Job Ticket Application Programming Interface (JTAPI)

Version 0.90
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Abstract

The Free Standards Group (FSG) OpenPrinting Job Ticket Application Programming Interface (JTAPI) provides an abstract interface for applications to read, edit, and write industry standard document processing job tickets (defined outside this specification). This specification defines an abstract model of objects (jobs, documents, etc.) and their operations and attributes for document processing (e.g. scanning, printing, copying, etc.). This specification also defines C language bindings of this abstract object model (including standard header files).

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1. Introduction

This specification describes and defines the Free Standards Group (FSG) Open Printing Job Ticket Application Programming Interface (JTAPI) for the Free Standards Group. The JTAPI defines the abstract interface and does define a specific job ticket, job ticket file format or job ticket syntax. An implementation of the JTAPI produces and/or consumes one or more standard or vendor specific job tickets formats.

This specification is intended for software developers, designers and architects that need to read and/or write job tickets.

The purpose of this specification is to define an open standard, the Job Ticket Application Programming, for open printing on Linux/Unix/Posix/Windows/Macintosh/Embedded platforms. A JTAPI implementation produces and consumes job tickets. The JTAPI is job ticket syntax neutral. The JTAPI isolates an application from the syntax of a job ticket to hind details and the structural complexity of specific job ticket along with interoperability between different job ticket file formats. The JTAPI abstract model is programming language neutral.

2. Overview

2.1 Print Environments

[Describe the Embedded Mobile, Desktop/Home, Office/Network, and Production environments.]

2.2 High Level Model

The JTAPI is object oriented extensible API. Figure 1.0 and 2.0 diagrams the JTAPI high level model and the relationship between JTAPI objects. A job ticket information object (JobTicketInfo) contains one job object (Job) where the job contains zero or more document objects (Document). The JobDocumentPage object is abstract and contains functionality that is common to jobs, documents, and specific pages (PageOverrides) in a job or document. Each of the other objects in the diagrams represents functionality that can be specified for the Job, Document, and PageOverrides objects. For example, the Media object represents the media that the job, document, or specific pages in the job or document is to be imaged/printed on. The section following the diagrams contains more detailed descriptions of each of the objects in the JTAPI model.

