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1  // Copyright (c) 2011 DMTF. All rights reserved.
2  // <change cr="CIMCoreCR00752.000" type="change">Update of
3  // descriptions based on Tech Edit review.</
4  // <change cr="ArchCR00066.004" type="add">Add UmlPackagePath
5  // qualifier values to CIM Schema.</change>
6  // <change cr="CIMCoreCR00856" type="change">Update the
7  // description of the class and the properties descriptions
8  // and MappingStrings.</
9  // <change cr="ArchCR00089.003" type="add">Add PUnit qualifier values
10 // to Units qualifier values.</change>
11 // =====
12 // CIM_PrintJob
13 // =====
14 [Version ( "2.29.0" ),
15  UMLPackagePath ( "CIM::Device::Printing" ),
16  Description (
17    "Description of a print request that is either waiting on a "
18    "Queue for a Printer to become available or in the process of "
19    "being output on a Printer, or that has previously been printed "
20    "on a Printer. PrintJobs are weak to their current Queue, or to "
21    "the last Queue that held them. The ABNF for CIM references to "
22    "PWG Standards and MIBs is in the directory "
23    "'ftp://ftp.pwg.org/pub/pwg/general/process\' in the file "
24    "'pwg-cim-references-format-20060309.txt\''. An example for a "
25    "MappingStrings reference to a PWG Standard is "
26    "'PWG5101-1.PWG|Section 4 Media Color Names\''. An example for "
27    "a MappingStrings reference to a PWG MIB is "
28    "'MIB.PWG|PWG-IMAGING-COUNTER-MIB.icMonitorCompletedJobs\'". )]
29 class CIM_PrintJob : CIM_Job {
30
31   [Key, Description (
32     "The CreationClassName of the scoping System." ),
33    MaxLen ( 256 ),
34    Propagated ( "CIM_PrintQueue.SystemCreationClassName" )]
35   string SystemCreationClassName;
36
37   [Key, Description ( "The Name of the scoping System." ),
38    MaxLen ( 256 ),
39    MappingStrings { "MIB.IETF|SNMPv2-MIB.sysName" },
40    Propagated ( "CIM_PrintQueue.SystemName" )]
41   string SystemName;
42
43   [Key, Description (
44     "The CreationClassName of the scoping Queue." ),
45    MaxLen ( 256 ),
46    Propagated ( "CIM_PrintQueue.CreationClassName" )]
47   string QueueCreationClassName;
48
49   [Key, Description ( "The Name of the scoping Queue." ),
50    MaxLen ( 256 ),
51    MappingStrings {
52      "MIB.IETF|Job-Monitoring-MIB.jmGeneralJobSetName",
53      "MIB.IETF|Job-Monitoring-MIB.queueNameRequested",
54      "RFC2911.IETF|Job.output-device-assigned" },

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55     Propagated ( "CIM_PrintQueue.Name" )]
56     string QueueName;
57
58     [Override ( "JobStatus" ),
59     Description (
60         "The inherited JobStatus is used to provide additional "
61         "information about the status of a PrintJob beyond that "
62         "enumerated by PrintJobStatus." ),
63     MappingStrings { "MIB.IETF|Job-Monitoring-MIB.jmJobState",
64         "MIB.IETF|Job-Monitoring-MIB.jmJobStateReasons1",
65         "RFC2911.IETF|Job.job-state",
66         "RFC2911.IETF|Job.job-state-reasons",
67         "RFC2911.IETF|Job.job-state-message" },
68     ModelCorrespondence { "CIM_PrintJob.PrintJobStatus" }]
69     string JobStatus;
70
71     [Key, Description (
72         "Uniquely identifies this Job within its scoping Queue, "
73         "but NOT across different Queues or PrintServices." ),
74     MappingStrings { "MIB.IETF|Job-Monitoring-MIB.jmJobIndex",
75         "MIB.IETF|Job-Monitoring-MIB.jmJobSubmissionID",
76         "RFC2911.IETF|Job.job-id" }]
77     string JobID;
78
79     [Deprecated { "No Value" },
80     Description (
81         "Note: The use of this free-form string property is "
82         "deprecated in lieu of the more semantically rich "
83         "CIM_JobSettingData class inherited from CIM_Job." )]
84     string SchedulingInformation;
85
86     [Description (
87         "Specifies the size of the PrintJob (as a byte stream) in "
88         "units of Kbytes." ),
89     Units ( "KiloBytes" ),
90     MappingStrings {
91         "MIB.IETF|Job-Monitoring-MIB.jmJobKOctetsProcessed",
92         "RFC2911.IETF|Job.job-k-octets" },
