1   INTERNET-DRAFT
2   <draft-ietf-ipp-output-bin-attr-00.txt>
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9   May 21, 1999
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11   Internet Printing Protocol/1.0 & 1.1: "output-bin" attribute extension

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14   Status of this Memo

24

25   **Abstract**

26   This document defines an extension to the IPP/1.0 [RFC2566] & IPP/1.1 [ipp-mod] Model and
27   Semantics specification for the OPTIONAL "output-bin" Job Template attribute. This attribute
28   allows the client to specify in which output bin a job is to be placed and to query the Printer's
29   default and supported output bins.

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1   Add new "output-bin" Job Template attributes

1.1   Problem

Many printers have multiple output bins, that the job submission protocol permits the submitter to select in which to put the entire job.

1.2   Suggested solution

Add a single-valued "output-bin" Job Template attribute that captures existing practice. Allow integer values, so that the number of output bins is not constrained. Do not specify internal mechanisms, such as collators. Do specify an externally accessible stacker, since current devices allow a user to select a stacker. Do not make the attribute multi-valued. Add the corresponding Job Template Printer attributes: "output-bin-default" and "output-bin-supported".

Note: If it is desired to allow the job submitter to select several output bin mail boxes that can be identified by number or recipient's name, propose a separate multi-valued attribute. Since the destination may also be electronic and have a method associated with it, also allow the uri attribute syntax. Probably call this other attribute "output-destination" with an attribute syntax of (1setOf uri | name). Or possibly the output-destination should be a parameter on the URL? If both "output-bin" and "output-destination" are specified, the job is both printed and sent to the specified destination. This note is provided so that the "output-bin" attribute will not suffer "scope creep" during the review and be changed into "output-destination". Printers have been allowing something like the "output-bin" specification for many years. Supporting something like "output-destination" is just starting to appear now.

1.3   Proposed text

```
  +==================+=====================+=====================+
  | Job Attribute    |Printer: Default Value|  Printer: Supported |
  |                  |      Attribute      |   Values Attribute  |
  +==================+=====================+=====================+
  | output-bin       | output-bin-default  | output-bin-supported |
  | (type2 keyword | | (type2 keyword |    | (1setOf (            |
  |  name(MAX) |     |  name(MAX)) |       |    type2 keyword |   |
  |   integer(1:MAX) |  integer(1:MAX)     |    name(MAX) |       |
  |                  |                     |    integer(1:MAX)))  |
  +==================+=====================+=====================+
```

output-bin (type2 keyword | name(MAX) | integer(1:MAX))

79 This Job Template attribute identifies the device output bin to which the job is to be delivered. There
80 are standard values whose attribute syntax is 'keyword', but there are no standard values whose attribute
81 syntax is 'name' or 'integer'. Output bins whose attribute syntax is 'name', if any, are assigned by local
82 administrators (by means outside the scope of IPP/1.0 and IPP/1.1). Output bins whose attribute syntax
83 is 'integer', if any, are assigned by a printer vendor or local administrator to identify a number of similar
84 output bins which are better differentiated by number than by one of the descriptive names defined in
85 the following keyword list.

86 Each output bin may have implementation-dependent properties. Output bins identified by 'integer' or
87 'name' values MAY possess any of the properties of the output bins identified by the following
88 keywords, depending on implementation. However, each output bin MUST be identified by only one
89 value of any attribute syntax type. Otherwise, clients might be mis-led as to the capabilities of the
90 device when querying the associated Printer object's "output-bin-supported" attribute.

91 Note: Output bin types, such as sorter(s) or collator(s), have not been included in the values of this
92 attribute, since implementations that employ such internal or external bins, determine which to use by
93 the values of other job attributes, such as "finishings", and "copies".

94 When validating a job in a create (or Validate-Job) operation, which subset of the output bins are
95 allowed as a destination for a job MAY depend on the user submitting that job, the user's authentication,
96 and possibly other job attributes, such as "finishings" and "copies". When returning the values of the
97 associated "output-bin-supported" attribute, the values returned MAY depend on the user issuing the
98 Get-Printer-Attributes operation. For example, some implementations MAY omit the 'my-mailbox'
99 value for users who do not have a defined mailbox for this IPP Printer object, while others MAY always
100 return 'my-mailbox' to all users even if only supported for certain users.

101 If this IPP Printer object is associated with multiple devices (fan-out) (see [ipp-mod] section 2.1), the
102 value of its "output-bin-supported" attribute is the union of the values supported with duplicates
103 removed.