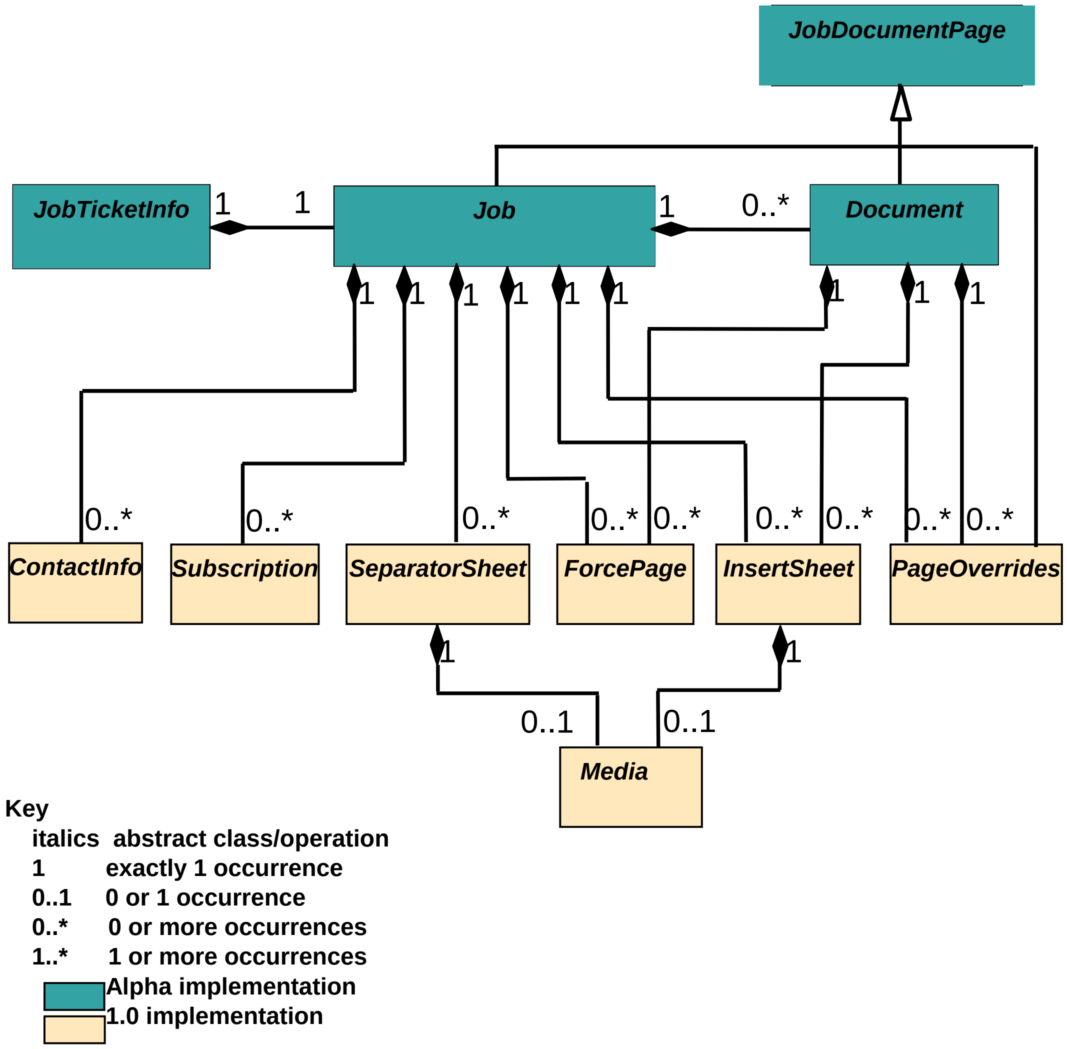

Figure 1.0 JTAPI High Level Object Model

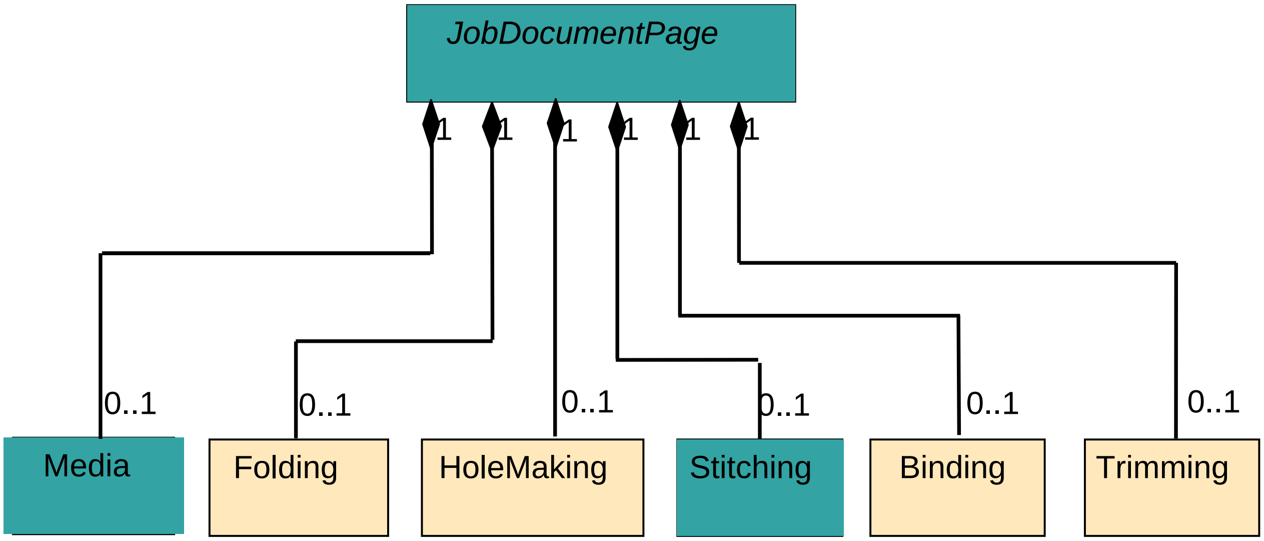

Figure 2.0 JTAPI JobDocumentPage High Level Object Model

2.3 Linking with JTAPI

The Job Ticket API can be provided in the form of a static link library, a dynamic link library and/or RPC client/services configuration. Linking of library and RPC details are operating system dependent and will not be elaborated in this specification. API interfaces for the three forms of the API implementation are discussed further in the following sections.

