PrintTalk

Version 1.5

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Abstract

PrintTalk is an open XML standard used to communicate business information. It provides JDF with capabilities for Pricing, Web-to-Print, RFQ/Quote, Invoicing, Order Status, Sub-contracting and more. The CIP4 consortium has maintained PrintTalk as integral to JDF development since 2005.

(The prior version was 1.3; there is no 1.4.)

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1   Introduction

PrintTalk is an XML standard that provides a single format for *Print Providers* to collaboratively communicate *Business Transactions* and specifications of *Print Product* both with their *Print Buyers* and among themselves. Print industry professionals from a wide range of organizations contributed to the design of PrintTalk. Such organizations include eCommerce companies, print Business Management Systems, print providers, and print equipment manufactures.

The PrintTalk standard embraces [JDF1.5] and [cXML 1.2]. These bracketed references are defined in Section 7 "References". By incorporating PrintTalk, JDF has been enhanced to provide a richer descriptive capability. While JDF describes the piece to be produced, PrintTalk specifies the external communication of business processes between *Print Provider* and *Print Buyer*.

With the extensions made for PrintTalk 1.3, it may also be used for subcontracting. For details about JDF, see [JDF1.5]

The PrintTalk interface specification is distributed free of any license fees or royalties in order to address the need for end-to-end connectivity in the printing industry.

The following pages describe the *Business Objects* that make up PrintTalk. See section 3.8 "Business Objects" for a complete list of *Business Objects* and a description of each. .

1.1   Intended Audience

While print industry professionals may find parts of this specification to be useful; our primary goal is to describe the PrintTalk protocol to programmers who wish to implement the PrintTalk interface specification within their software products. A working knowledge of XML and familiarity with JDF is required to fully understand this document.

2 Glossary

This section defines terminology used throughout this document. References to other documents are indicated with square brackets, e.g. [JDF1.5]. For most terms, see the Terminology section in [JDF1.5].

Table 1: Glossary

Term	Definition
Business Object	The portion of a *PrintTalk Document* that describes a *Business Transaction*. For example an RFQ *Business Object* describes a request-for-quote *Business Transaction* and a PurchareOrder *Business Object* describes a purchase order *Business Transaction*.
Business Transaction	When a *Print Buyer* sends a *PrintTalk Document* to a *Print Provider,* or a *Print Provider* sends a *PrintTalk Document* to a *Print Buyer*, the *Business Object* within the *PrintTalk Document* describes a *Business Transaction* between the *Print Buyer* and *Print Provider*.
Change Order	A *Business Transaction* that requests changes to *Confirmed Job*.
Confirmed Job	A Job (producing *Print Product*) that a *Print Buyer* and *Print Provider* have agreed to after negotiating a contract for it. The *Print Provider* consummates the agreement by confirming the *Print Buyer's* purchase order.
Invalid	When used in the context of a *Business Object*, it refers to a *Business Object* that is no longer *Pending* and is thus no longer accessible.
Item	Something that is priced separately in a Quote, PurchaseOrder or Invoice.
Negotiation Phase	The phase during which a *Print Buyer* and *Print Provider* negotiate a contract for *Print Product* by exchanging *Business Objects*. The *Production Phase* follows the *Negotiation Phase.*
Pending	When used in the context of a *Business Object*, it refers to a *Pending Business Object*.
Pending Business Object	A *Business Object* that other *Business Objects* can reference via @*BusinessRefID* and @*ReplaceID*. A *Business Object X* is pending from the time a *Print Buyer* or *Print Provider* creates it until • it expires, • its creator sends a Cancellation whose @*BusinessRefID* references *X*, or • its creator sends a *Business Object* whose @*ReplaceID* references *X*.
Print Buyer	The customer that is buying *Print Product*.
Print Product	The printed matter produced according to a contract negotiated between the *Print Buyer* and *Print Provider* using the PrintTalk negotiation process.
Print Provider	The producer of the *Print Product*.
PrintTalk Document	An XML document whose Root element has a Type of "PrintTalk" and which follows the rules of this document, the PrintTalk 1.5 specification.
Production Phase	The phase during which a *Print Provider* produces and ships *Print Product.*
Re-Quote	An additional Quotation for a variation in a Job, for which the *Print Provider* has already issued a Quotation.
Supersede	If *Business Object X Supersedes Business Object Y*, *Business Object X* becomes a *Pending Business Object* and *Business Object Y* becomes a *Superseded Business Object*.

Term	Definition
Superseded Business Object	When a *Print Buyer* or *Print Provider* sends a *Business Object X* with a @ReplaceID that references some other *Business Object Y* of the same type, *Business Object Y* becomes a *Superseded Business Object* and *Business Object X* become a *Pending Business Object*, A *Superseded Business Object* is *Invalid* and not *Pending*.
Superseding Business Object	A *Business Object* that *Supersedes* some other *Business Object*.

3 PrintTalk Structure

A *PrintTalk Document* is JDF wrapped in PrintTalk, which is similar to cXML. Like cXML, the top two elements of a *PrintTalk Document* SHALL be a Header element and a Request element. The Header concept comes directly from cXML, and identifies the parties involved in this correspondence. The Request element SHALL contain exactly one PrintTalk *Business Object*.

Whenever elements or attributes are specified with a "jdf" namespace prefix, this prefix specifies the presence of that element from the JDF namespace xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1". A PrintTalk implementation SHALL support standard namespace handling as defined in [XMLNS]. Thus the prefix "jdf:" is used as an example only. Any element from the JDF namespace MAY be specified with any prefix conforming to [XMLNS], including the default (empty) namespace prefix.

This document does not specify the transport for a PrintTalk Object. The selection of transport is left to the implementer. For example, a PrintTalk Object MAY be sent via email as an attachment, or it MAY be sent via HTTP using the POST or GET Method. Note that future ICS documents MAY restrict the transport protocol for PrintTalk in the context of specific interfaces.

The following pages provide a detailed explanation of each PrintTalk element. Figure 1 shows a high level view of the PrintTalk structure, where each box represents either an XML declaration (the first one) or a PrintTalk element.

Figure 1: Structure of PrintTalk Node

XML

PrintTalk

Header

From

Credential…

To

Credential…

Sender

Credential…

Request

BusinessObject (RFQ, Quotation, PurchaseOrder, Confirmation, Cancellation, Refusal, OrderStatusRequest, OrderStatusResponse, StockLevelRequest, StockLevelResponse, ProofApprovalRequest, ProofApprovalResponse, Invoice, ReturnJob)

