JTAPI & Objectives

- **What is JTAPI ?**
  - **JTAPI stands for:**
    - Job Ticket Application Programming Interface
    - Pronounced "jay-tappy", "Job Ticket API", or "jay tee API"
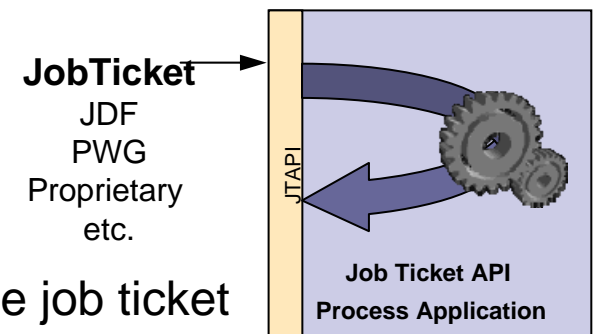
  - **A job ticket contains:**
    - **Instructions** describing how to process and/or print a job
    - **Information** about the results of a job as it is processed and/or printed

  - **A JTAPI job ticket is:**
    - an electronic replacement of manual hard copy instructions and information

- **Objectives**
  - To create and consume job tickets
  - To be job ticket syntax neutral
  - To isolate the application from the content of the job ticket
  - To be programming language neutral
  - To import and export multiple job ticket formats

JobTicket
JDF
PWG
Proprietary
etc.

JTAPI

Job Ticket API
Process Application

Existing Open Job Ticket Standards

CIP4 JDF (Job Definition Format) Job Ticket

- Defined by CIP4, a world wide standards body with almost 300 members
- Extensible XML-based job ticket standard
- JDF Specification versions
  - 1.0 released April 2001
  - 1.1 released April 2002
  - 1.2 released May 2004
  - 1.3 released September 2005
  - 1.4 to be released 2007

