WebToPrint ICS

Version 2.0 (Draft 0.1)

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Abstract

This CIP4 JDF Interoperability Conformance Specification (ICS) defines the interoperability requirements for WebToPrint Interfaces. This ICS defines the Conformance Requirements for an implementation of a Web Interface that consumes Job Tickets for Job Submission and returns Status Feedback.

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2 Disclaimer

This document is in draft stage and meant for preview only. The interfaces described in this document may be subject to change without prior notice.

Table 1: Document Version History

Version	Date	Remarks
0.1	2012-06-11	Original version.

3 Introduction

This document describes the interface between a web to print system (w2p) and any production system. The Web to print system may be located either locally with access to the Production network or remotely in the internet.

PrintTalk defines a PrintTalk wrapper around one or multiple XJDF items. PrintTalk provides functionality to define price lists and to define multiple items in one order (shopping cart checkout).

3.1 Data Types and Sample Values

The table column: "Sample Attribute Values" is just that: an incomplete sample list that illustrates the recommended syntax. In case of enumeration values, please refer to JDF1.4a: and PrintTalk respectively for a complete list.

The following table summarizes issues with the most common data types. For more details please refer to JDF1.4a:

Table 3: Data types

Data type	Example	Comment
integer	-7 0 42	This one should be simple enough. 32 bit signed should be sufficient for any values in this spec.
float / double	1.0 42. 0.1234	Floating POINT notation. The decimal separator is always the "." regardless of locale. 1000 separators MUST NOT be specified. Exponential notation is not suported.
string	Foo	Any string.

4 Network Protocol

4.1 HTTP Content-Type

The http content type depends on the selected data packaging (see section Data Packaging for details).

If raw XML is being sent, the HTTP Content-Type of the returned XML MUST be set to one of the following:

```
"text/xml";

"application/xml";

"application/vnd.cip4-jdf+xml";

"application/vnd.cip4-jmf+xml";
```

Note that the content-type is evaluated case-insensitive. The idle response can be any content-type you prefer, including text/html and null.

If the xml and pdf files are packaged as a ZIP stream the content type MUST be set to:

```
"application/zip";
```

If the xml and pdf files are packaged as a Mime multipart related stream the content type MUST be set to:

```
"multipart/related";
```

4.2 Job Metadata XML download

Production can poll w2p for new jobs at a URL defined by w2p in a regular interval. Therefore there are no requirements for w2p to directly access the Production network when only pdf data download is desired.

4.3 Acknowledgement of XML download.

Production will specify the transaction ID of the last successful download in the poll request in an http parameter called "previousID". The JDF or PrintTalk specified in for this transaction MUST NOT be supplied in any subsequent request from Production.

Depending on the root the transaction ID is taken from:

XJDF: /XJDF/@JobID
PrintTalk: /PrintTalk/Request/PurchaseOrder/@BusinessID

4.4 Job Posting environment

Jobs can also be posted to Production URL as specified in the Production w2p connector User Interface. This is typically the host name where the application is running on a user settable port. In this case the XML should be posted with a content-type of text/xml.

4.5 PDF download

The PDF file specified in /XJDF/ParameterSet/Parameter/RunList/FileSpec/@URL will be always be retrieved by Production and stored locally. This transaction is identical in polling or post environments.The PDF File must be available at that URL when the metadata is downloaded and for at least 1 hour after that, ideally longer. This implies that the same download URL must not be used for subsequent job files.

4.6 Data Packaging

The provided data may be packaged either raw, as ZIP or as MIME files. All package options are available in either polling or non polling environments. See below for details.

4.6.1 Raw XML

The standard data packaging method is raw XML. In this case any auxiliary files are not part of the transferred package and must be referenced by HTTP or absolute file URLs that are accessible by the Production w2p connector.

4.6.2 Mime Multipart related

The entire job may be packaged as a MIME stream. The xml MUST be packaged as the first MIME entry with a content type as specified for raw XML submission. All urls that reference data within the MIME package MUST be specified as CID URLS.