93     ModelCorrespondence { "CIM_Printer.MaxSizeSupported",
94         "CIM_PrintServiceCapabilities.MaxJobSize",
95         "CIM_PrintQueue.MaxJobSize" },
96     PUnit ( "byte * 10^3" )]
97     uint32 JobSize;
98
99     [Deprecated { "CIM_PrintJob.MimeTypes" },
100    Description (
101        "Note: The use of this property has been deprecated, due "
102        "to ambiguity. Instead use MimeTypes. \n"
103        "Enumerated print languages are only available in the IETF "
104        "Printer MIB v1/v2 (RFC 1759/3805) and are not available in "
105        "open standard print protocols (i.e., no known mapping). \n"
106        "Deprecated description: \n"
107        "Specifies the print language that is used by this Job. \n"
108        "Note: For legacy compatibility reasons, this property is NOT "

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109         "exactly aligned (in order of values) with the authoritative "
110         "PrtInterpreterLangFamilyTC in the IANA Printer MIB, unlike "
111         "the newer property PrintInterpreter.LangType (which is "
112         "exactly aligned with the IANA Printer MIB)." ),
113     ValueMap { "1", "2", "3", "4", "5", "6", "7", "8", "9", "10",
114               "11", "12", "13", "14", "15", "16", "17", "18", "19",
115               "20", "21", "22", "23", "24", "25", "26", "27", "28",
116               "29", "30", "31", "32", "33", "34", "35", "36", "37",
117               "38", "39", "40", "41", "42", "43", "44", "45", "46",
118               "47", "48", "50", "51", "52", "53", "54", "55", "56",
119               "57", "58", "59", "60", "61", "62", "63", "64", "65",
120               "66", "67", "68", "69", ".." },
121     Values { "Other", "Unknown", "PCL", "HPGL", "PJL", "PS",
122             "PSPrinter", "IPDS", "PPDS", // 10
123             "EscapeP",
124             "Epson", "DDIF", "Interpress", "ISO6429", "Line Data",
125             "MODCA", "REGIS", "SCS", "SPDL",
126             // 20
127             "TEK4014", "PDS", "IGP", "CodeV",
128             "DSCDSE", "WPS", "LN03", "CCITT", "QUIC", "CPAP",
129             // 30
130             "DecPPL", "Simple Text", "NPAP", "DOC",
131             "imPress", "Pinwriter", "NPDL", "NEC201PL", "Automatic",
132             "Pages", // 40
133             "LIPS", "TIFF", "Diagnostic",
134             "CaPSL", "EXCL", "LCDS", "XES", "MIME", "TIPSI",
135             // 50
136             "Prescribe", "LinePrinter", "IDP", "XJCL",
137             "PDF", "RPDL", "IntermecIPL", "UBIFingerprint",
138             "UBIDirectProtocol", "Fujitsu", // 60
139             "PCLXL",
140             "ART", "CGM", "JPEG", "CALs1", "CALs2", "NIRS", "C4",
141             "XPS", "OpenXPS", "DMTF Reserved" },
142     MappingStrings {
143         "MIB.IETF|Printer-MIB.prtInterpreterLangFamily",
144         "MIB.IETF|IANA-PRINTER-MIB.PrtInterpreterLangFamilyTC",
145         "MIB.IETF|Job-Monitoring-MIB.documentFormat",
146         "PWG5100-7.PWG|Job.document-format-supplied" },
147     ModelCorrespondence { "CIM_Printer.LanguagesSupported",
148         "CIM_PrintService.LanguagesSupported",
149         "CIM_PrintJob.MimeTypes" }]
150 uint16 Language;
151
152 [Description (
153     "Specifies the MIME types that are used by the PrintJob." ),
154     ModelCorrespondence { "CIM_PrintJob.Language",
155         "CIM_Printer.MimeTypesSupported",
156         "CIM_PrintServiceSettings.DocumentFormat",
157         "CIM_PrintService.MimeTypesSupported" }]
158 string MimeTypes[];
159
160 [Description (
161     "A string that specifies the type of paper that is "
162     "required by this PrintJob. The values of the property "

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163         "SHOULD conform to the requirements of the PWG Media "
164         "Standardized Names specification [PWG5101.1], which "
165         "defines the normative values for this property. See "
166         "older Appendix B \"Media Size Names\" and Appendix C "
167         "\"Media Names\" of IETF Printer MIB v2 [RFC3805] which "
