Comparison of Job Monitoring MIB implementations with the Job Monitoring MIB objects
Xerox Printxchange -DPA implementation

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File: ftp://ftp.pwg.org/pub/snmpmib/jobs-mib/mono-map/mono-map.doc .ps

Please fill in the comparison with your job monitoring implementations, whether using a MIB or not. This list reflects that changes agreed at the 8-Jan-1997 JMP meeting.

Please fill out each of the three columns provided:

1. obj/attr name - the name of the MIB object or attribute that has the same semantics as the JMP MIB object.
2. data type - the data type of your implementation
3. any notes on differences, etc.

Then rename your file to something to reflect your implementation and upload into the following directory:

ftp://ftp.pwg.org/pub/snmpmib/jobs-mib/mono-map/

List of objects for the Job Monitoring MIB

01 The Job Set~~MIB Instance~~ Group

The **JobSetGroup** consists of objects that are for *all* Job Set instances, not just a single instance. The **jmJobSetGroup** consists entirely of the **jmJobSetEntry** which is indexed by:

1. **jmJobSetIndex -** a running index of Job Set instances supported by this printer or server.

jmJobSetGroup (M)	DataType	Obj/attr name	Data type	Notess
1. **jmJobSetIndex** - a running index of Job Set instances supported by this printer or server.	**Integer32 (1..2^31)**			

02 The General Group

The **jmGeneralGroup** consists of objects of a general nature that are *not* per-job. The **jmGeneralGroup** consists entirely of the **jmGeneralEntry** which is indexed by:

1. **jmJobSetIndex -** a running index of Job Set instances supported by this printer or server.

jmGeneralGroup (G)	DataType	Obj/attr name	Data type	Notess
1. jmJobSetIndex - a running index of Job Set instances supported by this printer or server.	**Integer32 (1..2^15-1)**			
2. **jmGeneralJobCompletedPolicy** - the time in seconds that jobs are kept in the **jmJobTable** and the **jmCompletedTable** after processing.	**Integer32 (0..2^31-1)**			
3. **jmGeneralMaxNumberOfJobs** - the maximum number of job; (-1) means no limit.	**Integer32 (0..2^31-1)**			
4. jmGeneralCurrentNumberOfJobs - the total number of jobs currently in the Job Table (pending and completed).	**Integer32 (0..2^31-1)**			
5. jmGeneralQueuingAlgorithm - the current scheduling algorithm being used or **none** (no queuing is possible)**.**	**JMQueuingAlgorigthm**			

30

03 The Queue Group

The **jmQueueGroup** is made up entirely of the **jmQueueTable** which is an ordered list of jobs that have not completed processing. The **jmQueueGroup** consists of objects that are not needed after the job has completed processing. The **jmQueueGroup** is conditionally mandatory and shall be implemented by a server or print that performs queuing (or spooling). The **jmQueueGroup** shall *not* be implemented if the value of **jmGeneralQueuingAlgorithm** is **none**. The **jmQueueTable** is indexed by:

1. **jmJobSetIndex -** a running index of Job Set instances supported by this printer or server.
2. **jmQueueIndex** - a running index of the jobs that have *not* finished processing.

jmQueueGroup (Q)	DataType	Obj/attr name	Data type	Notes
1. **jmJobSetIndex** - a running index of Job Set instances supported by this printer or server.	**Integer32 (1..2^15)**			
2. **jmQueueIndex** - a running index of the jobs that have *not* finished processing.	**Integer32 (1..2^31-1)**			
3. **jmQueueIndex** - the job's identifier generated by the printer or server implementing this JM MIB	**Integer32 (0..2^31-1)**			
4. **jmQueueNumberOfInterveningJobs** - the number of jobs in front of this job	**Integer32 (0..2^31-1)**	**intervenint-jobs**	**Integer32**	
5. **jmJobPriority** - Job priority	**Integer32 (0..100)**			
6. **jmJobProcessAfterTime** - process-after-time	**GeneralizedTime**	**job-print-after**	**GeneralizedTime**	
7. **jmJobMessageToOperator** - job-message-to-operator from submitting user or device	**OCTET STRING(SIZE((63)))**			

04 The Completed Group

The **jmCompletedGroup** consists entirely of the **jmCompletedTable** which is an ordered list of the job that have completed processing. The **jmCompletedTable** is indexed by:

1. **jmJobSetIndex -** a running index of Job Set instances supported by this printer or server.
2. **jmCompletedIndex** - a running index of the jobs that have finished processing.