4.6.3 ZIP

The entire job may be packaged as a ZIP stream. The xml MUST be packaged as a zip entry with an extension of ".ptk", ".xml" or ".jdf" This SHOULD be the first entry in the stream. The xml MUST reside in the root of the zip stream. All urls that reference data within the ZIP package MUST be specified as relative URLS that are relative to the root of the zip stream.

5 Job Submission XML specification

5.1 PrintTalk PurchaseOrder Wrapper

The preferred method of providing information to Production is PrintTalk. Optional business information should be provided in a PrintTalk PurchaseOrder wrapper. The structure of the XJDF element inside the PrintTalk wrapper is identical to the structure of a raw XJDF element. PrintTalk provides financial information and the ability to group multiple XJDF elements e.g. Multiple items from one shopping cart order.

Table 4: PrintTalk

Xpath	Sample Attribute Values	Use	Description
/PrintTalk *(Required)* PrintTalk is always the root element.			

5.1.1 PrintTalk Header

The PrintTalk header with credentials may be filled but is currently ignored by Production.

Table 5: PrintTalk Header

Xpath	Sample Attribute Values	Use	Description
/PrintTalk/Header *(Optional)* Ignored. The PrintTalk Header need not be specified.			

5.1.2 PrintTalk PurchaseOrder

The PrintTalk PurchaseOrder request contains the pricing information and the product description in one or more XJDF elements. Note that non-production items, such as pens, t-shirts or any other merchandise that is not produced by the Production system may be specified in <Price> elements.

Table 6: PrintTalk initial Purchase Order

Xpath	Sample Attribute Values	Use	Description
/PrintTalk/Request *(Required)* Exactly one PrintTalk request must be provided.			
/PrintTalk/Request/PurchaseOrder *(Required)* Currently the Request MUST be a PurchaseOrder.			
@BusinessID		Required	Unique ID of this PurchaseOrder. Will be mapped to JDF/@ProjectID within Production. Will also be used as the unique identifier of successful download.
@BusinessRefID		Optional	Unique ID of a transaction that this transaction refers to. Currently not used by Production in a PurchaseOrder.
@Currency	EUR, USD, GBP, JPY, ...	Required	3 digit ISO 4217 currency code (Upper case). Required, if any Price or Pricing element is present
/PrintTalk/Request/PurchaseOrder/XJDF *(Required)* One XJDF MUST be provided for each item of a shopping cart that is supplied by w2p. Multiple XJDF elements are supported by Production. See Table 7: XJDF Job Description for details.			
/PrintTalk/Request/PurchaseOrder/Pricing *(Preferred)* The Pricing element provides a container for a list of Prices.			
/PrintTalk/Request/PurchaseOrder/Pricing/Payment *(Optional)* Specification of the method of payment. See PrintTalk for additional details. Note that sensitive data should not be sent over an insecure connection.			

Xpath	Sample Attribute Values	Use	Description
/PrintTalk/Request/PurchaseOrder/Pricing/Price *(Required)* One Price element MUST be provided for each individual cost item. The sum of all Price elements is the total cost. Price elements should be provided for the following line items: • Each Product (printed or other) in the shopping cart • shipping • handling • taxes			
@DescriptiveName		Required	Human readable description of this line item.
@Price	32.05	Preferred	Price of this line item. Must be specified if calculated separately. May but need not be omitted if the item is referenced from other line items.
@LineID	L_001	Preferred	Identifier of a Price Line. MUST be specified if partial Line items (those whose price is included in Sum Line items) are specified.
@LineIDRefs	L_001 L_002	Optional	In case of a summary line item: List of line items that are included in this summary line item. Generally required if the total price is included as a separate Price element. The price of any line items that are referenced from other line items MUST NOT be included in the total price calculation.
/PrintTalk/Request/PurchaseOrder/Pricing/Price/Additional *(Optional)* Acceptable price order for additional Copies in case of overproduction.			
@Price	32.05	Required	Price of @Amount additional copies of this line item.
@Amount	1000	Required	Number of additional copies that @Price applies to.

When a job is available for download from w2p, w2p will provide an XML file with details of the job at the standard w2p URL. See also section: W2P General Issues.

5.2 XJDF elements

XJDF elements provide details of one production item of a shopping cart that is supplied by w2p. Multiple XJDF elements are supported by Production.