168         "list the values of standardized media names defined in "
169         "ISO DPA [ISO10175]." ),
170     MappingStrings { "PWG5101-1.PWG|Media Standardized Names",
171         "MIB.IETF|Job-Monitoring-MIB.mediumRequested",
172         "RFC2911.IETF|Job.media" },
173     ModelCorrespondence { "CIM_Printer.PaperTypesAvailable",
174         "CIM_PrintServiceSettings.Media",
175         "CIM_PrintService.PaperTypesAvailable" }]
176 string RequiredPaperType;
177
178 [Deprecated { "CIM_PrintJob.Finishings" },
179     Description (
180         "Note: The use of this property has been deprecated, due "
181         "to ambiguity. Instead use Finishings. \n"
182         "Enumerated finishings are not available in "
183         "open standard print protocols (i.e., no known mapping). \n"
184         "Deprecated description: \n"
185         "An array of integers that indicates the type of "
186         "finishing that is required by this Job. It is equivalent "
187         "to the Capabilities property that is provided by the "
188         "Printer." ),
189     ValueMap { "0", "1", "2", "3", "4", "5", "6", "7", "8", "9",
190         "10", "11", "12", "13", "14", "15", "16", "17", "18",
191         "19", "20", "21" },
192     Values { "Unknown", "Other", "Color Printing",
193         "Duplex Printing", "Copies", "Collation", "Stapling",
194         "Transparency Printing", "Punch", "Cover", "Bind",
195         "Black and White Printing", "One Sided",
196         "Two Sided Long Edge", "Two Sided Short Edge", "Portrait",
197         "Landscape", "Reverse Portrait", "Reverse Landscape",
198         "Quality High", "Quality Normal", "Quality Low" },
199     ArrayType ( "Indexed" ),
200     ModelCorrespondence { "CIM_Printer.Capabilities",
201         "CIM_PrintService.Capabilities" }]
202 uint16 Finishing[];
203
204 [Description (
205     "The number of physical copies of the output that will be "
206     "produced from this Job." ),
207     MappingStrings {
208         "MIB.IETF|Job-Monitoring-MIB.jobCopiesRequested",
209         "RFC2911.IETF|Job.copies" },
210     ModelCorrespondence { "CIM_Printer.MaxCopies",
211         "CIM_PrintServiceCapabilities.Copies",
212         "CIM_PrintServiceSettings.Copies" }]
213 uint32 Copies;
214
215 [Description (
216     "The resolution of the in Pixels per Inch for the Job in "

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217         "the cross-feed direction, i.e., short-edge in portrait "
218         "feed mode." ),
219     Units ( "Pixels per Inch" ),
220     MappingStrings {
221         "MIB.IETF|Job-Monitoring-MIB.printerResolutionRequested",
222         "RFC2911.IETF|Job.printer-resolution" },
223     ModelCorrespondence { "CIM_Printer.HorizontalResolution",
224         "CIM_PrintServiceCapabilities.Resolution",
225         "CIM_PrintServiceSettings.Resolution" },
226     PUnit ( "pixel / inch" )]
227 uint32 HorizontalResolution;
228
229     [Description (
230         "The resolution in Pixels per Inch for the Job in the "
231         "feed direction, i.e., long-edge in portrait feed mode." ),
232     Units ( "Pixels per Inch" ),
233     MappingStrings {
234         "MIB.IETF|Job-Monitoring-MIB.printerResolutionRequested",
235         "RFC2911.IETF|Job.printer-resolution" },
236     ModelCorrespondence { "CIM_Printer.VerticalResolution",
237         "CIM_PrintServiceCapabilities.Resolution",
238         "CIM_PrintServiceSettings.Resolution" },
239     PUnit ( "pixel / inch" )]
240 uint32 VerticalResolution;
241
242     [Description (
243         "Specifies the character set and encoding method that "
244         "should be used by the Printer for the management of this "
245         "Job. The strings should conform to the semantics and "
246         "syntax that are specified by section 4.1.2 (\"Charset "
247         "parameter\") in RFC 2046 (MIME Part 2) and contained in "
248         "the IANA character-set registry. Examples include "
249         "\"utf-8\", \"us-ascii\" and \"iso-8859-1\".\" ),
250     MappingStrings {
251         "MIB.IETF|Job-Monitoring-MIB.jobCodedCharSet",