3. Application Programming Interface Summary

Object	**Header**	**API Request**	
---	fsgjt.h	fsgitOpenJTAPI	void**
---	fsgjt.h	fsgitCloseJTAPI	void*
all	fsgjt.h	fsgjtDestroy	object
all	fsgjt.h	fsgjtGet	object, attribute
all	fsgjt.h	fsgjtSet	object, attribute
all	fsgjt.h	fsgjtSetIntegerAttribute	object, attribute, value
all	fsgjt.h	fsgjtSetObjectAttribute	object, attribute, value
all	fsgjt.h	fsgjtSetObjectAttributeList	object, attribute, list
all	fsgjt.h	fsgjtSetStringAttribute	object, attribute, value
all	fsgjt.h	fsgjtSetStringAttributeList	object, attribute, values
all	fsgjt_attribute.h	fsgjtNewAttribute	attribute, name, type, value
all	fsgjt_attribute.h	fsgjtDestoryAttribute	attribute
all	fsgjt_attribute.h	fsgjtAddExtensionValue	attribute, extensionValue
all	fsgjt_attribute.h	fsgjtAddValue	attribute, value
all	fsgjt_attribute.h	fsgjtGetName	attribute, name
all	fsgjt_attribute.h	fsgjtGetNextExtensionValue	attribute, nextValue, moreValues
all	fsgjt_attribute.h	fsgjtNumExtensionValues	attribute, numExtensionValues
all	fsgjt_attribute.h	fsgjtGetNumValues	attribute, numValues
all	fsgjt_attribute.h	fsgjtGetValueType	attribute, type
all	fsgjt_attribute.h	fsgjtIsExtensible	attribute, extensible
all	fsgjt_attribute.h	fsgjtReplaceExtensionValue	attribute, extensionValue
all	fsgjt_attribute.h	fsgjtReplaceValue	attribute, value
all	fsgjt_attribute.h	fsgjtResetToFirstValue	attribute
all	fsgjt_destination.h	fsgjtNewDestination	destinationObject, uri
document	fsgjt_document.h	fsgjtNewDocument	documentObject
document	fsgjt_document.h	fsgjtNewDocumentFromURI	documentObject, uri
stitching	fsgjt_stitching.h	fsgjtNewStitching	stitchingObject, stitchType
media	fsgjt_media.h	fsgjtNewMedia	mediaObject, name
job	fsgjt_job.h	fsgjtNewJob	jobObject
job	fsgjt_job.h	fsgjtNewJobFromDocument	jobObject, documentObj
job ticket info	fsgjt_job_ticket_info.h	fsgjtNewJobTicketInfo	jobTicketInfoObject, typeAndVersion
job ticket info	fsgjt_job_ticket_info.h	fsgJtNewJobTicketFromURI	jobTicketInfoObject, uri, typeAndVersion
job ticket info	fsgjt_job_ticket_info.h	fsgJtNewJobTicketFromBuffer	jobTicketInfoObject, buffer, bufferSize, typeAndVersion
job ticket info	fsgjt_job_ticket_info.h	fsgJtNewJobTicketFromJob	jobTicketInfoObject, job, typeAndVersion
job ticket info	fsgjt_job_ticket_info.h	fsgJtNewJobTicketToBuffer	jobTicketInfoObject, buffer, bufferSize
job ticket info	fsgjt_job_ticket_info.h	fsgJtNewJobTicketToURI	jobTicketInfoObject, uri

4. Top Level Application Programming Interface

The top level JTAPI are used for system level and/or a specific implementation of JTAPI to perform initialization and release of resources and/or system level protocols.

4.1 fsgjtOpenJTAPI

Syntax:	fsgjt_return_code_t fsgjtOpenJTAPI(jtapi_struct);		
Parameters:	void **	jtapi_struct	An optional opaque structure that may be returned by the specific instantiation of the JTAPI
Return Status:	FSGJT_OK FSGJT_INTERNAL_ERROR FSGJT_INVALID_REQUEST		
Impact Level:	Library		
Description:	Initializes the JTAPI library and may return a structure that is utilized by the specific JTAPI library instantiation.		
Constraints, Limitation, Restrictions	This API call must be called before calling any other JTAPI calls.		
Also See:	fsgjtCloseJTAPI		

4.2 fsgjtCloseJTAPI

Syntax:	fsgjt_return_code_t fsgjtCloseJTAPI(jtapi_struct);		
Parameters:	void *	jtapi_struct	The opaque structure that was returned from the fsgjtOpenJTAPI call for this specific instantiation of the JTAPI
Return Status:	FSGJT_OK FSGJT_INTERNAL_ERROR		
Impact Level:	Library		
Description:	Releases the JTAPI library, removes any dynamic memory allocations and closes any I/O channels.		
Constraints, Limitation, Restrictions	This API call must be called after calling any other JTAPI calls.		
Also See:	fsgjtOpenJTAPI		

5. Functional Level Application Programming Interface

Functional level JTAPI calls for used to create, manipulate and store job tickets. The API's are segment into generic API calls that are useable for any object, the attribute API calls that useable for any attribute and, finally, API calls for specific objects

5.1 Generic Object Level Application Programming Interfaces

The generic object level API's can be used for any object.

5.1.1 fsgjtDestroy

Syntax:	fsgjt_return_code_t fsgjtDestroy(object);		
Parameters:	fsgjt_object_t	object	Free the memory used by the provided object.
Return Status:	FSGJT_OK FSGJT_INTERNAL_ERROR FSGJT_INVALID_REQUEST FSGJT_INVALID_OBJECT		
Impact Level:	Object		
Description:	Free the allocated memory used by an object.		
Constraints, Limitation, Restrictions	“fsghjtDestory MUST be called to free each object allocation during session, otherwise memory leaks will occur. Before calling fsgitCloseJTAPI, fsghjtDestory MUST be called to free each object allocation during session, Destroying higher level objects will automatically destroy lower level objects.		
Also See:			