104 Standard keyword values are:

105   'top':   The output-bin that, when facing the device, is best identified as the "top" bin with
106   respect to the device.
107   'middle'   The output-bin that, when facing the device, is best identified as the "middle" bin with
108   respect to the device.
109   'bottom'   The output-bin that, when facing the device, is best identified as the "bottom" bin with
110   respect to the device.
111   'side'   The output-bin that, when facing the device, is best identified as the "side" bin with
112   respect to the device.
113   'left'   The output-bin that, when facing the device, is best identified as the "left" bin with
114   respect to the device.

115 116	'right'	The output-bin that, when facing the device, is best identified as the "right" bin with respect to the device.
117 118	'center'	The output-bin that, when facing the device, is best identified as the "center" bin with respect to the device.
119 120	'rear':	The output-bin that, when facing the device, is best identified as the "rear" bin with respect to the device.
121 122 123 124	'face-up'	The output-bin that is best identified as the "face-up" bin with respect to the device. The selection of this output bin does not cause output to be made face-up; rather this output bin is given this name because a sheet with printing on one-side arrives in the output bin in the face-up position.
125 126 127 128	'face-down'	The output-bin that is best identified as the "face-down" bin with respect to the device. The selection of this output bin does not cause output to be made face-down; rather this output bin is given this name because a sheet with printing on one-side arrives in the output bin in the face-down position.
129 130	'large-capacity'	The output-bin that is best identified as the "large-capacity" bin (in terms of the number of sheets) with respect to the device.

131 'stacker-N':   The output-bin that is best identified as the stacker with values 'stacker-1',
132   'stacker-2', ... A stacker is typically used to collate sheets within a single document (not
133   to be confused with collated copies in which document copies are collated within a job -
134   see the description of the 'separate-documents-collated-copies' value of the "multiple-
135   document-handling" attribute in [ipp-mod] section 4.2.4). The correspondence between
136   the 'stacker-N' keyword and the actual stacker in the device is implementation-dependent,
137   as is the number of stackers. If this group of values is supported, at least the 'stacker-1'
138   value MUST be supported, unless the system administrator has assigned names or integer
139   values.

140   For client implementations that require distinct keywords for each possible value, say, for
141   localization purposes, it is recommended for interoperability with other vendor's Printer
142   implementations that 'stacker-1' to 'stacker-10' keywords be represented.

143 'mailbox-N':   The output-bin that is best identified as a mailbox with values 'mailbox-1',
144   'mailbox-2', 'mailbox-3', …. Each mailbox is typically used to collect jobs for an
145   individual or group. Whether the mailbox has doors and/or locks or is open, depends on
146   implementation. The correspondence between the 'mailbox-N' keyword and the actual
147   output-bin in the device is implementation-dependent, as is the number of mailboxes. A
148   system administrator MAY be able to assign a name to each mailbox in order to make
149   selection of a mailbox easier for the user. If this group of values is supported, at least the
150   'mailbox-1' value MUST be supported, unless the system administrator has assigned
151   names or integer values to mailboxes.

152   For client implementations that require distinct keywords for each possible value, say, for
153   localization purposes, it is recommended for interoperability with other vendor's Printer
154   implementations that 'mailbox-1' to 'mailbox-25' keywords be represented.

155   'my-mailbox':   The output-bin that is best identified as functioning like a private "mailbox" with
156   respect to the device. An output-bin functions like a private mailbox if a printer selects
157   the actual output bin using additional implementation-dependent criteria, such as the
158   "authenticated user" (see [ipp-mod] section 8.3) that depends on the user submitting the
159   job. Whether the mailbox has doors and/or locks or is open, depends on implementation,
160   as is the number of mailboxes.

161

2   IANA Considerations

163 This registration proposal will be forwarded to IANA for publication after approval by the IETF IPP
164 WG as outlined in the procedures in RFC 2566] and [ipp-mod].

3   Internationalization Considerations

166 Normally a client will provide localization of the keywords values of this attribute to the language of the
167 user. The numeric form may be simpler for a client to localize.

4   Security Considerations

169 The 'my-mailbox' attribute requires some form of Client Authorization to be really secure. See [ipp-
170 mod] section 8.

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6   Change History

6.1   Changes made to the December 14, 1998 version to make the May 21, 1999 version

200 The following changes were made to the December 14, 1998 version to make the May 21, 1999 version:

201 1. Added the 'integer' attribute syntax to reflect existing practice.

202 2. Removed 'collator' on the grounds that the client doesn't specify such a internal mechanism.

203 3. Recommended 10 stacker and 25 mailbox keywords for client implementations that require distinct
204   keywords for, say, localization.

205 4. Replaced the 'private' with 'my-mailbox' and clarified the Client Authentication required.

206 5. Added the other sections required to be an Internet-Draft.

7   Appendix A: Full Copyright Statement

223   RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A
224   PARTICULAR PURPOSE.

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