jdf:JDF
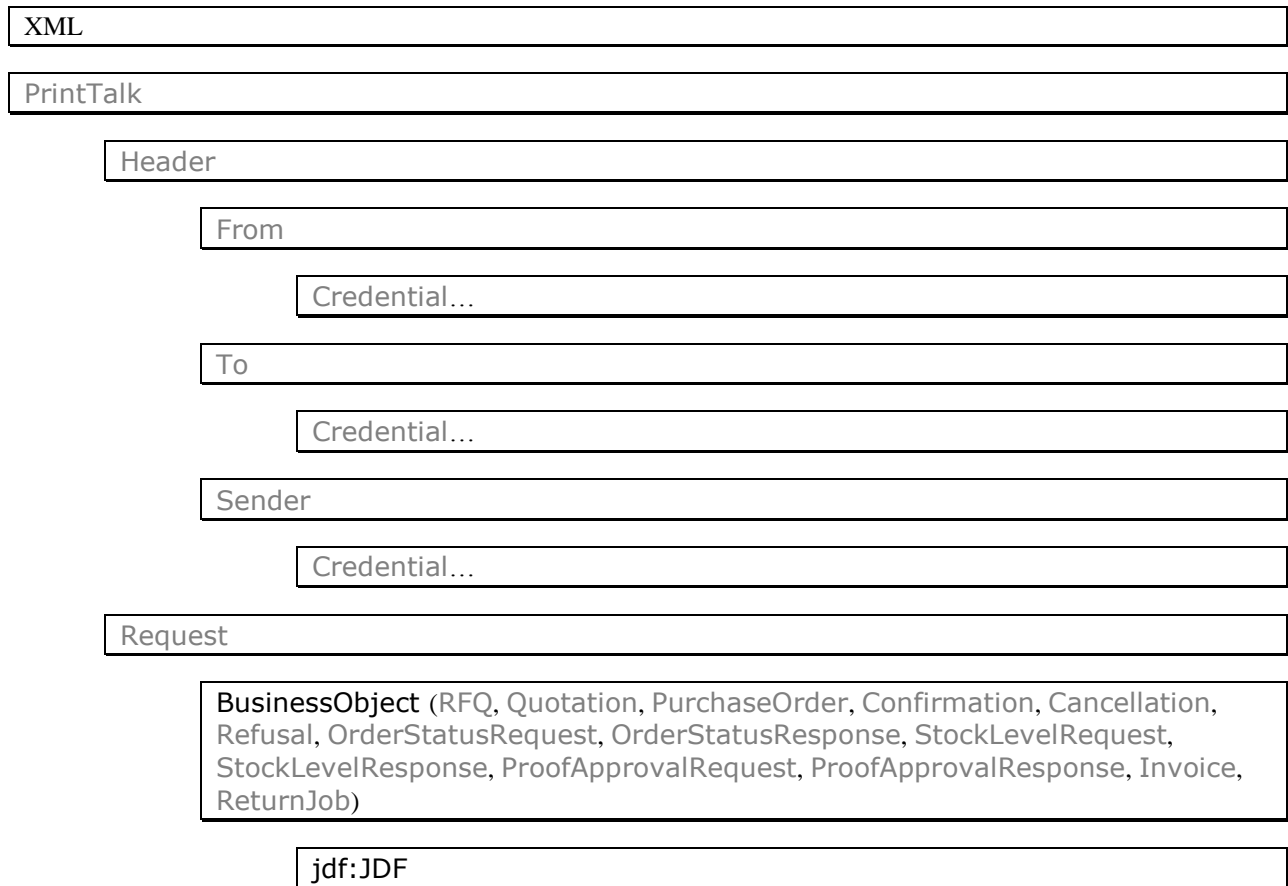
3.1   MIME and HTTP Content-Type

If PrintTalk is packaged in a MIME wrapper or posted over HTTP, the respective Content-Type header value SHOULD be set to: application/vnd-cip4-ptk+xml.

3.2   XML Declaration

A *PrintTalk Document* SHOULD start with the standard XML Declaration. An example is:

```
<?xml version="1.0" encoding="utf-8"?>
```

3.3   PrintTalk Node

The Root element in a *PrintTalk Document* SHALL be an element whose type is "PrintTalk". An example is:

```
<PrintTalk version="1.5" payloadID="107778" Timestamp="2013-02-01T22:39:00Z"
      xmlns="http://www.printtalk.org/schema_15">
   ...
</PrintTalk >
```

Table 2: PrintTalk

Name	Data Type	Description
payloadID	string	**From cXML:** A unique number with respect to space and time, used for logging purposes to identify documents that might have been lost or had problems. This value SHOULD not change for retry attempts.
Timestamp	dateTime	**From cXML:** The date and time the message was sent, in [ISO8601] format. Timestamp SHALL NOT change for retry attempts.
version	string	The version of PrintTalk. The current release is "1.5".
xmlns ?	URI	PrintTalk supports use of XML namespaces. The namespace SHALL be declared in the PrintTalk element. For details on using namespaces in XML, see [XMLNS]. For version 1.5 of PrintTalk, *xmlns* = "http://www.printtalk.org/schema_15".
Header	element	The Header defined in [cXML 1.2]. See Table 3: Header.
Request	element	The Request defined in [cXML 1.2] and as further specified in this document. See Table 8: Request.

3.4   Header

The Header element comes directly from cXML. Refer to the *cXML Users Guide* [cXML 1.2].

From cXML: The From, To and Sender elements allow receiving systems to identify and authorize parties. The From and To elements in a document do not change. However, as the document travels to its destination, intermediate nodes (such as Ariba Network) MAY change the Sender element.

For example, in an RFQ, the "From" party is the *Print Buyer*. The "To" party is the *Print Provider*. In the subsequent Quotation, those roles are reversed. The Sender is always the party sending the message.

Table 3: Header

Referenced by: PrintTalk

Name	Data Type	Description
From	element	**From cXML:** identifies the originator of the cXML request. See Table 4: From.
Sender	element	**From cXML:** allows the receiving party to identify and authenticate the party that opened the HTTP connection. It contains a stronger authentication Credential than the ones in the From or To elements, because the receiving party SHALL authenticate who is asking it to perform work. See Table 6: Sender.
To	element	**From cXML:** identifies the destination of the cXML request. See Table 5: To.

3.4.1 Example of a Header

The following is an example of a Header taken from a Quotation. In this example, the "To" party is a *Print Buyer* company called "PeterPan". The DUNS number uniquely identifies them. The "From" party is a *Print Provider*. It too, is uniquely identified by a DUNS number. The "Sender" is the party sending this *PrintTalk Document*. In this case, it's an eCommerce company. The SharedSecret element is a password known to (at least) the eCommerce company and the "To" party.

The content and exact format of this section depends on the specific implementation. All parties SHOULD agree to the format prior to sending messages.

```xml
<Header>
    <From>
        <Credential domain="DNS">
            <Identity>AnExcellentPrinter.com</Identity>
        </Credential>
        <Credential domain="ECompany.com">
            <Identity>Polkadot</Identity>
        </Credential>
        <Credential domain="DUNS">
            <Identity>3040392</Identity>
        </Credential>
        <Credential domain="jdf:CustomerID">
            <Identity>C1234</Identity>
        </Credential>
    </From>
    <To>
        <Credential domain="DNS">
            <Identity>pan-o-ramic.com</Identity>
        </Credential>
        <Credential domain="ECompany.com">
            <Identity>PeterPan</Identity>
        </Credential>
        <Credential domain="DUNS">
            <Identity>93009388</Identity>
        </Credential>
    </To>
    <Sender>
        <Credential domain="DNS">
            <Identity>ECompany.com</Identity>
            <SharedSecret>rosebud</SharedSecret>
        </Credential>
        <UserAgent>Print Buyer v.54.9</UserAgent>
    </Sender>
</Header>
```

3.4.2 From

Table 4: From

Referenced by: Header

Name	Data Type	Description
Credential +	element	A customer identifier that is known by the receiver (see **jdf:CustomerInfo**/@*CustomerID*) SHALL be specified as Credential [@*domain*="*jdf:CustomerID*"]/Identity. See Table 7: Credential.

.

3.4.3 To

Table 5: To

Referenced by: Header

Name	Data Type	Description
Credential +	element	See Table 7: Credential.

.

3.4.4 Sender

Table 6: Sender

Referenced by: Header

Name	Data Type	Description
Credential +	element	See Table 7: Credential.
UserAgent	element	See [cXML 1.2].

.

3.4.5 Credential

A Credential identifies and authenticates the various parties involved in a transaction.

Table 7: Credential

Referenced by: From, To, Sender

Name	Data Type	Description
domain	string	**From cXML:** Specifies the type of credential. This attribute allows documents to contain multiple types of credentials for multiple authentication domains. **From cXML:** For messages sent on Ariba Supplier Network, for instance, the domain MAY be AribaNetworkUserId to indicate an email address, DUNS for a D-U-N-S number, or NetworkId for a preassigned UserID. In addition to the domains defined by [cXML 1.2] . **Values include:**
jdf:AgentID		Identifier of the individual user in the print buyer system.
jdf:CustomerID		Customer Identifier in the print provider system.
jdf:ShopID		Identifier of the web shop if the BusinessObject has been submitted in a web-to-print environment.
type ?	string	See [cXML 1.2].
CredentialMac ?	element	See [cXML 1.2].
Identity	element	**From cXML:** The text in the element states who the Credential represents. For example, the text MAY be an email address or some other unique string of characters. See [cXML 1.2].
SharedSecret ?	element	See [cXML 1.2].