252         "MIB.IETF|IANA-CHARSET-MIB.IANACharset",
253         "RFC2911.IETF|Job.attributes-charset" },
254     ModelCorrespondence { "CIM_Printer.CharSetsSupported",
255         "CIM_PrintServiceCapabilities.Charset" }]
256 string CharSet;
257
258     [Description (
259         "Identifies the language that should be used by the "
260         "Printer for the management of this Job. The specified "
261         "value should conform to RFC 5646. For example, \"en\" is "
262         "used for English." ),
263     MappingStrings {
264         "MIB.IETF|Job-Monitoring-MIB.jobNaturalLanguageTag",
265         "RFC2911.IETF|Job.attributes-natural-language" },
266     ModelCorrespondence { "CIM_Printer.NaturalLanguagesSupported",
267         "CIM_PrintServiceCapabilities.NaturalLanguage" }]
268 string NaturalLanguage;
269
270     [Description (

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271         "The number of print-stream pages that should be rendered "
272         "onto a single media sheet when the Printer outputs this "
273         "PrintJob." ),
274         MappingStrings { "RFC2911.IETF|Job.number-up" },
275         ModelCorrespondence { "CIM_Printer.MaxNumberUp",
276         "CIM_PrintServiceCapabilities.NumberUp",
277         "CIM_PrintServiceSettings.NumberUp" }]
278     uint32 NumberUp;
279
280     [Description (
281         "Describes the current state of this Job with respect to "
282         "the PrintQueue and the Printer. Additional information "
283         "can be specified in JobStatus. \n"
284         "1 (Other) means this Job is in some non-standard state. \n"
285         "2 (Unknown) means this Job is in an unknown state. \n"
286         "3 (Pending) maps to IPP job-state 'pending'. \n"
287         "4 (Blocked) maps to IPP job-state 'pending-held'. \n"
288         "5 (Completed) maps to IPP job-state 'completed'. \n"
289         "6 (Completed With Error) maps to "
290         "IPP job-state 'completed' in combination with "
291         "IPP job-state-reasons 'completed-with-errors'. \n"
292         "7 (Printing) maps to IPP job-state 'processing'. \n"
293         "8 (Processing Stopped) maps to "
294         "IPP job-state 'processing-stopped'. \n"
295         "9 (Canceled) maps to IPP job-state 'canceled'. \n"
296         "10 (Aborted) maps to IPP job-state 'aborted'." ),
297         ValueMap { "1", "2", "3", "4", "5", "6", "7", "8", "9", "10" },
298         Values { "Other", "Unknown", "Pending", "Blocked",
299         "Complete", "Completed With Error", "Printing",
300         "Processing Stopped", "Canceled", "Aborted" },
301         MappingStrings { "MIB.IETF|Job-Monitoring-MIB.jmJobState",
302         "RFC2911.IETF|Job.job-state" },
303         ModelCorrespondence { "CIM_PrintJob.TimeCompleted",
304         "CIM_PrintJob.JobStatus" }]
305     uint16 PrintJobStatus;
306
307     [Description (
308         "The time when this Job was completed. This value is "
309         "valid only if the PrintJobStatus has been assigned to "
310         "\"Complete\" (value=5) or \"Completed With Error\" "
311         "(value=6).\" ),
312         MappingStrings {
313         "MIB.IETF|Job-Monitoring-MIB.jobCompletionTime",
314         "RFC2911.IETF|Job.date-time-at-completed" },
315         ModelCorrespondence { "CIM_PrintJob.PrintJobStatus" }]
316     datetime TimeCompleted;
317
318     [Description (
319         "Describes the job sheets that should be used when this "
320         "Job is output on the Printer." ),
321         MappingStrings { "RFC2911.IETF|Job.job-sheets" },
322         ModelCorrespondence { "CIM_Printer.AvailableJobSheets",
323         "CIM_PrintServiceCapabilities.JobSheets",
324         "CIM_PrintServiceSettings.JobSheets" }]

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325     string RequiredJobSheets[];
326
327     [Description (
328         "Provides additional information, beyond Job Owner that "
329         "is inherited from CIM_Job, to identify the origins of "
330         "the PrintJob. This property could include information "