Attribute	Sample Attribute Values	Use	Description
../PurchaseOrder/XJDF		Required	Description of an individual item. See Table 6: PrintTalk initial Purchase Order for context details.
/XJDF *(Required)*			
@Category	Web2Print Catalog	Required	If Category=Catalog, then the order is a catalog order for non-printed material snd not forwarded to Production.
@DescriptiveName	Joe's funny job	Preferred	Short description of the job
@JobID	id_12345	Required	This is the unique identifier of the job in the web to print system. Note that this is NOT necessarily identical to the Production JobID but rather mapped to CustomerInfo/ @CustomerOrderID within Production.
@RelatedJobID	id_12345	Optional	This is the unique identifier (/XJDF/@JobID) of a previous job in the web to print system. It is used to identify repeat jobs.
/XJDF/GeneralID[IDUsage='CatalogID'] *(Required)* This GeneralID element is used to specify the web2print product Type			
@IDUsage	CatalogID	Required	@IDUsage names the GeneralID
@IDValue	Articlenumber	Required	@IDUsage=CatalogID This is the id of the product in the web to print system and used to map from product to processing
/XJDF/GeneralID[IDUsage='LineID'] (Preferred) This GeneralID element is used to map XJDF elements to Price elements. (line items)			

Attribute	Sample Attribute Values	Use	Description
@IDUsage	LineID	Required	@IDUsage names the GeneralID
@IDValue	L_001	Required	@IDUsage=LineID This is the id of Price elements in the PrintTalk wrapper and maps the product description to the purchase order line item.
/XJDF/Comment *(Optional)*			
#text	User text	Optional	Comments are the only occurrence of xml element text. The XML text data is a user comment regarding the order that will be displayed in Production.
/XJDF/ParameterSet Set of Parameters. This is the root for parameter definitions.			
@Name	RunList Contact CustomerInfo NodeInfo	Required	@Name must match the first child element name.
/XJDF/ParameterSet/Parameter/Part Context of an individual Parameter in a ParameterSet.			
@Run	R1 Cover a123-456	Optional	Partition key for providing multiple pdf files. Must be unique in the scope of one JobID. Required if multiple PDF documents are provided. Need not be human readable. The value "Cover" must be used for the pdf that provides content for the cover.
/XJDF/ParameterSet[@Name='RunList']/Parameter/RunList/FileSpec See JDF1.4a 7.2.160 - RunList for more details			
@URL	http://kie-prosirai-lg:8080/ misconnec-tor/data/test8.pdf	Required	This is the URL location of the PDF to download. It must be specified in a manner that accessible from Production. See section PDF download for details of the download protocol.

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Attribute	Sample Attribute Values	Use	Description
/XJDF/ParameterSet[@Name='Contact']/Parameter/Contact Contact information. See JDF1.4a 7.2.38 - Contact for more details Multiple Contacts may be specified (Multiple Parameter Elements in the ParameterSet)			
@ContactTypes	Customer Delivery DeliveryCharge Approval	Required	Role or roles of the specified contact multiple tokens may be specified for Contacts with multiple roles.
/XJDF/ParameterSet[@Name='Contact']/Parameter/Contact/Person *(Optional)* Details of the person See JDF1.4a 7.2.133 - Person for more details			
@FamilyName	Mustermann	Required	
@FirstName	Max	Required	
@NamePrefix	Dr.	Optional	
/XJDF/ParameterSet[@Name='Contact']/Parameter/Contact/Company *(Optional)* Company details. Both person and company may be specified in the same contact See JDF1.4a 7.2.36 - Company for more details			
@OrganizationName	Firma Muster GmbH	Required	
/XJDF/ParameterSet[@Name='Contact']/Parameter/Contact/Address *(Optional)*			
@City	Stadt	Required	
@Country	Deutschland	Optional	
@CountryCode	De	Optional	
@PostalCode	12345	Required	
@Street	Musterstraße 12	Required	
/XJDF/ParameterSet[@Name='Contact']/Parameter/Contact/ComChannel *(Optional)* Communication channel for a contact. Multiple ComChannels may be specified. See JDF1.4a: 7.2.35 - ComChannel for more details			
@ChannelType	Email Phone Fax	Required	

