fullman  
256 Xerox Corporation  
257 737 Hawaii St. ESAE 231  
258 El Segundo, CA 90245  
259

260 Phone: 310-333-8342  
261 Fax: 310-333-5514  
262 e-mail: [dfullman@cp10.es.xerox.com](mailto:dfullman@cp10.es.xerox.com)

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