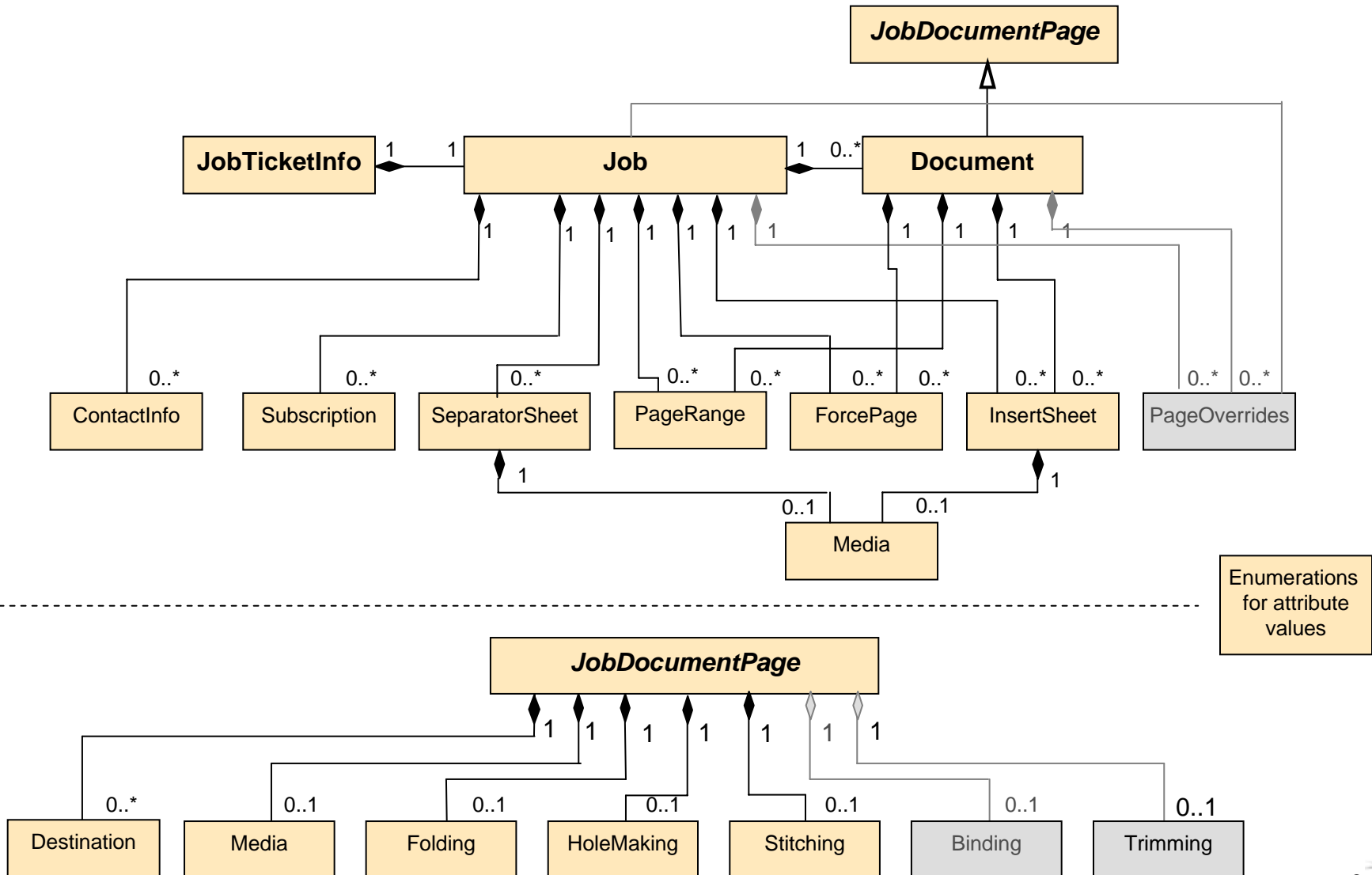## PWG Job Ticket

- Defined by PWG, a world wide standards body with over 27 members
- Defined by PWG Semantic Model 1.0 (Jan 2004)
- Extensible XML-based job ticket standard

JTAPI Object Model

JobDocumentPage

| JobTicketInfo | 1   1 | Job | 1   0..* | Document |

ContactInfo | Subscription | SeparatorSheet | PageRange | ForcePage | InsertSheet | PageOverrides

Media

Enumerations for attribute values

JobDocumentPage

Destination | Media | Folding | HoleMaking | Stitching | Binding | Trimming

29 March 2006

3

JTAPI Version 1.0

- **JTAPI Version 1.0 Specification**

- **JTAPI UML (Object Model) Diagrams**

- **C Header Files**
  - Each object in separate files
  - Common extensible method for attributes
  - Data/object model that is object oriented
  - Defines objects that are familiar to the printing industry, such as Job, Document, Insert Sheet, Media, Stitching, Hole Making, etc.
  - Defines relationship between objects
  - Defines operations to be performed on objects
  - Defines attributes of objects
  - Defines well-known enumerated values of all attributes

Milestones & Activities

- **Feb 2002**
  - Began job ticket discussions at FSG Open Print

- **June 2002**
  - JTAPI proposal & chartered FSG JT working group

- **Dec 2002**
  - IBM shipped first generation C JTAPI product

- **Dec 2003**
  - IBM shipped second generation C JTAPI product
  - IBM shipped first generation Java JTAPI product

- **April 2005**
  - Completed JTAPI Version 1.0 Specification/Header

- **July 2005**
  - Public release FSG JTAPI Version 1.0 Specification/Header

Documents

- JTAPI/1.0 Spec
  - ftp://ftp.pwg.org/pub/pwg/fsg/jobticket/JTAPI_Spec/fsg-openprinting-job-ticket-api-v0100-20050315.pdf

- JTAPI/1.0 C Headers
  - ftp://ftp.pwg.org/pub/pwg/fsg/jobticket/C_JTAPI_Code/CJTAPI_22Apr2005.zip

- JTAPI/1.0 UML
  - ftp://ftp.pwg.org/pub/pwg/fsg/jobticket/JTAPI_Diagrams/05Apr2005/*.png

- WG Directory
  - ftp://ftp.pwg.org/pub/pwg/fsg/jobticket/

- Slides – OSDL Print Summit
  - ftp://ftp.pwg.org/pub/pwg/fsg/April2006-OSDL-Printing-Summit-Slides/2006-03-29-FSG_JTAPI_OSDL_Printing_Summit.ppt

Working Group Information

- To subscribe to FSG Job Ticket mailing list:
  - http://freestandards.org/mailman/listinfo/printing-jobticket

- To post a message to FSG Job Ticket mailing list
  - printing-jobticket@freestandards.org

- To view FSG Job Ticket mailing list archives
  - http://freestandards.org/mailman/listinfo/printing-jobticket

- To find FSG Job Ticket documents
  - ftp://ftp.pwg.org/pub/pwg/fsg/jobticket/

- Participants
  - Claudia Alimpich (IBM) – chair
  - Jody Goldberg (Novell)
  - Tom Hastings (Xerox)
  - Till Kamppeter (Mandriva)
  - Ira McDonald (High North)
  - Glen Petrie (Epson)

JTAPI –Version 1.0 Release Details (1)

JTAPI Objects and their functions

- **JobTicketInfo**
  - **fsgjtNewJobTicketInfo**
    - Creates a JobTicketInfo object. Used when a new job ticket is being created without a Job object and not from an existing job ticket.
  - **fsgjtNewJobTicketInfoFromURI**
    - Creates a JobTicketInfo object from the job ticket file at the provided URI. Other JTAPI objects are also created based on the information in the job ticket file.
  - **fsgjtNewJobTicketInfoFromBuffer**
    - Creates a JobTicketInfo object from the provided buffer that contains a job ticket. Other JTAPI objects are also created based on the information in the job ticket buffer.
  - **fsgjtNewJobTicketInfoFromJob**
    - Creates a JobTicketInfo object using the provided Job object. Used when a new job ticket is being created. The Job object must be created first.
  - **fsgjtWriteJobTicketToBuffer**
    - Writes a job ticket to the provided buffer.
  - **fsgjtWriteJobTicketToURI**
    - Writes a job ticket at the provided URI.