jmCompletedGroup (C)	DataType	Obj/attr name	Data type	Notess
1. jmJobSetIndex - a running index of Job Set instances supported by this printer or server.	**Integer32 (1..2^15-1)**			
2. jmCompletedIndex - a running index of the jobs that have finished processing.	**Integer32 (1..2^31)**			
3. **jmJobIndex** - the job's identifier generated by the printer or server implementing this JM MIB	**Integer32 (1..)**	**job-identifier**	**string**	string instead of an integer, but contents are digits

05 The Job Group

The **jmJobGroup** consists of (1) job identification, (2) job parameters, and (3) job status and accounting objects that have a *single* value per job. The **jmJobGroup** consists entirely of the **jmJobTable** which is indexed by:

1. **jmJobSetIndex -** an instance index to distinguish separate sets of tables when a server supports more than one printer.
2. **jmJobIndex -** the job identifier that was generated by the server or printer that accepted the job.

jmJobGroup - Identification **(I)**	**DataType**	**Obj/attr name**	**Data type**	**Notess**
1. jmJobSetIndex - a running index of Job Set instances supported by this printer or server.	**Integer32 (1..2^15-1)**			
2. **jmJobIndex** - the job's identifier generated by the server or printer implementing this JM MIB	**Integer32 (1..2^31-1)**			
3. **jmJobName** - Job name assigned by job owner which is not necessarily unique.	**OCTET STRING(SIZE(63))**	**job-name**	**string**	
4. jmJobNameId - the job's identifier name generated by the job submitting software using the job submission protocol. This name can be anything that helps identifer the job to the job submitter, including the name of the queue from which the job was submitted.	**OCTET STRING(SIZE(63))**	**job-identifier-on-client**	**string**	
5. jmJobNumberId - the job's identifier number generated by the job submitting software using the job submission protocol. A (-2) value shall indicate that the submitter did not supply a job identifier number.	**Integer32 (0..2^31-1)**			
6. **jmJobTypes** - Job types (print, fax, scan, etc.) - bit vector to get multiple values in a single object	**JMJobType - enum encoded as bits**			
7. **jmJobOwner** - Job owner (User name of the user that originally submitted print job)	**OCTET STRING(SIZE(63))**	**job-owner**	**string**	

jmJobGroup - Identification **(I)**	**DataType**	**Obj/attr name**	**Data type**	**Notess**
8. **jmJobDeviceNameRequested** - Device name (Device-specific name of device) requested by the submitting user.	**OCTET STRING(SIZE((63))**	**printer-name-requested**	**string**	
9. jmDeviceIndex - the host resources index of the corresponding Printer MIB that the job was submitted to or has been assigned to be printed on by the server. 0 indicates if the server has not assigned a printer to the job.	**Integer32 (0..2^31-1)**	**printers-assigned**	**distinguished-name**	not an index to a MIB
10. **jmJobSourceChannel** - Source channel on which the job was submitted (index of channel row in the Printer MIB)	**PrtChannelIndex**			
11. **jmJobSubmissionTime** - Date/Time of job submission by job owner	**DateAndTime**	**job-submission-time**	**GeneralizedTime**	
12. **jmJobComment** - Job comment	**OCTET STRING(SIZE(63))**	**job-comment**	**string**	

56

jmJobGroup - Parameters (J)	**DataType**	**Obj/attr name**	**Data type**	**Notes**
12. jmJobTotalKOctets - total K octets to be processed in the job - rounded up to next higher K	**Integer32 (0..2^31-1)**	**total-job-octets**	**Integer64**	In octets, not K.

57

jmJobGroup - Status and Accounting (S)	**DataType**	**Obj/attr name**	**Data type**	**Notess**
13. **jmJobCurrentState** - Job state (**pending**, **processing**, **completed**, etc.)	**JMJobState**	**job-current-stae**	**OID**	same states as Job Monitoring MIB
14. **jmJobStateReasons** - Job state reasons - additional information about the job state: reasons being held, additional completed information such as successful, warnings, or errors.	**OCTET STRING(SIZE(0..63)) -bit vector**	**job-state-reasons**	**OIDs**	same reasons as Job Monitoring MIB

jmJobGroup - Status and Accounting (S)	**DataType**	**Obj/attr name**	**Data type**	**Notess**
15. **jmJobKOctetsCompleted** - K Octets completed - should be rounded down to lower K until completed.	**Integer32 (0..2^31-1)**			
16. **jmJobStartedProcessingTime** - Date/Time of day job started processing on device	**DateAndTime**	**started-printing-time**	**GeneralizedTime**	
17. **jmJobCompletionTime** - Date/Time of day job finished using the device	**DateAndTime**	**completion-time**	**GeneralizedTime**	
18. **jmJobAccountName** - Account Name	**OCTET STRING(SIZE(63))**	**user-name**	**string**	