3.5 Request

The Request element comes from [cXML 1.2]. However, its child BusinessObject is defined in PrintTalk but not in [cXML 1.2].

Table 8: Request

Referenced by: PrintTalk

Name	Data Type	Description
BusinessObject	element	A PrintTalk Request SHALL contain exactly one BusinessObject. See Table 11: Abstract BusinessObject.

3.6   Response

If the PrintTalk document is sent over a synchronous protocol, e.g. HTTP, then a valid cXML response SHOULD be generated if an error occurred. If no error occurred, a valid cXML response SHOULD be sent, but a response MAY be returned as an empty HTTP response with an HTTP response code of 200. See [cXML 1.2] for details, including a discussion of error handling and error codes in the Response. See pages 49-51 in [cXML 1.2] for a list of status codes.

Example PrintTalk success Response:

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<PrintTalk version="1.5" payloadID="107778" Timestamp="2013-02-01T22:39:00Z"
      xmlns="http://www.printtalk.org/schema_15">
   <Response>
      <Status code="200"/>
   </Response>
</PrintTalk >
```

Example PrintTalk error Response:

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<PrintTalk version="1.5" payloadID="107778" Timestamp="2013-02-01T22:39:00Z"
      xmlns="http://www.printtalk.org/schema_15">
   <Response>
      <Status code="400">Stuff happens</Status>
   </Response>
</PrintTalk >
```

3.7   Abstract Elements

PrintTalk has two abstract element types that other elements inherit from.

3.7.1   Abstract pt

All elements in the PrintTalk namespace inherit from the Abstract pt element. That is, every descendant of the Request element inherits from the Abstract pt element, either directly or indirectly through the Abstract BusinessObject (see Table 11: Abstract BusinessObject).

Table 9: Abstract pt

Superclass of: Abstract BusinessObject, Quote, Pricing, Price, Additional, Payment, CreditCard, StatusRequest, Status, ProofRequest, ProofResponse

Name	Data Type	Description
DescriptiveName ?	string	Display text for this element.
jdf:Comment *	element	Comment text that contains free form information about the element. See JDF "Generic Element" for the definition of the Comment element.

Name	Data Type	Description
jdf:GeneralID * New in PrintTalk 1.3	element	Optional parameters for a ***Business Transaction***. **GeneralID** elements MAY be used e.g. to carry a system's internal IDs. Generally both parties SHALL agree on the semantics of these IDs in an out-of-band communication. **Note**: a **GeneralID** references a ***Business Object*** that is a secondary parameter in a ***Business Transaction***, whereas @*BusinessRefID* references a ***Business Object*** that is the primary parameter in a ***Business Transaction***. See Table 10: jdf:GeneralID – pt.

3.7.1.1   jdf:GeneralID – pt

This section specifies particular PrintTalk values in Abstract pt for **jdf:GeneralID**.

Table 10: jdf:GeneralID – pt

Referenced by: Abstract pt

Name	Data Type	Description
IDUsage	NMTOKEN	**Values include:**
PurchaseOrderID		@***BusinessID*** of the initial PurchaseOrder.
QuoteID		@***BusinessID*** of the initial Quotation.
RFQID		@***BusinessID*** of the initial RFQ.
all remaining values		Application specific identifier.
IDValue	string	The value of the identifier that @*IDUsage* specifies.

3.7.2 Abstract BusinessObject

All *Business Objects* in PrintTalk (e.g. RFQ) extend the Abstract BusinessObject element. The Abstract BusinessObject element itself extends the Abstract pt element.

Table 11 below describes the contents of the Abstract BusinessObject element. For a detailed description of each Data Type see [JDF1.5].

Each individual BusinessObject within PrintTalk inherits all of the attributes and elements of the Abstract BusinessObject element, which in turn inherits all attributes and elements of the Abstract pt element.

Each *Business Object* has additional attributes and elements that are defined in a subsection of section 3.8 "Business Objects". Three of these *Business Objects* (RFQ, Quotation and PurchaseOrder) have a jdf:JDF Node. Credentials related to the context of the *Business Object* SHALL be extracted from the PrintTalk/Header.

Table 11: Abstract BusinessObject

Referenced by: Request

Subclass of: Abstract pt

Superclass of: RFQ, Quotation, PurchaseOrder, Confirmation, Cancellation, Refusal, OrderStatusRequest, OrderStatusResponse, StockLevelRequest, StockLevelResponse, ProofApprovalRequest, ProofApprovalResponse, Invoice, ReturnJob

Name	Data Type	Description
AgentDisplayName ?	string	The display name of the user that is identified by @*AgentID*.
AgentID ? Deprecated in PrintTalk 1.5	NMTOKEN	The unique identity of the user that "pushed the button" to send this *PrintTalk Document*, for example, a *Print Buyer* in an RFQ or a *Print Provider's* estimator in a Quotation. **Deprecation note:** the value "*AgentID*" was added to Credential/@*domain*.
AuxID ? Modified in PrintTalk 1.3	string	@*AuxID* is used as a reference to the *Print Buyer's* internal system ID by the sender. An @*AuxID* SHALL be used to carry a systems internal ID. **Modification note:** starting with PrintTalk 1.3, SHALL use pt/jdf:GeneralID for any IDs other than the *Print Buyer's* internal system ID.
BusinessID	NMTOKEN	The unique identifier for this *Business Object*.
BusinessRefID ?	NMTOKEN	The value of this @*BusinessRefID* SHALL be the same as the @*BusinessID* of some other *Pending Business Object* which acts as the primary parameter to the *Business Transaction* that this *PrintTalk Document* represents. See pt/GeneralID for secondary parameters. Prior to a PurchaseOrder, a @*BusinessRefID* SHALL refer to a *Business Object* that was received from the other party. Once a PurchaseOrder has been placed, PurchaseOrder /@*BusinessID* SHALL be used as the @*BusinessRefID* of all following *Business Object*s. For example, a Quotation/@BusinessRefID references an RFQ if it provides a quote for the RFQ, or it references a PurchaseOrder if it specifies a *Change Order*.
RequestDate ? Deprecated in PrintTalk 1.5	dateTime	Date/Time when this *Business Object* was sent. **Deprecation note:** starting with PrintTalk 1.5, use PrintTalk/@*Timestamp*.

3.8   Business Objects

For a *Print Buyer* and a *Print Provider* to negotiate a contract for *Print Product*, they SHALL exchange one or more of the following *Business Objects*: RFQ, Quotation, PurchaseOrder, Confirmation, Cancellation and Refusal.

After a contract has been consummated, either a *Print Buyer* or a *Print Provider* MAY initiate a *Change Order.* The negotiation of the *Change Order* is performed with the same *Business Objects* as the initial negotiation – RFQ, Quotation, PurchaseOrder, Confirmation, Cancellation and Refusal. The contract, which both parties have agreed on during previous negotiations, is valid during the whole *Change Order* process. However the *Print Provider* may halt production of the *Print Product*. The old contract is replaced only if there is a new agreement on a *Change Order* (expressed by the new Confirmation sent by the *Print Provider*). If the *Change Order* process terminates with a Refusal of a *Business Object*, an expired *Business Object*, or Cancellation of a *Business Object*, the *Change Order* process fails and production continues as originally planned before the *Change Order* was proposed.

During the *Production Phase*, interactions other than *Change Orders* can take place between the *Print Buyer* and *Print Provider*. The *Print Buyer MAY* send one or more OrderStatusRequest elements and receive an OrderStatusResponse from each request. The *Print Provider* MAY send unsolicited OrderStatusResponse elements. The *Print Provider* MAY send one or more ProofApprovalRequest elements and receive a ProofApprovalResponse from each request.