331         "such as the System, Application, or Process that created "
332         "the Job." ),
333     MappingStrings {
334         "MIB.IETF|Job-Monitoring-MIB.jobOriginatingHost",
335         "MIB.IETF|Job-Monitoring-MIB.submittingServerName",
336         "MIB.IETF|Job-Monitoring-MIB.submittingApplicationName",
337         "RFC2911.IETF|Job.job-originating-user-name" }]
338     string JobOrigination;
339
340     [Experimental, Description (
341         "Additional information about each document access error "
342         "encountered by the associated PrintService while "
343         "processing this PrintJob, e.g., "
344         "(404) http://example.com/telephone-list.pdf." ),
345     MappingStrings {
346         "RFC2911.IETF|Section 4.3.11 job-document-access-errors" },
347     ModelCorrespondence {
348         "CIM_PrintJob.NumberOfDocuments" }]
349     string DocumentAccessErrors[];
350
351     [Override ( "ElapsedTime" ),
352     Description (
353         "The processing elapsed time of this instance of PrintJob, "
354         "after the Job has completed. \n"
355         "Note: This property is NOT meaningful before PrintJob "
356         "completion." ),
357     MappingStrings {
358         "RFC2911.IETF|Section 4.3.14.3 time-at-completed",
359         "RFC2911.IETF|Section 4.3.14.7 date-time-at-completed" },
360     ModelCorrespondence {
361         "CIM_PrintJob.TimeCompleted" }]
362     datetime ElapsedTime;
363
364     [Required, Override ( "ElementName" ),
365     Description (
366         "The user-friendly name for this instance of PrintJob. "
367         "In addition, the user-friendly name can be used as an "
368         "index property for a search or query. (Note: The name "
369         "does not have to be unique within a namespace.) This "
370         "name shall be supplied by the client or generated by the "
371         "PrintService (if missing in job creation operation)."),
372     MappingStrings {
373         "RFC2911.IETF|Section 4.3.5 job-name" }]
374     string ElementName;
375
376     [Experimental, Description (
377         "The array of named finishings for this PrintJob. \n"
378         "That is, the set of named finishing operations to "

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379         "perform, e.g., 'staple' or 'bind'." ),
380     MappingStrings {
381         "RFC2911.IETF|Section 4.2.6 finishings" },
382     ModelCorrespondence {
383         "CIM_PrintServiceCapabilities.Finishings",
384         "CIM_PrintServiceSettings.Finishings" }]
385 string Finishings[];
386
387     [Experimental, Description (
388         "The number of output impressions completed for this "
389         "instance of PrintJob." ),
390     MappingStrings {
391         "RFC2911.IETF|Section 4.3.17.2 job-impressions",
392         "RFC2911.IETF|Section 4.3.18.2 job-impressions-completed" },
393     ModelCorrespondence {
394         "CIM_PrintServiceCapabilities.MaxImpressions" }]
395 uint32 ImpressionsCompleted;
396
397     [Experimental, Description (
398         "The named job hold until for this PrintJob. \n"
399         "That is, the named time period when the PrintJob may be "
400         "scheduled, e.g., 'night' or 'weekend'. "
401         "The value 'no-hold' indicates immediate scheduling." ),
402     MappingStrings {
403         "RFC2911.IETF|Section 4.2.2 job-hold-until" },
404     ModelCorrespondence {
405         "CIM_PrintServiceCapabilities.JobHoldUntil",
406         "CIM_PrintServiceSettings.JobHoldUntil" }]
407 string JobHoldUntil;
408
409     [Experimental, Description (
410         "The priority for this PrintJob. \n"
411         "Note: Weighted scale is *opposite* to Job.Priority. \n"
412         "The value 1 indicates the lowest possible priority. \n"
413         "The value 100 indicates the highest possible priority." ),
414     MinValue ( 1 ),
415     MaxValue ( 100 ),
416     MappingStrings {
417         "RFC2911.IETF|Section 4.2.1 job-priority" },
418     ModelCorrespondence {
419         "CIM_PrintServiceCapabilities.JobPriority",
420         "CIM_PrintServiceSettings.JobPriority" }]