Attribute	Sample Attribute Values	Use	Description
@ChannelTypeDetails	Email Phone Fax	Optional	Additional details of the channel type. For Phone, this could be Mobile or LandLine.
@Locator	mailto:info@muster.com tel:+49.173.5678.901 fax:+49.173.5678.901	Required	
/XJDF/ParameterSet[@Name='ApprovalParams']/Parameter/ApprovalParams *(Optional)* Details of the Approval Cycle			
@MinApprovals	1	Required	If provided, production will not commence until all pages have been approved.
/XJDF/ParameterSet[@Name='CustomerInfo']/Parameter/CustomerInfo *(Preferred)* Details of the end customer. See JDF1.4a 7.2.45 - CustomerInfo for more details			
@CustomerID	Web2Print CustomerID	Preferred	Unique customer identifier in the w2p system. If not provided, the customer is assumed to be an anonymous browsing customer.
@CustomerOrderID		Internal use	CustomerOrderID will be used by the Production system to store the original w2p JobID. Therefore this MUST NOT be specified by w2p.
/XJDF/ParameterSet[@Name='NodeInfo']/Parameter/NodeInfo *(Optional)* Details of the Approval Cycle			
@TotalDuration	P7D P1DT12H 1D12H 1	Preferred	Requested production duration in full and short hand ISO8601 duration format. Numeric literals are interpreted as days. TotalDuration is ignored when @End is specified.
@End	1276154997990 2011-06-07T09:55:14+02:00 2011-06-07	Preferred	Requested production end time Both seconds since 1970 and ISO8601 format are accepted.

Attribute	Sample Attribute Values	Use	Description
@NaturalLang	de en	Preferred	Language for communication with Customer, e.g. For preflight reports.
/XJDF/ProductList Root element for all Products			
/XJDF/ProductList/Product Product or sub product description. Multiple subproducts are currently supported for cover and body only. In this case, the first Product element specifies the complete book or brochure and the following products specify the parts such as cover and body. Currently, no more than two product parts (=3 product elements) are supported.			
@Amount	1000	Required	Ordered # of individual Products. Must NOT be specified in sub products and MUST be specified in the root product.
@ID	c1	Preferred	Must be specified if sub products e.g. Cover and body are specified.
@ProductType	Brochure Book Cover Body	Preferred	Type of product. Must be specified for the cover if multiple documents are uploaded for one item. In this case, the value of the cover sub product must be "Cover".
@ProductTypeDetails	8 Page Brochure	Optional	
/XJDF/ProductList/Product/ChildProduct *(Optional)* Definition of the structure of a multi part product. Multiple sub products may be specified. Should be specified if multiple product parts are provided.			
@Childref	C1	Required	ID of the sub product. References the sub products, e.g. The cover or the body of a book.
/XJDF/ProductList/Product/Comment *(Preferred)*			
#text	user comment in here	Preferred	Multi line buyer comment about the ordered product.
/XJDF/ProductList/Product/Intent[@Name='MediaIntent']/MediaIntent *(Preferred)* Details of the material to be printed on			

Attribute	Sample Attribute Values	Use	Description
@Brand	My favorite paper	Optional	Paper Brand. If only one descriptor is known, use MediaQuality.
@MediaQuality	My favorite paper	Preferred	Paper Descriptor. See section Paper Matching for details
@Weight	135	Optional	Paper weight in grams
/XJDF/ProductList/Product/Intent[@Name='LayoutIntent']/LayoutIntent Details of the page layout See JDF1.4a 7.1.11 - LayoutIntent for more details of the individual attributes			
@FinishedDimensions	595.27559055 822.04724409 or 21cm 29cm or 210mm 290mm 8.5in 11in	Preferred	X and Y Dimension of the Product in Points (cm*72/2.54) Optionally the Dimension may be given in inch, mm or cm. In this case the unit designator ("in","mm" or "cm") MUST NOT be separated from the numeric value by white space, e.g. 29cm is valid, while "29 cm" is not valid.
@FinishedPageOrientation	Portrait Landscape	Optional	Orientation of the finished pages. Note that the preferred method is to specify FinishedDimensions with X and Y values that reflect the actual orientation of the final product.
@Pages	8	Preferred	Number of pages - very preferred
@Sides	TwoSidedHeadToHead Simplex	Preferred	Layout Style
/XJDF/ProductList/Product/Intent[@Name='ProductionIntent']/ProductionIntent Additional production requirements See JDF1.4a 7.1.15 -ProductionIntent for more details			
@PrintProcess	Lithography or Digital	Preferred for Digital Jobs	Need not be specified unless a digital production workflow is required

