

# Changes to: Internet Printing Protocol/1.0 & 1.1: Production Printing Attributes Extension

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This document contains some changes to the document “Internet Printing Protocol/1.0 & 1.1: Production Printing Attributes Extension”.

These changes apply to the attributes that have “collection” values. The attributes are:

1. cover-back (collection)
2. cover-front (collection)
3. insert-sheet (collection)
4. media (type3 keyword | name(MAX) | collection) \*
5. job-accounting-sheets (type3 keyword | name(MAX) | collection)
6. job-error-sheets (type3 keyword | name(MAX) | collection)
7. job-sheets (type3 keyword | name(MAX) | collection) \*
8. separator-sheets (type3 keyword | name(MAX) | collection)
9. size (type3 keyword | name(MAX) | collection) (in media attribute)

The ‘\*’ denote attributes that are in IPP/1.1 and extended with the collection data type in the production printing specification.

## Rule for “xxx-supported”

The document “Internet Printing Protocol/1.0 & 1.1: Production Printing Attributes Extension” says that the “xxx-supported” attribute for an “xxx” attribute with a “collection” value must contain a single collection holding the supported values for each member attribute.

With this rule, the value of “media-supported (type3 keyword | name(MAX) | collection)” would be, for example:

```
Media-supported: letter, legal, {
    color-supported: red, blue;
    opacity-supported: opaque, transparent;
    ... }
```

Note: the brackets above delimit the collection value.

We suggest two different rules. Rule #2 conforms to the rules in the notification document

The two rules are as follows. If “xxx” has values that are collection values, then the definition of “xxx” specifies that the supported collection values for “xxx” are:

1. the one or more explicit collection values of the “xxx-supported (1setOf ( ... | collection))” attribute, e.g. the “size-supported (1setOf (type3 keyword | name(MAX) | collection))” attribute contains one or more collection values, each with an explicit collection value. Each collection value contains two integers specifying the x-dimension and y-dimension of the media size.
2. Any collection with specified member attributes. If “yyy” is such a specified member attribute, then either the definition of “xxx” specifies the supported values or the Printer-level attribute “yyy-supported” specifies the values supported for “yyy”, etc. For this rule, the “xxx-supported” attribute indicates support for collection values in one of the following ways:
  - “xxx-supported (boolean)” has the value “true” if “xxx” can have collection values only e.g. the “insert-sheet-supported (boolean)” attribute is a “true” if the Printer supports the “insert-sheet (collection)” attribute. According to the definition of “insert-sheet(collection)”, the collection member attributes “after-page-number (integer(0,MAX))” and “count (integer(1,MAX))” are always supported (this is a change for count) and can have any positive

44 integer. The “media-supported(1setOf( type3 keyword | name(MAX) | collection)) ” attribute  
45 contains the values supported for the “media” attribute element of the collection value.

- 46 • “xxx-supported (1setOf ( ... | any-collection))” has a special out-of-band value ‘any-collection’ if  
47 “xxx( ... | collection)” can have collection values and other non-collection values  
48 e.g. the “job-error-sheets-supported(1setOf(type3 keyword | name(MAX) | any-collection))”  
49 attribute potentially has the values ‘none’, ‘standard’ , ‘always’ and ‘any-collection’. The first  
50 three values specify that “job-error-sheets(type3 keyword | name(MAX) | collection)” can have  
51 any one of these keywords as its value. The ‘any-collection’ value indicates that “job-error-  
52 sheets(type3 keyword | name(MAX) | collection)” can also have a collection value. The definition  
53 of “job-error-sheets(type3 keyword | name(MAX) | collection)” specifies that the collection  
54 contains the attribute “job-error-sheets” and “media”. So the supported values for these two  
55 attributes are the values of “(1setOf(type3 keyword | name(MAX) | any-collection))” (recursively)  
56 and “media-supported(1setOf( type3 keyword | name(MAX) | collection))” (the same one used by  
57 the Job level “media” attribute).
- 58 • the “xxx” specification says that “xxx” must always be supported,  
59 e.g. a Printer MUST support “job-name(name(MAX))” and there is no corresponding “job-name-  
60 supported”.

61  
62 This new rule creates some “xxx-supported” attributes whose “xxx” attributes are member attributes of a collection,  
63 but never a Job-level attribute, e.g. “size-supported”. The Get-Printer-Attributes operation returns all such “xxx-  
64 supported” attributes when the client requests the ‘Job-Template’ attributes group. We suggest adding the following  
65 attribute

66 The “job-template-attributes-supported (1setOf type2 keyword) attribute contains a set of Job Template  
67 attributes that can occur outside of Collections, e.g. the ‘media’ keyword would be a value, but not the  
68 ‘size’ keyword.

## 69 Name changes

70 The new “xxx-supported” rule requires that some collection member attribute have new names. The tables show the  
71 new and old attribute names for attributes in collections.

72  
73 For the following attributes, the “sheets” attribute is changed to the name of the containing attribute so that “xxx-  
74 supported” attributes works.

75  
76 job-accounting-sheets (type3 keyword | name(MAX) | collection)

Attribute name	New Attribute name	attribute syntax
media	media	type3 keyword   name(MAX)   collection
sheets	job-accounting-sheets	type3 keyword   name(MAX)

77  
78 job-error-sheets (type3 keyword | name(MAX) | collection)

Attribute name	New Attribute name	attribute syntax
media	media	type3 keyword   name(MAX)   collection
sheets	job-error-sheets	type3 keyword   name(MAX)

79  
80 job-sheets (type3 keyword | name(MAX) | collection)

81

Attribute name	New Attribute name	attribute syntax
media	media	type3 keyword   name(MAX)   collection
sheets	job-sheets	type3 keyword   name(MAX)

82  
83 separator-sheets (type3 keyword | collection)

Attribute name	New Attribute name	attribute syntax
media	media	type3 keyword   name(MAX)   collection
sheets	separator-sheets	type3 keyword   name(MAX)

84  
85  
86 For the “media” attribute, each attribute in the collection is made to start with “media”.  
87 media (type3 keyword | name (MAX) | collection)  
88

Attribute name	New attribute name	attribute syntax
media-name	media-name	type3 keyword   name (MAX)
color	media-color	type3 keyword   name (MAX)
opacity	media-opacity	type3 keyword
pre-printed	media-pre-printed	boolean
tabs	media-tabs	type3 keyword
hole-count	media-hole-count	integer
order-count	media-order-count	integer
size	media-size	type3 keyword   name(MAX)   collection
weight	media-weight	integer
weight-units	media-weight-units	type3 keyword
back-coating	media-back-coating	type3 keyword   name(MAX)
front-coating	media-front-coating	type3 keyword   name(MAX)

89  
90 **Syntax Type changes**

91 We suggest the following syntax changes.

92  
93 Remove the “name” syntax type for “media-size” so that a Printer “understands” all values of “size”, i.e. well-  
94 defined keywords or x-y dimensions. With “name”, there an administrator would have to link the “name” to an  
95 actual size. Without names, the need for such a mechanism goes away.  
96

Attribute name	attribute syntax	New attribute syntax
media-size	type3 keyword   name(MAX)  collection	type3 keyword   collection

97  
98 We add “rangeOfInteger” to each value in the "media-size-supported" collection in order to accommodate web-fed  
99 printers:

Attribute name	attribute syntax	New attribute syntax
x-dimension	integer (0:MAX)	integer (0:MAX)   rangeOfInteger(0:MAX)
y-dimension	integer (0:MAX)	integer (0:MAX)   rangeOfInteger(0:MAX)

101