Either the *Print Buyer* or the *Print Provider* MAY send a Cancellation for the Job during the *Production Phase*, which generally leads to a final Invoice that conforms to the *Print Provider's* terms and conditions.

The *Print Provider* MAY send Invoice elements to the *Print Buyer* after delivery of the **Print Product** as well as at various milestones.

After the *Production Phase* is finished, the *Print Provider* MAY send back information about the produced Job using a ReturnJob element.

The following table lists the *Business Objects* that a PrintTalk implementation SHALL support. Each *Business Object* corresponds to a *Business Transaction* used in the commercial print industry. The list may expand in the future as the PrintTalk specification grows to support other *Business Transactions* and new areas of the industry.

The table columns are:

- Column 1: specifies the name of a *Business Object* and is a hotlink to a subsection on it.
- Column 2: describes the *Business Object*.
- Column 3: specifies the *Business Objects* which the named *Business Object* can reference via @*BusinessRefID* . The value "*None*" means that the @*BusinessRefID* MAY be absent from the *Business Object*.
- Column 4: specifies the direction of the *Business Transaction*, between the *Print Buyer* (shown as "B") and *Print Provider* (shown as "P").   In the cases with the two-headed arrow, the *Business Transaction* can be in either direction.

Table 12: List of BusinessObject Elements

Name	Description	References	Flow
RFQ	A Request for Quote that a *Print Buyer* sends to a *Print Provider*.	*None*, Quotation, Confirmation	B→P
Quote Deprecated in PrintTalk 1.3	A Quote MAY be sent in response to a RFQ. The Quote may contain very detailed information about the printing processes intended to create the product defined by the RFQ or it may contain only basic price and billing information. As with traditional quotes, providing the *Print Buyer* with detailed information lessens the chance of a misunderstanding. The *Re-Quote* and *Change Order* Quote variations are included within Quote. A Quote may *Supersede* an existing Quote before the *Print Buyer* has answered with a RFQ or an Order. **Deprecation note:** starting with PrintTalk 1.3, Quote elements SHALL be nested in Quotation *Business Objects*.	RFQ, PurchaseOrder, Confirmation	B←P
Quotation New in PrintTalk 1.3	A *Print Provider* sends a Quotation to a *Print Buyer* to provide one or more quotes for a Job. **Note:** starting with PrintTalk 1.3, Quotation replaces the Quote *Business Object*.	RFQ, PurchaseOrder, Confirmation	B←P
PurchaseOrder	A *Print Buyer* sends a PurchaseOrder to a *Print Provider* to purchase *Print Product* that is specified in a Quotation.	*None*, Quotation, Confirmation	B→P
Confirmation	A *Print Provider* sends a Confirmation if it accepts a PurchaseOrder or Cancellation.	PurchaseOrder	B←P
Cancellation	A Cancellation cancels a *Business Object*.	RFQ, Quotation, PurchaseOrder, Confirmation	B↔P
Refusal	A Refusal declines a received *Business Object*.	RFQ, Quotation, PurchaseOrder	B↔P
OrderStatusRequest	A *Print Buyer* sends an OrderStatusRequest to the *Print Provider* for details of the order status.	PurchaseOrder	B→P
OrderStatusResponse	A *Print Provider* sends to a *Print Buyer* an OrderStatusResponse either automatically or as the response to an OrderStatusRequest. See pages 49-51 in [cXML 1.2] for a list of status codes.	PurchaseOrder, OrderStatusRequest	B←P

Name	Description	References	Flow
ProofApprovalRequest	A *Print Provider* sends a ProofApprovalRequest to the *Print Buyer* to request an approval of a Proof.	PurchaseOrder	B←P
ProofApprovalResponse	A *Print Buyer* sends a to a *Print Provider* ProofApprovalResponse as the response to a ProofApprovalRequest. See pages 49-51 in [cXML 1.2] for a list of status codes.	ProofApprovalRequest	B→P
StockLevelRequest New in PrintTalk 1.5	A *Print Buyer* sends a StockLevelRequest to the *Print Provider* for a list of items that are available on stock.	-	B→P
StockLevelResponse New in PrintTalk 1.5	A *Print Provider* sends a StockLevelResponse to a *Print Buyer* as the response to a StockLevelRequest.	StockLevelRequest	B←P
Invoice	A *Print Provider* sends an Invoice to a *Print Buyer* to request payment	PurchaseOrder, Cancellation	B←P
ReturnJob New in PrintTalk 1.3	A *Print Provider* sends a ReturnJob to a *Print Buyer* to provide production information for the Job.	PurchaseOrder	B←P

3.8.1 RFQ

A *Print Buyer* sends an RFQ to a *Print Provider* to request a quote. Usually the *Negotiation Phase* starts with an RFQ. Sometimes, the *Negotiation Phase* starts with a Quotation or PurchaseOrder (see sections 3.8.2 "Quotation" and 3.8.3 "PurchaseOrder").

An RFQ SHALL convey the unambiguous intentions of the *Print Buyer* to the *Print Provider*. A complex RFQ MAY contain options that specify several types of acceptable materials or methods required by the *Print Buyer*. An RFQ MAY contain other options that require the *Print Provider's* estimator to generate more than one quoted price in the response.

A *Print Buyer* sends an RFQ whose semantics vary depending on @*BusinessRefID*.

> *Not specified*: If a *Print Buyer* chooses to initiate a new product process by making a request-for-quote to a *Print Provider*, it SHALL send an RFQ with no @*BusinessRefID.*
> Quotation: If a *Print Buyer* receives a Quotation for a Job and wants a *Re-Quote* for a variation of the Job, it SHALL send an RFQ whose @*BusinessRefID* references the received Quotation.
> Confirmation: If a *Print Buyer* wants to initiate a *Change Order* for a *Confirmed Job* and the PurchaseOrder form of a *Change Order* cannot be used because there are changes that don't have quotes, the *Print Buyer* SHALL send an RFQ whose @*BusinessRefID* references the Confirmation for the *Confirmed Job*. A *Change Order* (CO) RFQ asks what the consequences would be for a certain change of the *Print Product*. See 3.8.3 "PurchaseOrder" for an alternate *Change Order* that a *Print Buyer* can send.

After the *Print Buyer* has sent an RFQ and while it is *Pending*, the *Print Buyer* MAY send either

- a *Superseding* RFQ that replaces the *Pending* one or.
- an unrelated RFQ or

- a Cancellation for the *Pending* RFQ after which the *Print Buyer* MAY choose to continue the negotiation process by sending either a new RFQ or a new PurchaseOrder for a *Pending* Quotation. A *Pending* Quotation exists only if the cancelled RFQ was in fact a Request for *Re-Quote*.

When a *Print Provider* receives an RFQ, the *Print Provider* SHALL either

- accept the RFQ by sending a Quotation to the *Print Buyer* or
- decline the RFQ by either sending a Refusal to the *Print Buyer* or letting the RFQ expire.

Table 13: RFQ

Subclass of: Abstract BusinessObject

Name	Data Type	Description
Currency	NMTOKEN	Three-digit currency definition according to [ISO4217], e.g., USD, EUR, GBP. The value of @*Currency* identifies the currency that the *Print Provider* SHOULD use in the responding Quotation.
Estimate ?	boolean	If "*false*", the prices in the responding Quotation SHALL be binding amounts. If "*true*", the *Print Buyer* SHALL treat the prices in the responding Quotation as an estimate. If not specified, the *Print Provider* SHALL choose whether the responding Quotation is a binding amount or an estimate.
Expires	dateTime	Date/time when this RFQ becomes *Invalid*.
ReorderID ?	NMTOKENS	Whitespace-separated @*BusinessID* values that refer to PurchaseOrder *PrintTalk Documents* that are the basis for this (collected) RFQ. The RFQ is intended to lead to a re-order.
ReplaceID ?	NMTOKEN	RFQ/@BusinessID of the RFQ that this *PrintTalk Document Supersedes*. *Superseding* is only allowed as long as the RFQ to be *Superseded* is *Pending*.
jdf:JDF *	element	Description of the products or services that are to be produced or delivered. Multiple jdf:JDF elements specify multiple ordered *Item*s. Note that a Product description is typically used in a *Print Buyer* to *Print Provider* environment, whereas a Gray Box or individual Process is typically used in a subcontracting environment. See [JDF1.5].
Pricing ? New in PrintTalk 1.5	element	Pricing is a prototype element that defines the amounts that a quote is requested for. Multiple Price elements in this Pricing element specify an RFQ for amounts greater than or equal to Price/@*Amount*. Price/@*DescriptiveName* SHALL be identical for all Pricing/Priceelements in the scope of one RFQ. RFQ/Pricing/Price/@*UnitPrice* SHALL be specified. RFQ/Pricing/Price/@*Price* SHALL NOT be specified.