5.1.2 fsgjtGet

Syntax:	fsgjt_attribute_t fsgjtGet(object, attribute);		
Parameters:	fsgjt_object_t	object	Object to retrieve attribute from.
	char *	attribute	Attribute of object to retrieve value for.
Return Status:	**FSGJT_OK** **FSGJT_INTERNAL_ERROR** **FSGJT_INVALID_REQUEST** **FSGJT_INVALID_OBJECT** **FSGJT_NOT_SUPPPORTED**		
Impact Level:	Object		
Description:	Get the attribute of the specified object having the provided name.		
Constraints, Limitation, Restrictions			
Also See:			

5.1.3 fsgjtSet

Syntax:	fsgjt_return_code_t fsgjtSet(object, attribute);		
Parameters:	fsgjt_object_t	object	Object to retrieve attribute from.
	fsgjt_attribute_t	attribute	Attribute of object to set.
Return Status:	FSGJT_OK FSGJT_INTERNAL_ERROR FSGJT_INVALID_REQUEST FSGJT_INVALID_OBJECT FSGJT_NOT_SUPPPORTED		
Impact Level:	Object		
Description:	Set the provided attribute of the provided object.		
Constraints, Limitation, Restrictions			
Also See:			

5.1.4 fsgjtSet

Syntax:	fsgjt_return_code_t fsgjtSet(object, attribute);		
Parameters:	fsgjt_object_t	object	Object to retrieve attribute from.
	fsgjt_attribute_t	attribute	Attribute of object to set.
Return Status:	FSGJT_OK FSGJT_INTERNAL_ERROR FSGJT_INVALID_REQUEST FSGJT_INVALID_OBJECT FSGJT_NOT_SUPPPORTED		
Impact Level:	Object		
Description:	Convenience function for setting an integer attribute to the provided value. This function creates a fsgjt_attribute_t and calls the set() function **and then destroys the attribute.**		
Constraints, Limitation, Restrictions			
Also See:			

5.2 Generic Object Level Application Programming Interfaces

To be put in.

5.3 Object Level Application Programming Interfaces

5.3.1 Object Conformance for Print Environment

Based on the characteristics, resource limitations and print capabilities of the separate print environments the level of support for individual JTAPI objects is outlined in Table 5.0. The print environment type and the specific conformance version will be identified as part of the JTAPI initialization process.

Table 5 JTAPI Object Conformance for Print Environments

Object	***Conformance – 1.0 Release*** *(Must, Should, May)*			
	Embedded/Mobile	***Desktop/Home***	***Office/Network***	***Production***
Binding	May	May	May	**Must**
ContactInfo	May	May	May	**Must**
Document	**Must**	**Must**	**Must**	**Must**
Folding	May	May	May	**Must**
ForcePage	May	May	May	**Must**
HoleMaking	May	May	May	**Must**
InsertSheet	May	May	May	**Must**
Job	**Must**	**Must**	**Must**	**Must**
JobDocument Page	**Must**	**Must**	**Must**	**Must**
JobTicketInfo	**Must**	**Must**	**Must**	**Must**
Media	**Must**	**Must**	**Must**	**Must**
PageOverrides	May	May	May	**Must**
SeparatorSheet	May	May	May	**Must**
Stitching	May	May	May	**Must**
Subscription	May	May	May	**Must**
Trimming	May	May	May	**Must**

5.3.2 Binding

A Binding object specifies how a job, document, or range of pages in a job or document is to be bound. A Binding object contains attributes that specify the type of binding to perform (such as, tape or soft cover), and the edge of the sheet to bind.

5.3.2.1 Binding Attributes & Conformance

Attribute	***Range***	***Units***	***Type***	***Relation***	***E/M***	***D/H***	***O/N***	***Prod***
Binding					May	May	May	**Must**
binding-reference-edge					May	May	May	**Must** {Right, Left}
binding-type					May	May	May	May

Not-Set is required for all attribute implemented. "{-}" indicates value the must be supported.

5.3.2.2 Binding Procedures

5.3.2.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			
Also See:			

5.3.3 ContactInfo

A ContactInfo object contains information about a person who is to be contacted regarding the job. A ContactInfo object contains attributes that specify the name, address, company, URIs, and role of the person who is to be contacted. The role of the person identifies why the person is interested in the job. Some typical roles are Administrator, Customer, Delivery, and Approver.

5.3.3.1 ContactInfo Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
ContactInfo					May	May	May	**Must**
contact-info-address					May	May	May	**Must**
contact-info-company					May	May	May	**Must**
contact-info-contact-uri					May	May	May	**Must** <Mail-To Scheme>
contact-info-name					**Must**	**Must**	**Must**	**Must**
contact-info-types					**Must** {SENDER }	**Must** {SENDER }	**Must** {SENDER }	**Must** {SENDER , CUSTOMER, DELIVERY, PICKUP, ACCOUNTING }

Not-Set is required for all attribute implemented. "{-}" indicates value the must be supported.

5.3.3.2 ContactInfo Procedures

5.3.3.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			

Constraints, Limitation, Restrictions	
Also See:	

5.3.4 Document

Each Document object in a job references one or more files to be processed. A Document object contains attributes that describe the document and how it is to be processed.

