6.0   DOCUMENT PRINTING APPLICATION (DPA)

The ISO 10175 Document Printing Application [DPA] supports printing
using any one of the three possible configurations. For configuration
2, the mapping defined herein is performed on a server. Otherwise, the
mapping is performed on an agent within the printer.

6.1   jmJobSubmissionId Mapped to DPA

DPA contains a rich set of parameters which allow several methods of
creating the jmJobSubmissionId object. To prevent interoperability
problems, the preferred method is to use the DPA job-originating-user
attribute as follows:

   octet 1:   '0'

   octets 2-40: Contains the DPA job-owner attribute
                 supplied by the submitter. If the job-owner
                 is less than 40 octets, the left-most character in the
                 string shall appear in octet position 2. Any unused
                 portion of this field shall be filled with spaces.
                 Otherwise, only the last 39 bytes shall be included.

   octets 41-48: Contains an 8-digit sequential decimal number.

6.2   jmJobIndex Mapped to DPA

The job index (jmJobIndex) assigned by the SNMP job monitoring agent is
returned to the client by DPA as a decimal digit string as the value of
the DPA job-identifer attribute. (Since DPA does not require
consecutively generated job-identifiers, the agent may receive jobs from
multiple clients and can assign the jmJobIndex in an accending sequence
independent of the submitting job client.) The DPA job-identifier must
be restricted to the range of 1 to 99,999,999 (decimal) to allow the
value to be properly represented in jmJobSubmissionId.

6.3   Other MIB Objects Mapped to DPA

MIB Object | DPA Job attribute
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jmJobOwner | job-owner
jmJobKOctetsRequested | total-job-octets (note 1)
jmJobKOctetsProcessed | job-octets-completed (note 1)
jmJobImpressionsRequested | job-impression-count
jmJobImpressionsProcessed | impressions-completed
jmJobStateReasons1 | job-state-reasons (note 2)
jmNumberOfInterveningJobs | intervening-jobs

 Notes:
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1. jmJobKOctetsRequested and jmJobKOctetsProcessed is in K octets
   while the DPA job-total-octets and job-octets-completed is in
   octets and is 63-bits of significance.
2. JobStateReasons is a bit map described in one object and three
   attributes. The DPA condition may change one or more of the bits
   in one or more of these Job MIB items. Also the DPA
   job-state-reasons is a multi-valued attribute with each value being
   an OBJECT IDENTIFIER (OID).

6.4 The Attribute Group Mapped to DPA

The following mappings are required if the listed DPA job attribute is
provided.

MIB attribute	DPA job attribute	IPP Data type
jobCodedCharSet	every attribute is tagged	Octet String
jobNaturalLanguage	-	Octet String
jobName	job-name	Octet String
documentFormat	document-format	Octet String
jobPriority	job-priority	Integer
jobHoldUntil	job-print-after (note 3)	Octet String
sides	sides (note 4)	Integer
finishing	job-finishing, finishing	Integer
printQualityRequested	print-quality	Integer
printerResolutionRequested	default-printer-resolution (note 5)	Integer
jobCopiesRequested	job-copies-requested	Integer
mediumRequested	page-media-select, default-medium	Octet String
jobSubmissionTime	submission-time (note 6)	Integer
jobStartedProcessingTime	started-printing-time (note 6)	Integer
jobCompletionTime	completion-time (note 6)	Integer
sheetsRequested	job-media-sheet-count	Integer
jobURI	-	Octet String
jobStateReasonsN	job-state-reasons (note 2)	Integer
physicalDevice	printers-assigned	Octet String
sheetsCompleted	job-media-sheets-completed	Integer

 Notes:
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   3. jobHoldUntil is a keyword value of the time period, while DPA
      job-print-after is a date/time value.
   4. The Job MIB sides attribute is an integer '1' or '2' while the DPA
      sides attribute has one of six OID values that includes plex.
   5. printerResolutionRequested has x and y resolution and is intended
      to override the resolution instruction in the document, if any,
      while the DPA default-printer-resolution is the same in x and y and
      only takes effect if the document does not contain a resolution
      instruction
   6. IPP times are the number of seconds since boot time, while DPA
      times are a date/time.