3.8.2 Quotation

New in PrintTalk 1.3

Usually a *Print Provider* creates a Quotation after receiving an RFQ. Sometimes, a *Print Provider* creates a Quotation as the first *Business Object* in the *Negotiation Phase*.

If the *Print Provider* chooses to accept an RFQ, the *Print Provider* creates one or more Quote elements and sends them back to the *Print Buyer* in a Quotation element. Each Quote element represents one quote for the Job.

A *Print Provider* sends a Quotation whose semantics vary depending on @*BusinessRefID*.

  RFQ: If a *Print Provider* receives an RFQ and chooses to provide a quote, it SHALL send a Quotation whose @*BusinessRefID* references the received RFQ.

  PurchaseOrder: If a *Print Provider* chooses to initiate a *Change Order* for a *Confirmed Job*, it SHALL send a Quotation whose @*BusinessRefID* references the PurchaseOrder for the *Confirmed Job*. The *Print Buyer* selects a possible or necessary change to the *Print Product*.

A Quotation SHALL contain at least one Quote element. If the *Print Provider* offers multiple options, it SHALL specify a separate Quote element for each such option.

After the *Print Provider* has sent a Quotation and while it is pending, the *Print Provider* MAY send either

- a *Superseding* Quotation that replaces the **Pending** one
- a Cancellation for the **Pending** Quotation after which the *Print Provider* MAY choose to send either a new Quotation or a Confirmation for some pending PurchaseOrder A **Pending** PurchaseOrder exists only if   the cancelled Quotation was in fact a *Re-Quote*.

When a *Print Buyer* receives a Quotation, the *Print Buyer* MAY

- accept the Quotation by sending a PurchaseOrder that references the Quote that the *Print Buyer* wishes to accept from the list of Quote elements in the Quotation or
- decline the Quotation by either sending a Refusal or letting it expire. The *Print Buyer* MAY choose to create a new RFQ that requests a *Re-Quote* (see section 3.8.1 "RFQ"), or
- defer a decision on the Quotation and send a new RFQ that requests a *Re-Quote* (see section 3.8.1 "RFQ") .

Table 14: Quotation

Subclass of: Abstract BusinessObject

Name	Data Type	Description
Currency	NMTOKEN	Three-digit currency definition according to [ISO4217] Identifies the currency that each Quote[not(exists(@Currency)] element inside this Quotation uses.
Estimate	boolean	For each Quote[not(exists(@Estimate)] element inside this Quotation, the price SHALL be a binding amount if @*Estimate* = "*false*", otherwise, the *Print Buyer* SHALL treat the price as an estimate only.
Expires	dateTime	Date/time when this Quotation becomes *Invalid*.
ReorderID ?	NMTOKENS	Whitespace-separated unique @*BusinessID* values that refer to PurchaseOrder *PrintTalk Documents* that are the basis for this Quotation. In this scenario the Quotation MAY be the starting point of the *Negotiation Phase*.
ReplaceID ?	NMTOKEN	Quotation/@BusinessID of the Quotation that this Quotation *Supersedes*.

Name	Data Type	Description
Quote **+**	element	Each Quote element SHALL describe a complete distinct variation of all *Print Product*s quoted. A Quote SHALL NOT be a quote for an individual part or *Item* of the Order. See Table 15: Quote.

3.8.2.1 Quote

Modified in PrintTalk 1.3

A Quote element describes a quote for a particular variation of a product.

Starting with PrintTalk 1.3, the Quote element is changed from a *Business Object* to a child element of a Quotation *Business Object*.

Table 15: Quote

Referenced by: Quotation

Subclass of: Abstract pt

Name	Data Type	Description
Currency ?	NMTOKEN	Three-digit currency definition according to [ISO4217] Identifies the currency that this Quote uses. If not specified, the value of `../@Currency` (in parent) SHALL be used.
DeviationFactor = "*None*" New in PrintTalk 1.3	enumeration	The *@DeviationFactor* shows how close the Quote meets the requirements of the RFQ. **Allowed values are:**
None		Proposed *Print Product* conforms to requirements in the RFQ.
Significant		Major Deviation from the RFQ.
Slight		Some minor deviation from the RFQ requirements – e.g. paper weight.
Estimate ?	boolean	If "*false*", each price in this Quote SHALL be a binding amount; otherwise, the *Print Buyer* SHALL treat each price as an estimate only. If not specified, the `../@Estimate` (in parent) SHALL be used.
Expires ? Deprecated in PrintTalk 1.3	dateTime	Date/time when this Quote becomes *Invalid*. This attribute SHALL NOT be specified in Quotation/Quote. **Deprecation note:** starting with PrintTalk 1.3, a Quote is only in the context of Quotation/Quote and thus this attribute SHALL NOT be used.
QuoteID New in PrintTalk 1.3 Modified in PrintTalk 1.5	NMTOKEN	The unique identifier for this Quote element. *@QuoteID* SHALL be unique only in the context of a Quotation. If *@QuoteID* exists, *@BusinessRefID* SHALL be present. **Modification note:** starting with PrintTalk 1.5, this attribute is

Name	Data Type	Description
		required.
ReorderID ? [Deprecated in PrintTalk 1.3](#)	NMTOKENS	Whitespace-separated unique @*BusinessID* values that refer to PurchaseOrder *PrintTalk Documents* that are the basis for this (collected) Quote. In this scenario the Quote is the starting point of the *Negotiation Phase* and is intended to lead to a re-order. If not specified, the ../ReorderID (in the parent Quotation) is used. **Deprecation note:** starting with PrintTalk 1.3, use ../@*ReorderID* (in Quotation parent) .
ReplaceID ? [Modified in PrintTalk 1.3](#)	NMTOKEN	Quote/@QuoteID of the Quote that this Quote *Supersedes*. *Superseding* is only allowed as long as the Quote to be *Superseded* is *Pending*. **Modification note:** starting with PrintTalk 1.2, @*ReplaceID* specifies Quote/@BusinessID of the Quote (if any) that this Quote *Supersedes*.
ReturnJDF ?	boolean	If @*ReturnJDF* = "$true$", the **Print Provider** SHALL send to the *Print Buyer* a ReturnJob *Business Object* that has a completed JDF including Audit elements; otherwise the **Print Provider** SHALL NOT send a ReturnJob.
jdf:JDF *	element	JDF representing the returned values that this Quotation has been made for. Potentially this MAY differ significantly from the original RFQ. See @*DeviationFactor* for details on JDF Nodes that do not match the originating RFQ. See [JDF1.5].
Pricing [New in PrintTalk 1.3](#)	element	The price associated with this Quote. Pricing SHALL be used to indicate the price. See Table 16: Pricing.

3.8.2.2 Pricing

New in PrintTalk 1.3

The Pricing element SHALL contain a list of prices for all *Items* that are included in a Quote, The Pricing element MAY also have credit card information and terms of payment.

Table 16: Pricing

Referenced by: Quote, PurchaseOrder, Invoice

Subclass of: Abstract pt

Name	Data Type	Description
Payment ?	element	Payment details. See Table 17: Payment.
Price +	element	Each Price element represents the price for a single *Item* or service. See Table 20: Price.