Note: For the Alpha implementation, only one file per Document object is supported.

5.3.4.1 Document Attributes & Conformance

Attribute	***Range***	***Units***	***Type***	***Relation***	***E/M***	***D/H***	***O/N***	***Prod***
Document					**Must**	**Must**	**Must**	**Must**
document-uri					**Must**	**Must**	**Must**	**Must**

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.4.2 Document Procedures

5.3.4.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			
Also See:			

5.3.5 Folding

A Folding object contains information that specifies how a job, document, or range of pages in a job or document is to be folded. A Folding object contains attributes that specify the type of folding (such as, z-fold and saddle fold) and the reference edge from which to perform the folding operation.

5.3.5.1 Folding Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
Folding					May	May	May	**Must**
folding-reference-edge					May	May	May	May
folding-type					May	May	May	**Must** {SADDLE}

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.5.2 Folding Procedures

5.3.5.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			
Also See:			

5.3.6 ForcePage

A ForcePage object is used to specify that a single page, identified by an input page number, is imaged on a specific side (front or back) and/or specific cell of the sheet. Forcing a page is typically performed when the first page of each chapter is to be imaged on the front side of a sheet, also known as "chapter starts". A ForcePage object can also be used to only image on the back side of a back cover. ForcePage is only valid when two-sided printing is specified.

ForcePage will force a page to be imaged on the specified side even if the page would normally fall on the other side. For example, if the second page would normally be imaged on the back side of the sheet and it is to be forced to the front side, then the back side of the current sheet is left blank and the second page is imaged on the next sheet.

5.3.6.1 ForcePage Attributes & Conformance

Attribute	***Range***	***Units***	***Type***	***Relation***	***E/M***	***D/H***	***O/N***	***Prod***
ForcePage					May	May	May	**Must**

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.6.2 ForcePage Procedures

5.3.6.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			
Also See:			

5.3.7 HoleMaking

A HoleMaking object specifies how a job, document, or range of pages in a job or document is to be punched or drilled. A HoleMaking object contains attributes that specify the number of holes to punch and the edge of the sheet to punch.

5.3.7.1 HoleMaking Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
HoleMaking					May	May	May	**Must**
hole-making-reference-edge					May	May	May	**Must** {LEFT, RIGHT}
hole-making-count					May	May	May	May

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.7.2 HoleMaking Procedures

5.3.7.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			
Also See:			

5.3.8 InsertSheet

An InsertSheet object specifies information that describes an insert sheet that is to be inserted in the job or document. An insert sheet will not be imaged/printed with content from the document data stream.

An InsertSheet object contains attributes that specify where the insert sheet is to be placed in the job or a document (before or after specific page numbers), the media that is to be used for the insert sheet, the number of insert sheets to insert, and other insert sheet information.

5.3.8.1 InsertSheet Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
InsertSheet					May	May	May	**Must**
insert-sheet-content					May	May	May	**Must**
insert-sheet-count					**Must**	**Must**	**Must**	**Must**
insert-sheet-media					May	May	May	**Must**
insert-sheet-pages					**Must**	**Must**	**Must**	**Must**
insert-sheet-position					**Must**	**Must**	**Must**	**Must**

Not-Set is required for all attribute implemented. "{-}" indicates value the must be supported.

5.3.8.2 InsertSheet Procedures

5.3.8.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			

Also See:	

5.3.9 Job

A Job object specifies a description of a job and how it is to be processed. A Job object contains attributes that specify job-name (description) and number-of-copies (processing).

5.3.9.1 Job Attributes & Conformance

Attribute	***Range***	***Units***	***Type***	***Relation***	***E/M***	***D/H***	***O/N***	***Prod***
Job					**Must**	**Must**	**Must**	**Must**
job-billing-code					May	May	May	**Must**
job-binding					May	May	May	**Must**
job-client-id					May	May	**Must**	**Must**
job-collate					May	**Must**	**Must**	**Must**
job-comment					May	May	**Must**	**Must**
job-compression					**Must** {NONE}	**Must** {NONE}	**Must** {NONE}	**Must** {NONE}
job-contact-info					May	May	May	**Must**
job-copies					May	May	**Must**	**Must**
job-create-user-name					**Must**	**Must**	**Must**	**Must**
job-destination-uri					**Must** {Single-Valued}	**Must** {Single -Valued}	**Must** {Single-Valued}	**Must** {Single-Valued}
job-document-format					**Must** {application/octet-stream}	**Must** {application/octet-stream}	**Must** {application/octet-stream}	**Must** {application/octet-stream}
job-document-natural-language					May	**Must**	**Must**	**Must**
job-feed-orientation					May	May	May	**Must**
job-fit-policy					**Must** {FIT_TO_PAGE}	**Must** {FIT_TO_PAGE}	**Must** {FIT_TO_PAGE}	**Must** {FIT_TO_PAGE}
job-folding					May	May	May	**Must**
job-force-pages					May	May	May	**Must**
job-hold					May	May	May	**Must**
job-hole-making					May	May	May	**Must**
job-image-alignment-x					May	May	May	**Must**
job-image-alignment-y					May	May	May	**Must**
job-image-shift-back-x					May	May	May	**Must**