Attribute	Sample Attribute Values	Use	Description
/XJDF/ProductList/Product/Intent[@Name='ProofingIntent']/ProofingIntent Proofing requirements. If specified, Proofing is enabled. Note that this only specifies the graphical details of the proof and NOT the Approval requirements. Approvals are specified in ApprovalParams.			
/XJDF/ProductList/Product/Intent[@Name='ProofingIntent']/ProofingIntent/ProofItem *(Required)* Exactly one ProofItem is currently supported if ProofingIntent is specified.			
@BrandName		Required	One of: PixelProof: Use the Pixelproof viewer Remote Access: Use Remote Access
/XJDF/ProductList/Product/Intent[@Name='BindingIntent']/BindingIntent Product Binding requirements See JDF1.4a 7.1.3 - BindingIntent for more details			
@BindingType	SaddleStitch None	Preferred	Need not be specified for unbound products.
/XJDF/ProductList/Product/Intent[@Name='FoldingIntent']/FoldingIntent Folding details of the final product See JDF1.4a 7.1.7 - FoldingIntent for more details			
@FoldingCatalog	F6-1	Optional	This is for maps or unbound flyers. See JDF1.4a 7.2.79 - FoldingParams for more details and illustrations
/XJDF/ProductList/Product/Intent[@Name='ColorIntent']/ColorIntent Folding details of the final product See JDF1.4a 7.1.7 - FoldingIntent for more details			

Attribute	Sample Attribute Values	Use	Description
@NumColors	4 1 0 4 4 4 1 4 0	Preferred	Number of Colors Front and Back. If one number is specified, it is assumed for both front and back. If 2 numbers are specified, the first is the value for the front and the second is the value for the back. 4 Colors are assumed CMYK 1 Color is assumed Black 0 colors implies single sided printing n>=5 Colors are assumed CMYK + n-4 Spot colors. If both NumColors and ColorsUsed are specified, the two are merged and duplicate colors are removed.
@ColorsUsed	Cyan Spot1	Optional	Blank separated list of color names in the product. Should be specified if Spot colors are used.
@ColorsUsedBack	Cyan Spot1	Optional	Blank separated list of color names on the back side of the product. May be empty to specify one-sided printing. MUST be specified for a duplex job if ColorsUsed is specified.
@Coatings	DullVarnish GlossVarnish None	Optional	Coatings for the product.
@CoatingsBack	DullVarnish GlossVarnish None	Optional	Coatings for the product. If not specified, and Coatings is specified, then coatings are applied on both sides.

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6 W2P General Issues

6.1 Paper Matching

W2P generally should know the physical characteristics of the required paper, e.g. grammage, coating, grain direction relative to the finished product, ... but not necessarily production dependent media definition such as the lot # of the used paper, the size of the press sheet, etc. Therefore there will potentially be a set of matching production media for any given end product media.

Currently a selection algorithm based on size is implemented. W2p must specify the exact paper brand as specified in the Production master data store. If multiple entries exist that differ only in their dimensions, the media with the correct size will be selected. Correct size allows for some rounding tolerances.

6.2 Ids, Job Contexts, Mapping Mess

In this section, I will try to explain the various contexts that exist in a w2p environment with multiple applications and also including gang jobs.

6.2.1 W2P:

W2P_OrderID: The ID of one shopping cart checkout.

W2P_ItemID: The ID of one item (with n copies) within the shopping cart.

W2P_DocumentID: The ID of one subproduct, e.g. Cover or body within one item as defined by *W2P_ItemID.*

W2P_ProductID: The identifier of the type of product. May but need not be human readable. Each *W2P_ProductID* has one or more predefined workflows in the Production system. The workflows may be dependent on substructure (e.g. Cover / body) or amount ordered.