421 uint32 JobPriority;
422
423     [Experimental, Description (
424         "The human-readable status messages for this instance of "
425         "PrintJob, e.g., 'Paused by operator at 12:04'." ),
426     MappingStrings {
427         "RFC2911.IETF|Section 4.3.10 job-detailed-status-messages",
428         "RFC2911.IETF|Section 4.3.9 job-state-message" },
429     ModelCorrespondence {
430         "CIM_PrintJob.JobStatus",
431         "CIM_PrintJob.PrintJobStatus" }]
432 string JobStatusMessage[];

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433
434     [Experimental, Description (
435         "Unique URI for this PrintJob across all instances of "
436         "PrintQueue and across all instances of PrintService. \n"
437         "Value is assigned by associated PrintService when the "
438         "PrintJob is received." ),
439     MappingStrings {
440         "RFC2911.IETF|Section 4.3.1 job-uri" }]
441 string JobURI;
442
443     [Experimental, Description (
444         "A human-readable message to end users from the operator, "
445         "system administrator, or management software for this "
446         "instance of PrintJob." ),
447     MappingStrings {
448         "RFC2911.IETF|Section 4.3.16 job-message-from-operator" },
449     ModelCorrespondence {
450         "CIM_PrintService.MessageFromOperator",
451         "CIM_PrintService.NaturalLanguage",
452         "CIM_PrintJob.NaturalLanguage" }]
453 string MessageFromOperator;
454
455     [Experimental, Description (
456         "The URI for more info about this specific instance of "
457         "PrintJob. \n"
458         "This URI shall be generated as a factory default by the "
459         "manufacturer and may be changed out-of-band to a "
460         "site-specific URI by the system administrator." ),
461     MappingStrings {
462         "RFC2911.IETF|Section 4.3.4 job-more-info" },
463     ModelCorrespondence {
464         "CIM_PrintService.MoreInfoURI" }]
465 string MoreInfoURI;
466
467     [Experimental, Description (
468         "The multiple document handling for this PrintJob. \n"
469         "That is, the named policy for the handling of finishing,"
470         "the placement of one or more input logical pages onto "
471         "output impressions, and multiple copies in a PrintJob "
472         "with two or more documents, e.g., 'single-document' "
473         "or 'single-document-new-sheet'." ),
474     MappingStrings {
475         "RFC2911.IETF|Section 4.2.4 multiple-document-handling" },
476     ModelCorrespondence {
477         "CIM_PrintServiceCapabilities.MultipleDocumentHandling",
478         "CIM_PrintServiceCapabilities.MultipleDocumentJobs",
479         "CIM_PrintServiceSettings.MultipleDocumentHandling" }]
480 string MultipleDocumentHandling;
481
482     [Experimental, Description (
483         "The number of input documents in this PrintJob." ),
484     MappingStrings {
485         "RFC2911.IETF|Section 4.3.12 number-of-documents" },
486     ModelCorrespondence {

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487         "CIM_PrintJob.DocumentAccessErrors" }]
488     uint32 NumberOfDocuments;
489
490     [Experimental, Description (
491         "The orientation requested for this PrintJob. \n"
492         "Value 'portrait' means imaged across the short edge, "
493         "with no content rotation. \n"
494         "Value 'landscape' means imaged across the long edge, "
495         "with content rotated 90 degrees anticlockwise "
496         "from 'portrait'. \n"
497         "Value 'reverse-landscape' means imaged across the long "
498         "edge, with content rotated 90 degrees clockwise "
499         "from 'portrait'. \n"
500         "Value 'reverse-portrait' means imaged across the short "
501         "edge, with content rotated 180 degrees (opposite) "
502         "from 'portrait'." ),
503     MappingStrings {
504         "RFC2911.IETF|Section 4.2.10 orientation-requested" },
505     ModelCorrespondence {
506         "CIM_PrintServiceCapabilities.OrientationRequested",
507         "CIM_PrintServiceSettings.OrientationRequested" }]