Attribute	***Range***	***Units***	***Type***	***Relation***	***E/M***	***D/H***	***O/N***	***Prod***
job-image-shift-back-y					May	May	May	**Must**
job-image-shift-front-x					May	May	May	**Must**
job-image-shift-front-y					May	May	May	**Must**
job-include-pages					May	May	May	**Must**
job-insert-sheets					May	May	May	**Must**
job-jog-offset					May	May	May	**Must**
job-margin-bottom					**Must**	**Must**	**Must**	**Must**
job-margin-left					**Must**	**Must**	**Must**	**Must**
job-margin-top					**Must**	**Must**	**Must**	**Must**
job-margin-right					**Must**	**Must**	**Must**	**Must**
job-media					**Must**	**Must**	**Must**	**Must**
job-message-to-operator					May	May	May	**Must**
job-name					May	May	**Must**	**Must**
job-number-up-x					May	**Must**	**Must**	**Must**
job-number-up-y					May	**Must**	**Must**	**Must**
job-output-bin-name					May	**Must**	**Must**	**Must**
job-output-pages					**Must**	**Must**	**Must**	**Must**
job-page-delivery					May	May	May	**Must**
job-rotation					May	**Must**	**Must**	**Must**
job-presentation-direction					May	May	May	**Must**
job-priority					**Must**	**Must**	**Must**	**Must**
job-print-quality					**Must**	**Must**	**Must**	**Must**
job-resolution-x					**Must**	**Must**	**Must**	**Must**
job-resolution-y					**Must**	**Must**	**Must**	**Must**
job-scaling-factor-x					**Must**	**Must**	**Must**	**Must**
job-scaling-factor-y					May	May	May	**Must**
job-separator-sheets					May	May	**Must**	**Must**
job-sides					May	**Must**	**Must**	**Must**
job-stitching					May	May	**Must** {(CORNER,TOP-LEFT)}	**Must**
job-subscriptions					May	May	May	**Must**
job-trimming					May	May	May	**Must**

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.9.2 Job Procedures

5.3.9.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			
Also See:			

5.3.10 JobDocumentPage

JobDocumentPage is an abstract object that contains attributes that can be specified for the Job, Document, or PageOverrides objects. For example, one media can be specified for the entire job, which can be overridden by another media for a specific document in the job, which can be overridden by another media for specific pages in the job or document.

5.3.10.1 JobDocumentPage Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
JobDocument Page					**Must**	**Must**	**Must**	**Must**

Not-Set is required for all attribute implemented. "{-}" indicates value the must be supported.

5.3.10.2 JobDocumentPage Procedures

5.3.10.2.1 fsgjtxxxxxxx

<table>
<tr><td><b>Syntax:</b></td><td colspan="3">fsgjt_return_code_t fsgjtxxxxxxx(xxxxx);</td></tr>
<tr><td rowspan="2"><b>Parameters:</b></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td><b>Return Status:</b></td><td colspan="3">FSGJT_OK</td></tr>
<tr><td><b>Impact Level:</b></td><td colspan="3">Object</td></tr>
<tr><td><b>Description:</b></td><td colspan="3"></td></tr>
<tr><td><b>Constraints, Limitation, Restrictions</b></td><td colspan="3"></td></tr>
<tr><td><b>Also See:</b></td><td colspan="3"></td></tr>
</table>

5.3.11 JobTicketInfo

A JobTicketInfo object specifies job ticket information, such as a comment describing the job ticket, the version of the JTAPI, the type or syntax (JDF, PWG, etc.) of job ticket, and other job ticket information. A JobTicketInfo object does not contain job processing information.

5.3.11.1 JobTicketInfo Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
JobTicketInfo					**Must**	**Must**	**Must**	**Must**
jt-api-charset					**Must** {“UTF8”}	**Must** {“UTF8:}	**Must** {“UTF8”}	**Must** {“UTF8”}
jt-api-version					**Must**	**Must**	**Must**	**Must**
Jt-charset					**Must**	**Must**	**Must**	**Must**
jt-comment					May	**Must**	**Must**	**Must**
jt-mandatory-attributes					**Must**	**Must**	**Must**	**Must**
jt-type-version					**Must**	**Must**	**Must**	**Must**
jt-length-units					**Must** {MICRO}	**Must** {MICRO}	**Must** {MICRO}	**Must** {MICRO}

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.11.2 JobTicketInfo Procedures

5.3.11.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			

Also See:	

5.3.12 Media

A Media object specifies a media that is to be used when printing the job, document, or a range of pages in the job or document. A Media object contains attributes that specify a name that describes the media dimensions (for example, na_letter_8.5x11in), the color of the media, the actual media dimensions, and other media information.