JobID: The ID for producing one "Job". Generated by the MIS or Production in case no MIS is involved. In case multiple jobs are produced together on a gang form, a single product may be produced as 2 or more separate jobs with separate JobIDs.

1.   The Individual Job with a unique JobID for page preparation and finishing after cutting

2.   The gang jobs with a different JobID for printing. A single product may be printed on multiple gang forms, e.g. cover on form A and body on form B.

CustomerOrderID: = *W2P_ItemID* W2P is assumed to be the "Customer" of MIS. An order is assumed to be one item (NOT one W2P_OrderID) This was chosen to reduce the complexity of production jobs. Production Jobs thus describe the production of one item, which may comprise multiple documents, e.g. one pdf for cover and one for pdf for body. The physical and production characteristics of multiple documents may vary. (Paper selection, digital/offset, etc.)

ProjectID: = W2P_OrderID A project is a set of related jobs. A single order with multiple items is grouped as a JDF project with a common @ProjectID.

JobPartID: ID of one set of tasks (e.g platesetting in job 1)

WorkstepID: ID of one atomic, individually planned workstep, e.g Printing sheet 1, Front side. This is generally opaque for w2p.

7 Examples

7.1 Minimal job submission using PrintTalk:

The following example contains the absolute minimum data required within a PrintTalk wrapper:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk Timestamp="2011-02-07T17:53:48+01:00" payloadID="pid" version="1.3">
  <Request>
    <PurchaseOrder BusinessID="PT_110207_175348529_000257" Currency="EUR">
      <XJDF Category="Web2Print" JobID="Job340792">
        <GeneralID IDUsage="CatalogID" IDValue="46"/>
        <ProductList>
          <Product Amount="1000"/>
        </ProductList>
        <ParameterSet Name="RunList">
          <Parameter>
            <RunList>
              <FileSpec URL="http://www.w2p.com:8080/w2p/getPDF/w2p/32.pdf"/>
            </RunList>
          </Parameter>
        </ParameterSet>
      </XJDF>
    </PurchaseOrder>
  </Request>
</PrintTalk>
```

7.2 Multi Document Job submission:

The following example contains an example of a job with multiple pdf files:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk Timestamp="2011-02-07T17:53:48+01:00" payloadID="pid" version="1.3">
  <Request>
    <PurchaseOrder BusinessID="PT_110207_175348529_000257" Currency="EUR">
      <XJDF Category="Web2Print" JobID="Job340792">
        <GeneralID IDUsage="CatalogID" IDValue="46"/>
        <ProductList>
          <Product Amount="1000"/>
        </ProductList>
        <ParameterSet Name="RunList">
          <Parameter >
            <Part Run="Cover"/>
            <RunList>
              <FileSpec
                  URL="http://www.w2p.com:8080/w2p/getPDF/w2p/Job42/Cover.pdf"/>
            </RunList>
          </Parameter>
          <Parameter>
            <Part Run="Body"/>
            <RunList>
              <FileSpec
                  URL="http://www.w2p.com:8080/w2p/getPDF/w2p/Job42/Body.pdf"/>
            </RunList>
          </Parameter>
        </ParameterSet>
      </XJDF>
    </PurchaseOrder>
  </Request>
</PrintTalk>
```