- **Job**
  - **fsgjtNewJob**
    - Creates a Job without providing a Document.
  - **fsgjtNewJobFromDocument**
    - Creates a Job containing the provided Document

- **Document**
  - **fsgjtNewDocument**
    - Creates a Document object.
  - **fsgjtNewDocumentFromURI**
    - Creates a Document object using the provided URI that contains the document data.

JTAPI –Version 1.0 Release Details (2)

- ContactInfo
  - **fsgjtNewContactInfo**
    - Creates a ContactInfo object having the specified name.

- Subscription
  - **fsgjtNewSubscription**
    - Creates a Subscription object having the specified notification URI.
  - **fsgjtNewSubscriptionForEvent**
    - Creates a Subscription object having the provided notification URI and event.

- SeparatorSheet
  - **fsgjtNewSeparatorSheet**
    - Creates a SeparatorSheet object to be placed at the provided location.

- ForcePage
  - **fsgjtNewForcePage**
    - Creates a ForcePage object haing the specified page and sheet side.

- InsertSheet
  - **fsgjtNewInsertSheet**
    - Creates a InsertSheet object.

- Destination
  - **fsgjtNewDestination**
    - Creates a Destination object with a specific URI.

JTAPI –Version 1.0 Release Details (3)

- Media
  - **fsgjtNewMedia**
    - Creates a Media object using the specified name.

- PageRange
  - **fsgjtNewRangRange**
    - Creates a PageRange object.

- Folding
  - **fsgjtNewFolding**
    - Creates a Folding object having the specified folding type.

- HoleMaking
  - **fsgjtNewHoleMaking**
    - Creates a HoleMaking object having the specified hole
      count and reference edge.

- Stitching
  - **fsgjtNewStitching**
    - Creates a Stitching object having the specified stitch type.

JTAPI –Version 1.0 Release Details (4)

- Attribute

    Generic support for all object/attributes

- **fsgjtNewAttribute**
    - Creates a new Attribute object having the provided attribute name, value type, and value.
- **fsgjtDestroyAttribute**
    - Free the memory used by the Attribute.
- **fsgjtAddValue**
    - Add an additional value to this Attribute.
- **fsgjtGetName**
    - Get the name of the Attribute.
- **fsgjtGetNextValue**
    - Return the Attribute's next value.

- **fsgjtGetNumValues**
    - Get the number of values that the Attribute contains.
- **fsgjtGetValueType**
    - Returns the type of the Attribute's values.
- **fsgjtReplaceValue**
    - Replaces the existing value(s) for this Attribute.
- **fsgjtResetToFirstValue**
    - Reset the iterator to point to the first of the Attribute.

JTAPI –Version 1.0 Release Details (5)

- Miscellaneous / Helper

  - **fsgjtDestory**
    - Free the memory used by the an object.

  - **fsgjtGet**
    - Get the Attribute having the specific name.

  - **fsgjtSet**
    - Set the Attribute having the specific name.

  - **fsgjtSetIntegerAttribute**
    - Convenience function for setting an integer attribute.

  - **fsgjtSetObjectAttribute**
    - Convenience function for setting an object attribute.

  - **fsgjtSetObjectAttributeList**
    - Convenience function for setting an object list.

  - **fsgjtSetStringAttribute**
    - Convenience function for setting a string attribute.

  - **fsgjtSetStringAttributeList**
    - Convenience function for setting a string list.

JTAPI - Version 1.0 – Enumerations

Enumerations

- BindTypeEnum
- BooleanEnum*
- CollateEnum
- CompressionEnum
- ContactInfoRoleEnum
- FeedOrientationEnum
- FitPolicyEnum
- FoldTypeEnum
- HoldEnum
- ImageAlignmentXEnum
- ImageAlignmentYEnum
- InputTrayNameEnum*
- InsertSheetContentEnum
- JobTicketTypeVersionEnum*
- JogOffsetEnum
- LengthUnitEnum*
- MandatoryAttributesEnum
- MediaCoatingEnum
- MediaColorEnum

- MediaPrePrintedEnum
- MediaTypeEnum*
- OutputBinEnum
- PageDeliveryEnum
- PositionEnum
- PresentEnum
- PresentationDirectionEnum
- PrintContentOptimizeEnum
- PrintQualityEnum*
- ReferenceEdgeEnum
- RotationEnum*
- SeparatorSheetEnum
- SheetSideEnum
- SidesEnum*
- StitchingTypeEnum*
- SubscriptionEventEnum
- TrimmingTypeEnum
- ValueTypeEnum*