3.8.2.3 Payment

New in PrintTalk 1.3

In the Payment element, additional details about payment MAY be specified using **GeneralID** elements. See Table 18: jdf:GeneralID – Payment.

Table 17: Payment

Referenced by: Pricing

Subclass of: Abstract pt

Name	Data Type	Description
CreditCard ?	element	Specifies credit card information. A *Print Buyer* MAY supply CreditCard. A *Print Provider* SHALL NOT supply CreditCard. See Table 19: CreditCard.
PayTerm ?	element	The text content of the PayTerm element describes the payment terms & conditions in a human readable form. A *Print Provider* MAY supply PayTerm. A *Print Buyer* SHALL NOT supply PayTerm.

3.8.2.4   jdf:GeneralID – Payment

This section specifies particular Payment values for **jdf:GeneralID**.

Table 18: jdf:GeneralID – Payment
Referenced by: Payment
Subclass of: Abstract pt

Name	Data Type	Description
IDUsage	NMTOKEN	**Values include:**
Bank		The name of the bank.
BankAccount		The local bank account number.
BIC		The SWIFT Bank Identifier Code.
BLZ		The "Bankleitzahl".
IBAN		The International Bank Account Number.
IDValue	string	See [JDF1.5].

3.8.2.5 CreditCard

New in PrintTalk 1.3

Table 19: CreditCard
Referenced by: Payment
Subclass of: Abstract pt

Name	Data Type	Description
Authorization ?	string	Authorization code for this *Business Transaction*.
AuthorizationExpires ?	gYearMonth	Expiration date of the @*Authorization*.
Expires	gYearMonth	Expiration date of the credit card.
Number	NMTOKEN	Credit card number. The format is specified without blanks or any other separator characters.
Type	NMTOKEN	Credit card brand. **Values include:**
Amex		
DinersClub		
Discover		
MasterCard		This includes derived brands, (e.g., EuroCard).
Visa		

3.8.2.6 Price

New in PrintTalk 1.3

The Price element specifies the price of a single *Item* . These *Items* each have a value which can be taken from the @*Price* attribute or calculated based on other referenced *Items*. If a Price references other Price *Items*, then these referenced price *Items* SHALL NOT be taken into account when calculating a total price. To calculate this value, sum the values of the referenced *Items*. If @*Unit* is "*Percentage*", the value is calculated by taking that percentage of the resulting sum. The @*Price* attribute is either a calculated (optionally rounded) version of the value, or (for *Items* without any *Item* references) @*Price* SHALL be present. If @*PriceType* has the value "*Discount*", "*Handling*", "*Markup*" or "*Shipping*" and no @*Unit* is specified, the @*Price* value is a flat amount.

Table 20: Price

Referenced by: Pricing

Subclass of: Abstract pt

Name	Data Type	Description
Amount ?	double	Amount of items that this Price refers to. If not specified and @*UnitPrice* is specified, the @*Amount* will be determined upon completion. If @*UnitPrice* is specified, @*Amount* SHALL be specified in an Invoice.
DescriptiveName	string	The description of the *Item*. Note that @*DescriptiveName* is required in Price, unlike @*DescriptiveName* in the Abstract pt element, where it is optional.
ItemRefs ? Deprecated in PrintTalk 1.3	NMTOKENS	List of jdf:JDF/@*ProductID* of *Items* within the associated jdf:JDF of this Quote that this Price relates to. **Deprecation note:** starting with PrintTalk 1.3, use @*LineID*.
LineID ?	ID	The unique identifier for this (line) *Item*. One or more of the Price elements SHALL have a @*PriceType* with the literal value "*Product*". The @*LineID* of these Price elements SHALL match up with a GeneralID[IDUsage = "LineID"]/@Value in a JDF ticket. These GeneralID elements SHOULD be contained in a jdf:**Component**.
LineIDRefs ?	NMTOKENS	References to line items that go into calculating the value of this Price element.
Option ? New in PrintTalk 1.5	NMTOKEN	Sets a @*PartIDKey* value. Optional items are expressed using resource partitioning.
Price ?	double	The price of the entire amount as specified by @*Amount* of the *Item*. @*Price* SHALL be specified in an Invoice. If neither @*Price* nor @*UnitPrice* is specified, the price is unknown at Quotation time and will be specified in the invoice, e.g., taxes or discounts. No-charge items, e.g., line items that are included within other line items, SHALL have a price of 0. @*Price* is a rounded version of the value that could be obtained by summing the values of each of the references in @*LineIDRefs*.

Name	Data Type	Description
PriceType ? New in PrintTalk 1.5	NMTOKEN	Machine readable type of the price. The values specified below SHOULD be used in an open system. **Values include:**
Discount		Discount prices SHALL be negative.
Handling		This price relates to handling charges. If shipping and handling are combined in one line item the value "*Shipping*" SHOULD be used.
Markup		
Other		This @*PriceType* SHALL also be used for services such as shipping.
Product		The requested products. If @*PriceType*="*Product*", then this line SHOULD be referenced from the JDF that describes the product.
Shipping		This price relates to shipping charges.
Subtotal		
Total		Total.
TaxType ? New in PrintTalk 1.5	enumeration	Type of tax. **Allowed values are:**
Gross		The price includes taxes. Note that the Gross Price MAY differ from the Net Price + the Tax portion due to rounding.
Net		The price excludes taxes.
Tax		The price is only the tax.
Unit ?	string	MAY be specified if exists(@*UnitPrice*), otherwise SHALL NOT be specified. The unit of measurement for @*Amount* and @*UnitPrice*. If @*Unit*="*Percentage*", @*UnitPrice* is the percentage value of this Price element. All values derived from references in @*LineIDRefs* SHALL be summed and the percentage applied to that sum.
UnitPrice ?	double	Price for one unit of the *Item*, i.e. the @*Price* of the *Item* if @*Amount*="*1*". If @*Unit*="*Percentage*", then @*UnitPrice* specifies the percentage of the total cost that this line item represents which will be negative for @*PriceType*="*Discount*".
Additional *	element	Price for orders in excess of the nominal delivery quantity specified in @*Amount*. Additional SHALL NOT be specified in an Invoice. See Table 21: Additional.

3.8.2.7 Additional
New in PrintTalk 1.3

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Table 21: Additional

Referenced by: Price

Subclass of: Abstract pt

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Name	Data Type	Description
Amount	double	The additional number of *Items* that @*Price* refers to. The unit of measurement SHALL be the value of *../@Unit*.
Price	double	The price of the additional number of *Items* as specified in @*Amount*.

3.8.3 PurchaseOrder

The *Print Buyer* accepts a Quote of the Quotation for purchase of *Print Product* by creating and sending a PurchaseOrder that references the Quote. However, a PurchaseOrder can also be the first *Business Object* in a *Negotiation Phase*, especially for a reorder of a previously produced *Print Product*.

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Table 22: PurchaseOrder

Subclass of: Abstract BusinessObject

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Name	Data Type	Description
Currency	NMTOKEN	Three-digit currency definition according to [ISO4217] Identifies the currency that this PurchaseOrder uses.
Expires ?	dateTime	Date/time when this PurchaseOrder becomes *Invalid*.
QuoteID ? New in PrintTalk 1.3	NMTOKEN	This PurchaseOrder PO selects the quote specified by Quotation[@BusinessID=Q]/Quote/[@QuoteID=q], where Q = PO/@BusinessRefID and q = PO/@QuoteID. **Constraint:** if @*BusinessRefID* is present @*QuoteID* SHALL exist.
ReorderID ?	NMTOKENS	Whitespace-separated unique @*BusinessID* values that refer to PurchaseOrder *PrintTalk Documents* that are the basis for this (collected) re-order, if the re-order is the starting point.
ReplaceID ?	NMTOKEN	PurchaseOrder/@BusinessID of the PurchaseOrder that this PurchaseOrder *Supersedes*. *Superseding* is only allowed as long as the PurchaseOrder to be *Superseded* is *Pending*.
ReturnJDF ?	boolean	If @*ReturnJDF* = "*true*", the *Print Provider* SHALL send to the *Print Buyer* a ReturnJob *Business Object* that has a completed JDF including Audit elements; otherwise, the *Print Provider* SHALL NOT send a ReturnJob.