7.3 Specification of pricing using PrintTalk:

The following example describes an order containing two items and the price list within a PrintTalk wrapper. Note the mapping of LineID in Price elements to XJDF Products using GeneralID elements.:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk Timestamp="2011-02-07T17:53:48+01:00" payloadID="pid" version="1.3">
  <Request>
    <PurchaseOrder BusinessID="PT_110207_175348529_000257" Currency="EUR">
      <Pricing>
        <Price DescriptiveName="Product #1" LineID="L_1" Price="250."/>
        <Price DescriptiveName="Product #2" LineID="L_2" Price="500."/>
        <Price DescriptiveName="Delivery" LineID="L_3" Price="5.55"/>
        <Price DescriptiveName="19 % Tax" LineID="L_4" Price="143.55"/>
        <Price DescriptiveName="Total" LineID="L_5" LineIDRefs="L_1 L_2 L_3 L_4"
         Price="899.1"/>
      </Pricing>
      <XJDF Category="Web2Print" JobID="Job1">
        <GeneralID IDUsage="CatalogID" IDValue="46"/>
        <GeneralID IDUsage="LineID" IDValue="L_1"/>
        <ProductList>
          <Product Amount="1000"/>
        </ProductList>
        <ParameterSet Name="RunList">
          <Parameter>
            <RunList>
              <FileSpec URL="http://www.w2p.com:8080/w2p/getPDF/w2p/L1.pdf"/>
            </RunList>
          </Parameter>
        </ParameterSet>
      </XJDF>
      <XJDF Category="Web2Print" JobID="Job2">
        <GeneralID IDUsage="CatalogID" IDValue="66"/>
        <GeneralID IDUsage="LineID" IDValue="L_2"/>
        <ProductList>
          <Product Amount="500"/>
```

```
        </ProductList>
        <ParameterSet Name="RunList">
          <Parameter>
            <RunList>
              <FileSpec URL="http://www.w2p.com:8080/w2p/getPDF/w2p/L2.pdf"/>
            </RunList>
          </Parameter>
        </ParameterSet>
      </XJDF>
    </PurchaseOrder>
  </Request>
</PrintTalk>
```

7.4 Specification of multiple items with pricing using PrintTalk:

The following example contains the price list within a PrintTalk wrapper. Note the total line using LineIDRefs to specify price items that are part of the total:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk Timestamp="2011-02-07T17:53:48+01:00" payloadID="pid" version="1.3">
  <Request>
    <PurchaseOrder BusinessID="PT_110207_175348529_000257" Currency="EUR">
      <Pricing>
        <Price DescriptiveName="Products" LineID="L_1" Price="750."/>
        <Price DescriptiveName="Delivery" LineID="L_2" Price="5.55"/>
        <Price DescriptiveName="19 % Tax" LineID="L_3" Price="143.55"/>
        <Price DescriptiveName="Total" LineID="L_4" LineIDRefs="L_1 L_2 L_3"
         Price="899.1"/>
      </Pricing>
      <XJDF Category="Web2Print" JobID="Job340792">
          ... see previous example
      </XJDF>
    </PurchaseOrder>
  </Request>
</PrintTalk>
```

The following example contains the description of a Brochure with additional metadata:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk Timestamp="2011-02-07T17:53:48+01:00" payloadID="pid" version="1.3">
  <Request>
    <PurchaseOrder BusinessID="PT_110207_175348529_000257" Currency="EUR">
      <XJDF Category="Web2Print" JobID="Job258596">
        <GeneralID IDUsage="CatalogID" IDValue="46"/>
        <Comment>This is a multiline
            user comment
        </Comment>
        <ProductList>
          <Product Amount="1000" ProductType="Brochure"
            ProductTypeDetails="4 Page Brochure">
            <Intent Name="LayoutIntent">
              <LayoutIntent FinishedDimensions="595.27559055 822.04724409"
                Pages="32" Sides="TwoSidedHeadToHead"/>
            </Intent>
            <Intent Name="BindingIntent">
              <BindingIntent BindingType="SaddleStitch"/>
            </Intent>
            <Intent Name="MediaIntent">
              <MediaIntent MediaQuality="Paper 135 Glossy" Weight="135"/>
            </Intent>
            <Intent Name="ProductionIntent">
              <ProductionIntent PrintProcess="Lithography"/>
            </Intent>
          </Product>
        </ProductList>
        <ParameterSet Name="CustomerInfo">
          <Parameter>
            <CustomerInfo CustomerID="KundenIdentNummer"
              CustomerOrderID="Web2Print System JobID"/>
          </Parameter>
```

