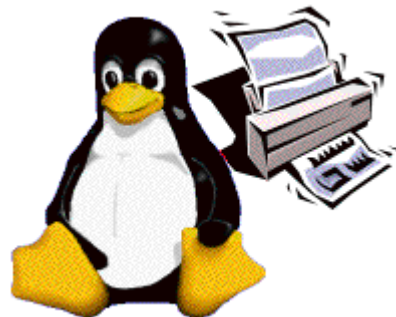




**Free  
Standards  
Group**

# *Job Ticket*

*Presented By: Glen W. Petrie  
Senior Software Architect  
EPSON*





# 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:

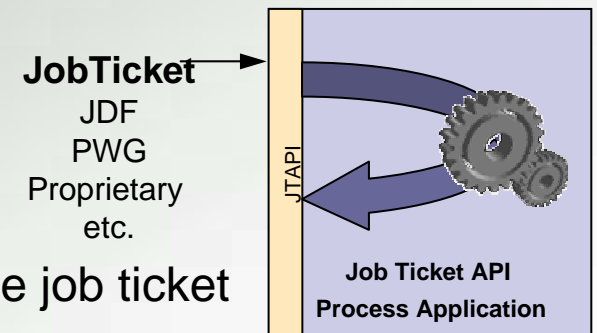
- ◆ **Instructions** describing how to process and/or print a job
- ◆ **Information** about the results of a job as it is processed and/or printed

### ✘ 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





# Existing Job Ticket Formats

Technical Review

## ❏ CIP4 JDF (Job Definition Format) Job Ticket

- ✘ Defined by CIP4, a world wide standards body with over 150 members
- ✘ Is open, 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 to be released Mid 2005

