Job Ticket

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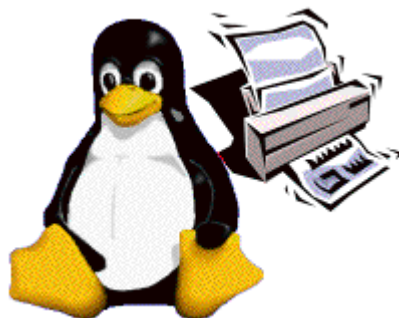
JTAPI & Objectives

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
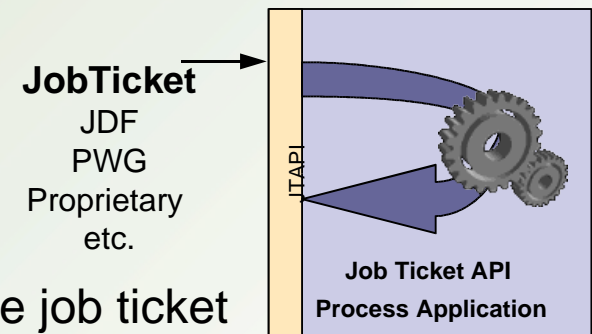
Existing Job Ticket Formats

CIP4 JDF (Job Definition Format) Job Ticket

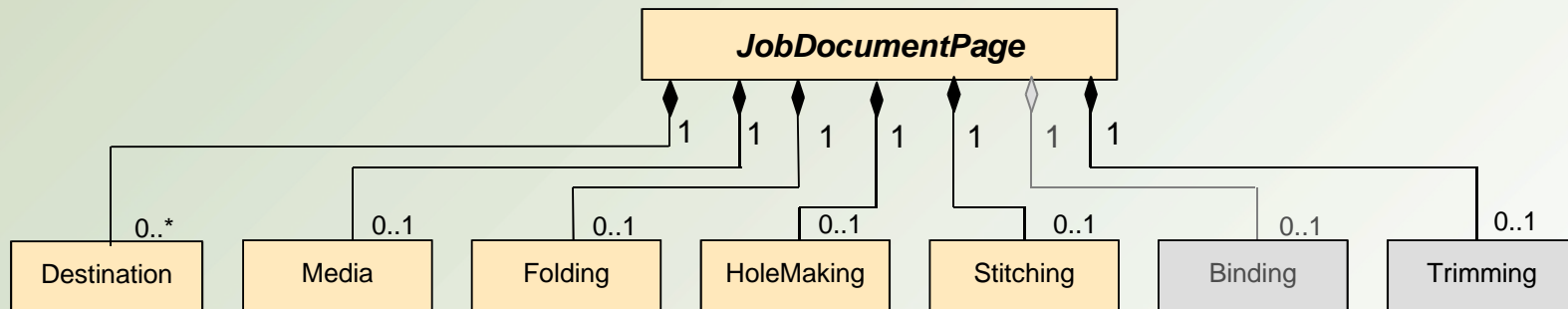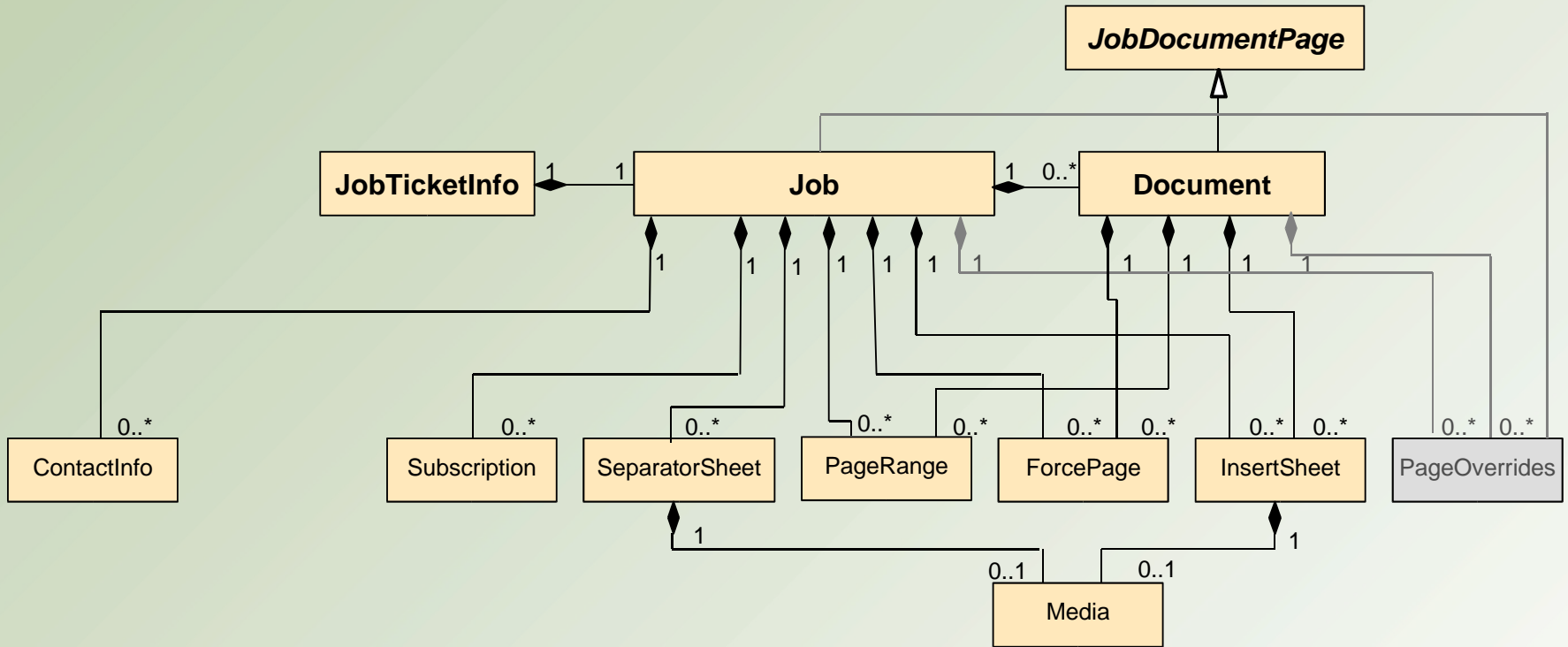- Defined by CIP4, a world wide standards body with over 150 members
- Is open, extensible, XML-based job ticket standard
- JDF Specification versions
  - 1.0 released April 2001
  - 1.1 released April 2002
  - 1.2 released May 2004
  - 1.3 to be released later 2005

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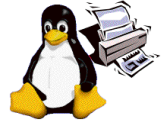
- **Document**
  - ✗ **fsgjtNewDocument**
    - ◆ Creates a Document object.
  - ✗ **fsgjtNewDocumentFromURI**
    - ◆ Creates a Document object using the provided URI that contains the document data.

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 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.

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.

PageRange

fsgjtNewRangRange

- Creates a PageRange object.

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

- 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 <u>ships</u> 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
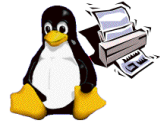
Accomplishments 2003

- 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

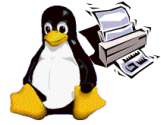# *Accomplishments 2004*

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 |

Accomplishments 2005

JTAPI Version 1.0 Specification/Header Release

April   2005   - Release Specification and Headers

June   2005   - Public Review of JTAPI 1.0

JT Working Group Information

- Periodic 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

- 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 Kamppeter (Mandrakesoft)
  - Ira McDonald (High North)
  - Glen Petrie (Epson)

FSG OpenPrinting

Thanks

from the

JTAPI Team