5.3.12.1 Media Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
Media					**Must**	**Must**	**Must**	**Must**
media-back-coating					May	May	May	**Must**
media-color					May	May	**Must**	**Must**
media-color-name					May	May	**Must**	**Must**
media-dimension-name					**Must**	**Must**	**Must**	**Must**
media-front-coating					**Must**	**Must**	**Must**	**Must**
media-hole-count					May	May	May	**Must**
media-input-tray-name					May	May	**Must**	**Must**
media-manual-feed					**Must**	**Must**	**Must**	**Must**
media-preprinted					May	May	May	**Must**
media-recycled					May	May	May	**Must**
media-recycled-percentage					May	May	May	**Must**
media-set-count					May	May	May	**Must**
media-type					**Must**	**Must**	**Must**	**Must**
media-weight					May	May	May	**Must**
media-x-dimension					May	May	May	May
media-y-dimension					May	May	May	May

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.12.2 Media Procedures

5.3.12.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			

Return Status:	FSGJT_OK
Impact Level:	Object
Description:	
Constraints, Limitation, Restrictions	
Also See:	

5.3.13 PageOverrides

A PageOverrides object specifies a single page number or a range of consecutive page numbers, and the attributes that override the corresponding attributes that are specified in the Job or Document object that contains the PageOverrides object.

5.3.13.1 PageOverrides Attributes & Conformance

Attribute	***Range***	***Units***	***Type***	***Relation***	***E/M***	***D/H***	***O/N***	***Prod***
PageOverrides					May	May	May	**Must**

Not-Set is required for all attribute implemented. "{-}" indicates value the must be supported.

5.3.13.2 PageOverrides Procedures

5.3.13.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			
Also See:			

5.3.14 SeparatorSheet

A SeparatorSheet object specifies information that describes separator sheets. A separator sheet will not be imaged/printed with content from the document data stream.

A SeparatorSheet object contains attributes that specify where the separator sheets are to be placed (before or after the job or document, between copies, etc.), the media that is to be used for the separator sheet, and a message that is to be imaged/printed on the separator sheet.

5.3.14.1 SeparatorSheet Attributes & Conformance

Attribute	***Range***	***Units***	***Type***	***Relation***	***E/M***	***D/H***	***O/N***	***Prod***
SeparatorSheet					May	May	May	**Must**
separator-sheet-media					May	May	May	**Must**
separator-sheet-message					May	May	May	**Must**
separator-sheet-type					**Must** {BEFORE _JOB}	**Must** {BEFORE _JOB}	**Must** {BEFORE _JOB}	**Must**

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.14.2 SeparatorSheet Procedures

5.3.14.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			
Also See:			

5.3.15 Stitching

A Stitching object specifies how a job, document, or range of pages in a job or document are to be stapled/stitched. A Stitching object contains attributes that specify the number of stitches, the type of stitch (for example, corner, edge, or saddle), the edge of the sheet to stitch, and other stitching information.

5.3.15.1 Stitching Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
Stitching					May	May	May	**Must**
stitching-angle					May {tbd}	May {tbd}	May {tbd}	**Must** {tbd}
stitching-count					May	May	May	**Must** {1, 2}
stitching-reference-edge					May	May	May	**Must** {LEFT, RIGHT}
stitching-type					**Must** {CORNER, NONE}	**Must** {CORNER, NONE}	**Must** {CORNER, NONE}	**Must**

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.15.2 Stitching Procedures

5.3.15.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			

Also See:	

5.3.16 Subscription

A Subscription object specifies subscription for notification of events that are to be sent to a specific destination. A Subscription object contains attributes that specify the events to be sent, the character set, the language, the comment text to be included in the notification, delivery method (for example, email), and other subscription information.

5.3.16.1 Subscription Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
Subscription					May	May	May	**Must**
subscription-charset					**Must** {UTF-8}	**Must** {UTF-8}	**Must** {UTF-8}	**Must** {UTF-8}
subscription-comment					May	May	May	**Must**
subscription-events					**Must** {tbd}	**Must** {tbd}	**Must** {tbd}	**Must** {tbd}
subscription-job-attributes					May	May	May	May
subscription-language					May	May	May	May
subscription-send-to-uri					**Must** {tbd}	**Must** {tbd}	**Must** {tbd}	**Must** {tbd}

Not-Set is required for all attribute implemented. "{-}" indicates value the must be supported.

5.3.16.2 Subscription Procedures

5.3.16.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			

Also See:	

5.3.17 Trimming

A Trimming object specifies how a job, document, or range of pages in a job or document are to be trimmed. A Trimming object contains an attribute that specifies the type of trimming to perform (for example, default trimming, face, gutter, or tab) and other trimming information.