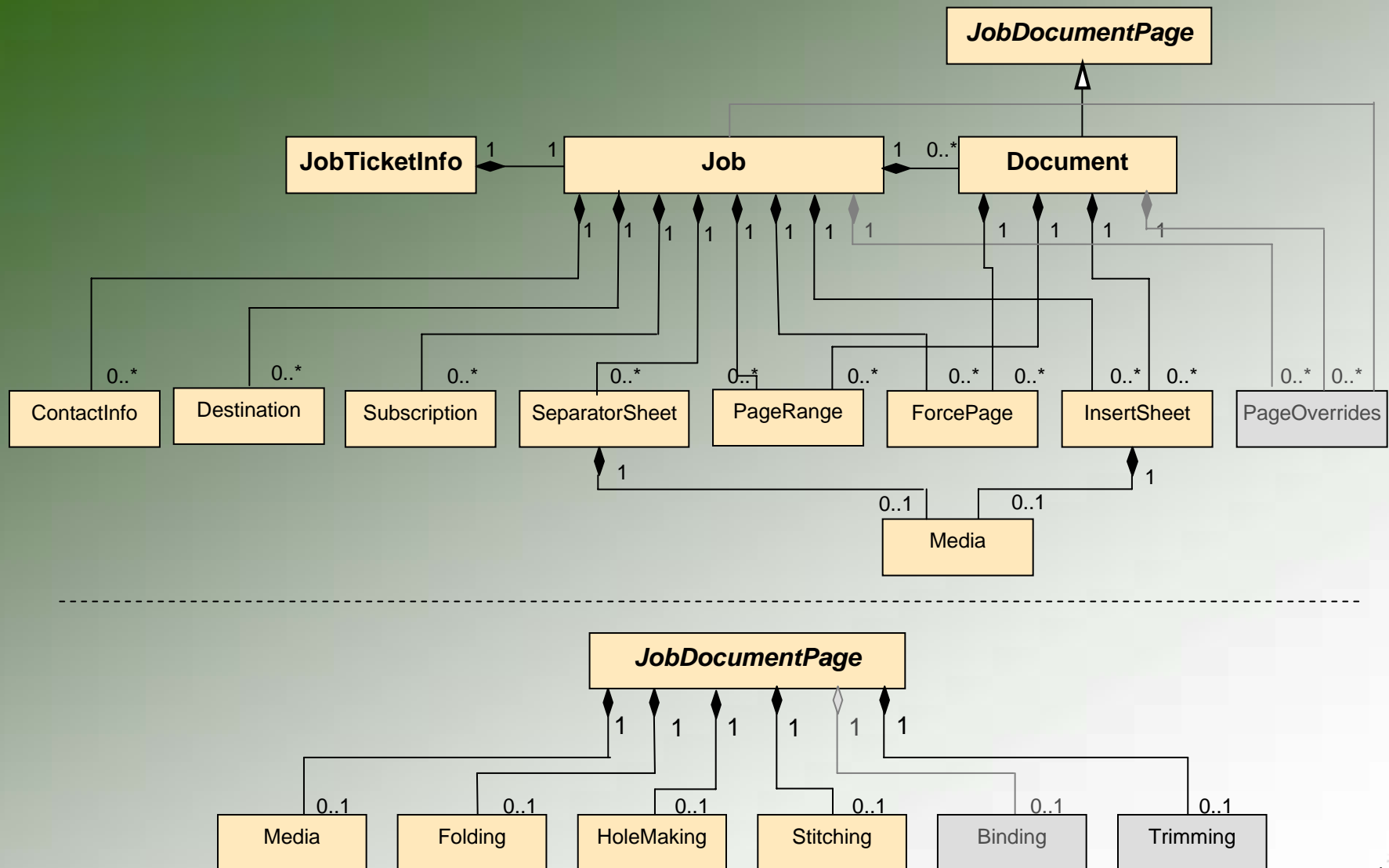
## ❏ PWG Job Ticket

- ✘ Defined by PWG Semantic Model 1.0
- ✘ Is open, extensible, XML-based job ticket standard





# JTAPI Object Model





# ***JTAPI Version 1.0 Release***

## **✚ Completed 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**
  - ◆ 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**





# JTAPI – Version 1.0 Release Details (1)

## 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 having 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\*





# Accomplishments 2002

*Introduction*

- Feb 2002
  - ✘ Began job ticket discussions in FSG Open Print
  
- June 2002
  - ✘ Initial JTAPI proposal
  - ✘ Chartered FSG JT working group
  
- Nov 2002
  - ✘ Created IPP to JDF mapping table
    - ◆ In cooperation with PODi and CIP4 Digital Printing working groups
  
- Dec 2002
  - ✘ Prioritized features/functions of JTAPI
  - ✘ IBM ships first generation C JTAPI product
    - ◆ In a job submission GUI and printer control unit product
      - Based on initial JTAPI specification
      - Based on early version of JDF ICS Specification for Digital Printing





# Accomplishments 2003

*Introduction*

## ✚ May 2003

- ✚ Completed detailed JTAPI UML diagrams
  - 19 objects and 33 enumerations
  - 20+ draft versions

## ✚ June 2003

- ✚ Defined subset of JTAPI 1.0 content for Alpha version

## ✚ Nov 2003

- ✚ Completed version 0.82 JTAPI Specification
- ✚ Started “C” language header files
  - Initial contribution from IBM

## ✚ Dec 2003

- ✚ IBM ships second generation C JTAPI product
- ✚ IBM ships first generation Java JTAPI product



# Accomplishments 2004



## ✚ JTAPI Software Development White Paper

- ✘ May 2004 - Draft white paper completed
- ✘ May 2004 - Completed and distributed to FSG/Japan

## ✚ JTAPI Version 1.0 Specification

- ✘ Oct 2004 - Updated JTAPI global UML diagrams
- ✘ Oct 2004 - Updated JTAPI Version 1.0 compliant C header files
- ✘ Oct 2004 - Updated Version 1.0 Specification
- ✘ Nov 2004 - Review Specification

## ✚ JTAPI Version C Header Files

- ✘ Nov 2004 - Review headers
- ✘ Dec 2004 - Finalize requirement / definition document

## ✚ JTAPI Version 1.0 Specification/Header Release

- ✘ Jan 2005 - Release Specification and headers





# JT Working Group Information

- ✦ Weekly FSG Job Ticket conference calls
  - ✦ Tuesdays at 3:00 PM US Eastern for 1-2 hours
- ✦ 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](mailto: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 (Gnome)
  - ✦ Tom Hastings (Xerox)
  - ✦ Till Kampeter (Mandrakesoft)
  - ✦ Ira McDonald (High North)
  - ✦ Glen Petrie (Epson)





***Thanks***  
***from the***  
***JTAPI Team***