508     string OrientationRequested;
509
510     [Experimental, Description (
511         "The assigned output device name(s) for this instance of "
512         "PrintJob." ),
513     MappingStrings {
514         "RFC2911.IETF|Section 4.3.13 output-device-assigned",
515         "PWG5100-7.PWG|Section 4.2.1 output-device",
516         "PWG5100-7.PWG|Section 4.2.1.3 output-device-actual" },
517     ModelCorrespondence {
518         "CIM_Printer.ElementName",
519         "CIM_PrintServiceCapabilities.OutputDevice" }]
520     string OutputDevice[];
521
522     [Experimental, Description (
523         "The input logical page ranges for this PrintJob. \n"
524         "That is, the set of input logical pages to be "
525         "included in the output. \n"
526         "Note: Each page range shall be specified as lower and "
527         "then higher decimal numbers separated by a colon (X:Y). \n"
528         "The set of page ranges shall be in ascending order, "
529         "e.g., '1:5', '7:10'. \n"
530         "The page ranges shall not overlap, so that a non-spooling "
531         "PrintService can process the PrintJob in a single pass." ),
532     MappingStrings {
533         "RFC2911.IETF|Section 4.2.7 page-ranges" },
534     ModelCorrespondence {
535         "CIM_PrintServiceCapabilities.PageRanges" }]
536     string PageRanges[];
537
538     [Experimental, Description (
539         "The print quality for impressions for this PrintJob. \n"
540         "Value 'draft' means lowest print quality. \n"

```

```

541         "Value 'normal' means normal print quality. \n"
542         "Value 'high' means highest print quality." ),
543     MappingStrings {
544         "RFC2911.IETF|Section 4.2.13 print-quality" },
545     ModelCorrespondence {
546         "CIM_PrintServiceCapabilities.PrintQuality",
547         "CIM_PrintServiceSettings.PrintQuality" }]
548 string PrintQuality;
549
550     [Experimental, Description (
551         "The number of output sheets completed for this "
552         "instance of PrintJob." ),
553     MappingStrings {
554         "RFC2911.IETF|Section 4.3.17.3 job-media-sheets",
555         "RFC2911.IETF|Section 4.3.18.3" },
556     ModelCorrespondence {
557         "CIM_PrintServiceCapabilities.MaxSheets" }]
558 uint32 SheetsCompleted;
559
560     [Experimental, Description (
561         "The imposition mode for impressions for this PrintJob. \n"
562         "That is, the policy for imposing input logical pages "
563         "onto output impressions (sides of selected media). \n"
564         "Value 'one-sided' means each successive input logical "
565         "page onto the same side of consecutive sheets of media. \n"
566         "Value 'two-sided-long-edge' means each consecutive pair "
567         "of input logical pages onto front and back sides of "
568         "consecutive sheets of media, with orientation for long "
569         "edge binding \n"
570         "Value 'two-sided-short-edge' means each consecutive pair "
571         "of input logical pages onto front and back sides of "
572         "consecutive sheets of media, with orientation for short "
573         "edge binding." ),
574     MappingStrings {
575         "RFC2911.IETF|Section 4.2.8 sides" },
576     ModelCorrespondence {
577         "CIM_PrintServiceCapabilities.Sides",
578         "CIM_PrintServiceSettings.Sides" }]
579 string Sides;
580
581     [Override ( "StartTime" ),
582     Description (
583         "The processing start time of this instance of PrintJob." ),
584     MappingStrings {
585         "RFC2911.IETF|Section 4.3.14.2 time-at-processing",
586         "RFC2911.IETF|Section 4.3.14.6 date-time-at-processing" }]
587 datetime StartTime;
588
589     [Override ( "TimeSubmitted" ),
590     Description (
591         "The creation time of this instance of PrintJob." ),
592     MappingStrings {
593         "RFC2911.IETF|Section 4.3.14.1 time-at-creation",
594         "RFC2911.IETF|Section 4.3.14.5 date-time-at-creation" }]

```

```
595         datetime TimeSubmitted;  
596  
597  
598     };  
599
```