5.3.17.1 Trimming Attributes & Conformance

Attribute	*Range*	*Units*	*Type*	*Relation*	*E/M*	*D/H*	*O/N*	*Prod*
Trimming					May	May	May	**Must**
trimming-type					**Must** {NONE, TRIM}	**Must** {NONE, TRIM}	**Must** {NONE, TRIM}	**Must** {NONE, TRIM}

Not-Set is required for all attribute implemented. “{-}“ indicates value the must be supported.

5.3.17.2 Trimming Procedures

5.3.17.2.1 fsgjtxxxxxxx

Syntax:	fsgjt_return_code_t fsgjtxxxxxx(xxxxx);		
Parameters:			
Return Status:	FSGJT_OK		
Impact Level:	Object		
Description:			
Constraints, Limitation, Restrictions			
Also See:			

6. Static Library Configuration of JTAPI

7. Dynamic Link Library Configuration of JTAPI

8. RPC Configuration of JTAPI

APPENDIX: X - Terminology and Acronyms

Conformance Terminology

In this document, the uppercase terms “MUST”, “MUST NOT”, “SHOULD”, “SHOULD NOT”, and “MAY” are intended to be interpreted as described in [RFC2119]

In this document, each conformance statement uses one of the terms:

Table 1 Conformance Statement Terms

Term	*Meaning*
MUST	Implementation support is required for conformance to this specification.
SHOULD	Implementation support is strongly recommended for conformance to this specification unless impractical (for example, memory limitations).
MAY	Implementation support is optional for conformance to this specification.

In this document, the term “support” is defined as:

Table 2 Conformance Support Terms

Term	*Meaning*
“support an operation”	An implementation MUST accept a syntactically correct instance of the operation (includes all required parameters) and MUST return one of the defined results for the invoked operation.
“support an object”	An implementation MUST accept a syntactically correct instance of the object (includes all required attributes), MUST locally instantiate the object and MUST return one of the defined results for the invoked operation.
“support an attribute”	An implementation MUST accept a syntactically correct instance of the attribute (includes a valid value) and MUST locally instantiate the attribute. Further, an implementation MUST accept at least one value (other than the empty value NOT_SET) defined for the given attribute. [[Ira will create sentence]]

[[Editor Note: Are all required attribute required to be support for closed set?]]

[[Editor Note: We need to go through all object, attributes to determine which REQUIRED, RECOMMENDED, OPTIONAL]]

Element	Object operation or attribute.

8.1 Other Terminology <all>

Table 3 Miscellaneous Terms

Term	***Meaning***
Job Ticket	A set of one or more job processing activities (e.g. stapling, binding, number of copies, insert sheet), contained within a file or stream, serialized into some file format (for example, the XML instance textual encoding of a CIP4 JDF Job Ticket).
Job	A set of one or more processing activities, contained within a "Job Ticket", described by "Job Description" attributes, and processed according to "Job Processing" attributes.
Document	A single document to be processed, contained within a "Job", described by "Document Description" attributes, and processed according to "Document Processing" attributes.

[[Editor Note: Need a better definition for document]]

Document Processing	
Page	A single logical page in a source document. Multiple source pages may be included in a single "Impression" on a "Side" of a "Sheet".
Sheet	A single physical piece of media.
Side	A single side (front or back) of "Sheet" of media.
Impression	A single image marked (by some means) on a "Side" of a "Sheet".

8.2 Acronyms < All >

Table 4 Acronyms

Acronyms	*Meaning*	*Source*
CIP4	International **C**ooperation for the **I**ntegration of **P**rocesses in **P**repress, **P**ress and **P**ostpress	http://www.cip4.org/
JDF	**J**ob **D**efinition **F**ormat	Version 1.1, August 2002. See documentation tab at http://www.cip4.org/
PWG	**P**rinter **W**orking **G**roup	http://www.pwg.org/
FSG	Free Standards Group	
FSG/OP	Free Standards Group – Open Printing	http://www.openprinting.org/
JTAPI	**J**ob **T**icket **A**pplication **P**rogramming **I**nterface	

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Changes < Editor >

Date	***Affected Version***	***Author***	***Change***
08.12.03	0.30	G. Petrie	Added comments from T. Hastings in the introduction and reference sections.
08.12.03	0.30	G. Petrie	Added comments from I. McDonald in the reference section. Added comments and changes based on discussion from 08.12.03 weekly job-ticket meeting. Many section affected.
08.15.03	0.40	G. Petrie	Added comments and changes based on discussion from 08.12.03 weekly job-ticket meeting. Many section affected.
08.19.03	0.50	G. Petrie	Updated minor change to headings.
08.26.03	0.50 Claudia	G. Petrie	Added Sections 4.0, 4.1 and 4.2 from Claudia's version of 0.50, dated 08.19.03
08.28.03	0.55	G. Petrie	Edits and changes based on 08.28.03 weekly job-ticket meeting for Section 4.0, 4.1, 4.2. The addition table/figure labels and a table/figure table-of-content
10/15/03	0.77	G. Petrie	Updates to attribute compliance table based on 10.14.03 meeting. The addition of attribute #define/string-names to C language header section.
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