Name	Data Type	Description
jdf:JDF * Modified in PrintTalk 1.5	element	Description of the *Print Product*. The JDF element MAY be used to specify a very detailed *Print Product*, or it MAY also be used to describe the ordering of finished goods in catalog-based environments. **Modification note**: Multiple jdf:JDF were introduced in PrintTalk 1.5 to allow transactions of multi-item purchase orders. **Note:** Whereas multiple jdf:JDF in an RFQ or Quote specify multiple potential options, multiple jdf:JDF in a PurchaseOrder are an explicit request to purchase multiple items, e.g. when describing a shopping cart in a web to print application. See [JDF1.5].
Pricing ? New in PrintTalk 1.3	element	Pricing SHALL NOT be specified if @*BusinessRefID* references a Quotation. Pricing MAY be specified if the PurchaseOrder is based on a global contract referenced by @*ReorderID*. **Note:** starting with PrintTalk 1.3, the pricing information has been moved from JDF to PrintTalk. See Table 16: Pricing.

3.8.4 Confirmation

If a *Print Provider* accepts a PurchaseOrder, it SHOULD send a Confirmation whose @*BusinessRefID* references the accepted PurchaseOrder.

Table 23: Confirmation

Subclass of: Abstract BusinessObject

Name	Data Type	Description
jdf:Contact * Deprecated in PrintTalk 1.3	element	Detailed contact information about the company. **Deprecation note:** starting with PrintTalk 1.3, the [cXML 1.2] PrintTalk/Header specifies all necessary credentials. See [JDF1.5].

3.8.5 Cancellation

A *Print Buyer* or a *Print Provider* sends a Cancellation to cancel a previously sent *Business Object*.

For a *Print Provider* to cancel for a Quotation or Confirmation, it SHALL send a Cancellation whose @*BusinessRefID* references the Quotation or Confirmation.

For a *Print Buyer* to cancel for an RFQ or PurchaseOrder, it SHALL send to *Print Provider* a Cancellation whose @*BusinessRefID* references the RFQ or PurchaseOrder.

Table 24: Cancellation

Subclass of: Abstract BusinessObject

Name	Data Type	Description
JobIDRef ?	string	Reference to jdf:JDF/@JobID of the cancelled job. If not present, all jobs of the PurchaseOrder referred in @*BusinessRefID* are cancelled.
jdf:Contact * Deprecated in PrintTalk 1.3	element	Detailed contact information about the company. **Deprecation note:** starting with PrintTalk 1.3, the [cXML 1.2] PrintTalk/Header specifies all necessary credentials. See [JDF1.5].

3.8.6 Refusal

A *Print Buyer* or a *Print Provider* sends a Refusal to decline receipt of a *Business Object*.

If a *Print Buyer* chooses to decline a Quotation sent by a *Print Provider*, or if a *Print Provider* chooses to decline either an RFQ or a PurchaseOrder sent by a *Print Buyer*, it SHALL either send a Refusal whose @*BusinessRefID* references the declined *Business Object* or let the *Business Object* expire.

Table 25: Refusal

Subclass of: Abstract BusinessObject

Name	Data Type	Description
jdf:Contact * Deprecated in PrintTalk 1.3	element	Detailed contact information about the company. **Deprecation note:** starting with PrintTalk 1.3, the [cXML 1.2] PrintTalk/Header specifies all necessary credentials. See [JDF1.5].

3.8.7 OrderStatusRequest

An OrderStatusRequest allows the *Print Buyer* to query the *Print Provider* for details of the order status.

If a *Print Buyer* wants the status of an order, it SHALL send to the *Print Provider* an OrderStatusRequest whose @*BusinessRefID* references the order's PurchaseOrder. The order's PurchaseOrder is either the initial PurchaseOrder if no *Change Orders* have occurred or the latest accepted PurchaseOrder if a *Change Order* has been made.

In addition, the *Print Buyer* SHALL specify whether it wants status of the

- **entire order** (PurchaseOrder/jdf:JDF) or
- **just a portion of the order** (PurchaseOrder//jdf:JDF[@JobID = J and @*JobPartID* = P] for some J and some P defined in StatusRequest; the test for either J or P MAY be omitted.

Table 26: OrderStatusRequest

Subclass of: Abstract BusinessObject

Name	Data Type	Description
jdf:Contact * Deprecated in PrintTalk 1.3	element	Detailed information about the company. **Deprecation note:** starting with PrintTalk 1.3, all necessary credentials are defined in the [cXML 1.2] PrintTalk/Header. See [JDF1.5].
StatusRequest *	element	Individual status request description. If StatusRequest is not specified, the *Print Provider* SHALL provide status for the entire order (as explained just above this table). See Table 27: StatusRequest.

3.8.7.1   StatusRequest

Table 27: StatusRequest

Referenced by: OrderStatusRequest

Subclass of: Abstract pt

Name	Data Type	Description
JobIDRef ?	string	Reference to a @*JobID* within the JDF Node in the corresponding PurchaseOrder. If not specified, this StatusRequest refers to the all jobs specified by @*BusinessIDRef*.
JobPartIDRef ?	string	Reference to a @*JobPartID* within the JDF node in the corresponding PurchaseOrder. If not specified, this StatusRequest refers to the entire job or set of jobs specified in @*JobIDRef*.
ResponseDetails ? New in PrintTalk 1.3	enumeration	The level of detail requested in the OrderStatusResponse. **Allowed values are:**
Brief		Include only the latest Milestone Notification of the current Job Status.
CompletedMilestones		Include all completed Milestone Notification elements of the current Job and the Milestone Notification elements of steps that have begun processing.
Full		Include all Milestone Notification elements as defined by "*CompletedMilestones*" and any additional detailed information. **Modification note:** starting with PrintTalk 1.3, the only defined details are **jdf:DeliveryParams**.

Name	Data Type	Description
Subscribed ? New in PrintTalk 1.5	boolean	If @*Subscribed* = "*true*", then this StatusRequest is a subscription for multiple asynchronous OrderStatusResponse messages; else this StatusRequest is a Query for one individual, synchronous OrderStatusResponse message. The trigger conditions for asynchronous OrderStatusResponse messages are implementation dependent. Asynchronous OrderStatusResponse messages SHOULD be sent whenever a relevant status change of the subscribed order takes place.

3.8.8 OrderStatusResponse

An OrderStatusResponse is the response to an OrderStatusRequest.

If a *Print Provider* receives an OrderStatusRequest, it SHALL send to the *Print Buyer* an OrderStatusResponse whose @*BusinessRefID* references the OrderStatusRequest.

A *Print Provider* MAY send to a *Print Buyer* an automatically generated OrderStatusResponse which describes the status of an order whose associated PurchaseOrder is referenced by the @*BusinessRefID*.

Table 28: OrderStatusResponse

Subclass of: Abstract BusinessObject

Name	Data Type	Description
jdf:Contact * Deprecated in PrintTalk 1.3	element	Detailed information about the company. **Deprecation note:** starting with PrintTalk 1.3, the [cXML 1.2] PrintTalk/Header specifies all necessary credentials. See [JDF1.5].
jdf:DeliveryParams ?	element	Has details of the delivery status. **jdf:DeliveryParams** SHALL NOT be partitioned when specified in an OrderStatusResponse. Individual line *Items* that are described by a PrintTalk//Pricing/Price element MAY be referenced by jdf:DeliveryParams/Drop/DropItem/ GeneralID[@IDUsage="LineID"]. See [JDF1.5].
jdf:Notification *	element	Notification elements with @*Type*="*Milestone*" that describe the current status of the job. jdf:Notification/@*JobID* SHOULD be specified and jdf:Notification/@*JobPartID* MAY be specified in jdf:Notification elements that reside in an OrderStatusResponse. See [JDF1.5].