06 The Resource Group

The **jmResourceGroup** consists of requested and used resources objects that can have multiple values per job. The **jmResourceGroup** consists entirely of the **jmResourceTable** which is indexed by:

1. **jmJobSetIndex -** an instance index to distinguish separate sets of tables when a server supports more than one printer.
2. **jmJobIndex** - the job identifier that was generated by the server or printer that accepted the job.
3. **jmResourceIndex** - a running index of resources for each job

jmResourceGroup (R)	DataType	Obj/attr name	Data type	Notes
1. jmJobSetIndex - a running index of Job Set instances supported by this printer or server.	**Integer32**			
2. **jmJobIndex** - the job's current identifier generated by the server or printer implementing this JM MIB	**Integer32 (0..)**			
3. jmResourceIndex - a running index of the resources requested and/or used by the job.	**Integer32**			
4. **jmResourceType** - Resources required/used (table):	**JMResourceType**			
a) **documentName(3) -** Document name(s) (or file-names)	**OCTET STRING(63)**	**document-name**	**string**	
b) **jobCopiesRequested(4) -** Number of job copies requested	**Integer32 (0..2^31-1)**	**job-copies**	**Integer32**	
c) **jobCopiesProduced(5) -** Number of job copies produced	**Integer32 (0..2^31-1)**	**job-copies-completed**	**Integer32**	
d) **documentCopiesRequested(6) -** Number of document copies requested	**Integer32 (0..2^31-1)**	**copy-count**	**Integer32**	
e) **documentCopiesProduced(7) -** Number of document copies produced	**Integer32 (0..2^31-1)**			
f) **sides(8) -** Number of sides requested/used (one-sided, two-sided)	**Integer32 (1..2)**	**sides**	**Integer32**	

jmResourceGroup (R)	DataType	Obj/attr name	Data type	Notes
g) **interpreters(9) -** PDLs requested/used	**PrtInterpreterFamily**	**document-format**	**3-element structure**	1st element is OID that maps directly to enum
h) **physicalDevices(10) -** physical devices requested/used	**hrDeviceIndex**	**physical-printers-requested**	**string**	string instead of a MIB index
i) **faxPhoneNumber(10) -** FAX phone number requested/used	**OCTET STRING(255)**			
j) **impressionsCompleted(11) -** Impressions (sides) completed	**Counter32(0..2^31-1)**			
k) **sheetsCompleted(12) -** Sheets completed for the job.	**Counter32(0..2^31-1)**			
l) pagesSpooled(13) - logical pages spooled for the job.	**Counter32(0..2^31-1)**			
m) pagesInterpreted(14) - logical pages intepreted for the job.	**Counter32(0..2^31-1)**			
n) pagesSentToDevice(15) - logical pages sent to the device for the job.	**Counter32(0..2^31-1)**			
o) pagesCompleted(16) - logical pages completed for the job.	**Counter32(0..2^31-1)**			
p) pagesCompletedCurrentCopy(17) - logical pages completed on the current copy.	**Integer32(0..2^31-1)**			
q) **processingTime(18) -** Processing time so far	**Integer32(0..2^31-1)**			
r) **processingMessage(19) -** Processing Messages	**OCTET STRING(63)**			
5. **jmResourceName** - resource required/usage name	**OCTET STRING(63) or Integer32**			
6. jmResourceUnits - resource required/used usage-unit	**JMResourceUnits**			

jmResourceGroup (R)	DataType	Obj/attr name	Data type	Notes
7. jmResourceAmount - resource amount requested/used; -2 - unknown	**Integer32**			

The following *job* attributes are supported by Printxchange, but are not currently in our Job Monitoring MIB list:

1. initial-value-job
2. notification-profile
3. job-message-from-administrator
4. previous-job-state
5. job-submission-complete
6. number-of-documents
7. job-sheets
8. output-bin
9. job-discard-time
10. job-retention-period
11. job-hold
12. job-identifier-on-printer [listed as an issue to be added to the Job Monitoring MIB for configuration 2b]

The following *document* attributes are supported by Printxchange, but are not currently in our Job Monitoring MIB list:

1. default-character-set
2. default-font
3. default-input-tray
4. default-medium
5. content-orientation
6. number-up
7. page-select
8. plex
9. binding-edge
10. x-image-shift
11. y-image-shift
12. reset-printer

13. bottom-margin
14. left-margin
15. right-margin
16. top-margin
17. length
18. width
19. header-text
20. footer-text
21. number-pages
22. repeated-tab-stops
23. finishing
24. document-file-name (added to resource list)
25. document-revision-date
26. document-state
27. page-order-received
28. octet-count
29. document-sheets