```
        </ParameterSet>
        <ParameterSet Name="RunList">
          <Parameter>
            <RunList>
              <FileSpec
                URL="http://www.w2p.com:8080/w2p/getPDF/w2p/hd_a5_32.pdf"/>
            </RunList>
          </Parameter>
        </ParameterSet>
        <ParameterSet Name="NodeInfo">
          <Parameter>
            <NodeInfo End="1286557458599"/>
          </Parameter>
        </ParameterSet>
        <ParameterSet Name="Contact">
          <Parameter>
            <Contact ContactTypes="Customer Delivery DeliveryCharge">
              <Person FamilyName="Mustermann" FirstName="Max" NamePrefix="Dr."/>
              <Company OrganizationName="Firma Muster GmbH"/>
              <Address City="Stadt" Country="Deutschland" CountryCode="De"
                  PostalCode="12345" Street="Musterstraße 12"/>
              <ComChannel ChannelType="Email" Locator="mailto:info@muster.com"/>
              <ComChannel ChannelType="Phone" Locator="tel:+49.173.5678.901"/>
              <ComChannel ChannelType="Phone" Locator="tel:+0123.456.789"/>
            </Contact>
          </Parameter>
        </ParameterSet>
      </XJDF>
    </PurchaseOrder>
  </Request>
</PrintTalk>
```

7.6 Job Cancellation:

The following example cancels Job113476:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk Timestamp="2011-02-07T17:53:48+01:00" payloadID="pid" version="1.3">
  <Request>
    <Cancellation BusinessRefID="PT_110207_175348529_Old"
      BusinessID="PT_110207_175348529_000257">
      <XJDF JobID="Job113476"/>
    </Cancellation>
  </Request>
</PrintTalk>
```

7.7 Page replacement:

The following example replaces pages 2-4 (one based) in Job113476:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk Timestamp="2011-02-07T17:53:48+01:00" payloadID="pid" version="1.3">
  <Request>
    <PurchaseOrder BusinessRefID="PT_110207_175348529_Old"
      BusinessID="PT_110207_175348529_000257" Currency="EUR">
      <XJDF Category="DigitalDelivery" JobID="Job113476">
        <ParameterSet Name="RunList">
          <Parameter>
            <RunList>
              <FileSpec URL="http://www.w2p.com:8080/w2p/getPDF/w2p/hd_1_3.pdf"/>
            </RunList>
            <Part PageNumber="1 ~ 3"/>
          </Parameter>
        </ParameterSet>
      </XJDF>
    </PurchaseOrder>
  </Request>
</PrintTalk>
```

7.8 Request for approval from Remote Access:

The following example requests proofing of all pages of the item with jobID=jid123 place in the
order id001. The URL for the remote proofing is http://www.ra.com/lotsofstuff.

```xml
<PrintTalk xmlns="http://www.printtalk.org/schema_13"
  Timestamp="2011-02-18T16:16:12+01:00" payloadID="id" version="1.3">
  <Request>
    <ProofApprovalRequest BusinessRefID="id001">
      <ProofRequest JobIDRef="jid123">
        <ProofItem ProofTarget="http://www.ra.com/lotsofstuff"/>
      </ProofRequest>
    </ProofApprovalRequest>
  </Request>
</PrintTalk>
```

7.9 Approval Results from Remote Access:

##TBD##

7.10 Approval Results from W2P to Prinect using Pixel Viewer:

```xml
<PrintTalk xmlns="http://www.printtalk.org/schema_13"
  Timestamp="2012-01-10T16:16:12+01:00" payloadID="id" version="1.3">
  <Request>
    <ProofApprovalResponse BusinessRefID="idJob">
      <ProofResponse PageIndex="0">
        <ApprovalSuccess>
          <ApprovalDetails ApprovalState="Approved">
        </ApprovalSuccess>
      </ProofResponse>
      <ProofResponse PageIndex="1">
        <ApprovalSuccess>
          <ApprovalDetails ApprovalState="Approved">
        </ApprovalSuccess>
      </ProofResponse>
      <ProofResponse PageIndex="3">
        <ApprovalSuccess>
          <ApprovalDetails ApprovalState="ApprovedWithComment">
            <Comment>Please check trapping carefully!</Comment>
          </ApprovalDetails>
        </ApprovalSuccess>
      </ProofResponse>
    </ProofApprovalResponse>
  </Request>
</PrintTalk>
```

8 References

JDF1.4a: http://www.cip4.org/documents/jdf_specifications/JDF1.4a.pdf

PrintTalk: http://www.cip4.org/documents/printtalk/PrintTalk-1.3.pdf