Name	Data Type	Description
Status * Deprecated in PrintTalk 1.3	telem	Human-readable text for individual status description. **Deprecation note:** starting with PrintTalk 1.3, use jdf:Notification. See Table 29: Status.

3.8.8.1 Status

Deprecated in PrintTalk 1.3

Table 29: Status

Referenced by: OrderStatusResponse

Subclass of: Abstract pt

Name	Data Type	Description
JobIDRef	string	Reference to the requested part of the Job. MAY be a reference to the @*JobID* of the JDF Root Node or to the @*JobPartID* of a nested JDF Node.
<content of element>	text	Body of the status description.

3.8.9 StockLevelRequest

New in PrintTalk 1.5

A StockLevelRequest allows the *Print Buyer* to query the *Print Provider* for the available stock levels of pre-printed or non-printed items.

Table 30: StockLevelRequest

Subclass of: Abstract BusinessObject

Name	Data Type	Description
Availability ?	enumeration	@*Availability* filters the returned StockLevel elements. **Allowed values are:**
Any		All matching StockLevel elements SHALL be returned regardless of availability.
Available		Only StockLevel elements that are currently available and have StockLevel/@*Amount* > 0 SHALL be included.
Deliverable		Only StockLevel elements that are currently available (StockLevel/@*Amount* > 0) or can be procured or produced (StockLevel/@*ProductionDuration* != "INF") SHALL be displayed.

Name	Data Type	Description
Currency ?	NMTOKEN	Three-digit currency definition according to [ISO4217], e.g., USD, EUR, GBP. The value of @*Currency* identifies the currency that the **Print Provider** SHALL use in the responding StockLevelResponse.
DisplayPrice ?	boolean	If true, StockLevel/@*Price* SHALL be included in the response.
ProductID ?	regexp	Regular expression that filters the returned list of StockLevel elements to only include elements whose StockLevel/@*ProductID* matches @*ProductID*. If @*ProductID* is not specified, StockLevel elements SHALL be specified for all Products.

3.8.10 StockLevelResponse

New in PrintTalk 1.5

A StockLevelResponse is the response to a StockLevelRequest.

If a *Print Provider* receives a StockLevelRequest, it SHALL send to the *Print Buyer* a StockLevelResponse whose @*BusinessRefID* references the StockLevelRequest.

Table 31: StockLevelResponse

Subclass of: Abstract BusinessObject

Name	Data Type	Description
Currency	NMTOKEN	Three-digit currency definition according to [ISO4217], e.g., USD, EUR, GBP. The value of @*Currency* identifies the currency of StockLevel/@*Price* elements.
StockLevel *	element	Level of available stock.

3.8.10.1 StockLevel

New in PrintTalk 1.5

Table 32: StockLevel

Referenced by: StockLevelResponse

Subclass of: Abstract pt

Name	Data Type	Description
Amount	integer	Number of items that are currently available or will be available within the time defined by @*ProductionDuration*.
Lot ?	string	Production Lot of this item. Used to separate available stock with different pricing based on production lots.
ProductID	string	ProductID of the respective item.
ProductionDuration ?	jdf:duration	Estimated time until non-available items will be deliverable. A value of "*INF*" specifies that the item is no longer available. If not specified @*Amount* specifies the number of currently available products. Note that @*ProductionDuration* excludes shipping times to the recipient.
jdf:Location ?	element	Location of the items specified by the StockLevel. Multiple StockLevel elements with identical @*ProductID* but differing jdf:Location MAY be specified to describe distributed warehousing.
Pricing ?	element	List of Price definitions for the item specified by this StockLevel. Multiple Price elements in this Pricing element specify the price for orders with an order amount greater than or equal to Price /@*Amount*. Price /@*DescriptiveName* SHALL be identical for all Pricing /Price elements in the scope of one StockLevel.

3.8.11 ProofApprovalRequest

A ProofApprovalRequest allows the *Print Provider* (in the context of an order) to request an Approval of a Proof from the *Print Buyer*.

If a *Print Provider* wants a *Print Buyer* to approve a soft or hard copy order, the *Print Provider* SHALL send to the *Print Buyer* a ProofApprovalRequest whose @*BusinessRefID* references the order's PurchaseOrder. The order's PurchaseOrder is either the initial PurchaseOrder if no *Change Orders* have occurred, or the latest accepted PurchaseOrder if a *Change Order* has been made.

Table 33: ProofApprovalRequest

Subclass of: Abstract BusinessObject

Name	Data Type	Description
jdf:Contact * Deprecated in PrintTalk 1.3	element	Detailed information about the company. **Deprecation note:** starting with PrintTalk 1.3, the [cXML 1.2] PrintTalk/Header specifies all necessary credentials. See [JDF1.5].
ProofRequest *	element	Individual proof request description. See Table 34: ProofRequest.

3.8.11.1 ProofRequest

Table 34: ProofRequest

Referenced by: ProofApprovalRequest

Subclass of: Abstract pt

Name	Data Type	Description
JobIDRef ?	string	Reference to the @*JobID* this proof corresponds to. If not specified, the ProofRequest refers to the Job that was ordered by the PurchaseOrder that is referenced by @*BusinessRefID*.
JobPartIDRef ? Deprecated in PrintTalk 1.3	string	Reference to the @*JobPartID* this proof corresponds to. **Deprecation note:** starting with PrintTalk 1.3, use jdf:ProofItem/@ProofTarget.
ProofLocation ? Deprecated in PrintTalk 1.3	URL	Identifies a remote target for the proof output. This can be either a soft or hard proofing target. **Deprecation note:** starting with PrintTalk 1.3, use ProofItem/@ProofTarget.
jdf:ProofItem * New in PrintTalk 1.3 Modified in PrintTalk 1.5	element	Details of the items to be proofed. jdf:ProofItem/@*ProofName* and ProofItem/@*ProofTarget* SHALL be used to reference the proof that is requested. See [JDF1.5].

3.8.12 ProofApprovalResponse

A ProofApprovalResponse is the response to a ProofApprovalRequest.

If a *Print Buyer* receives a ProofApprovalRequest, it SHALL send to the *Print Provider* a ProofApprovalResponse whose @*BusinessRefID* references the ProofApprovalRequest and contains the *Print Buyer's* approval or rejection of a proof.

Table 35: ProofApprovalResponse

Subclass of: Abstract BusinessObject

Name	Data Type	Description
jdf:Contact * Deprecated in PrintTalk 1.3	element	Detailed information about the company. The details of the individuals that signed off the proof are specified in jdf:ApprovalSuccess/ApprovalDetails/Contact. **Deprecation note:** starting with PrintTalk 1.3, the [cXML 1.2] PrintTalk/Header specifies all necessary credentials. See [JDF1.5].
ProofResponse *	element	Human-readable text for individual proof response. See Table 36: ProofResponse.

3.8.12.1 ProofResponse

Table 36: ProofResponse

Referenced by: ProofApprovalResponse

Subclass of: Abstract pt

Name	Data Type	Description
JobIDRef	string	Reference to the @*JobID* this proof corresponds to.
JobPartIDRef ? Deprecated in PrintTalk 1.3	string	Reference to the @*JobPartID* this proof corresponds to.
PageIndex ?	IntegerRangeList	List of pages in the **jdf:PageList** that this ProofResponse applies to. If not specified, this ProofResponse applies to all pages specified in jdf:ProofItem.
Response ? Deprecated in PrintTalk 1.3	enumeration	Describes the overall result of the approval. **Deprecation note:** starting with PrintTalk 1.3, use **jdf:ApprovalSuccess** to specify approval results. **Allowed values are:**
Approved		Everything is fine.

Name	Data Type	Description
ApprovedWithEdits		Minor changes required, but it's ok.
Rejected		Major changes. New proof required.
jdf:ApprovalSuccess New in PrintTalk 1.3	element	Describes the overall result of the approval. See [JDF1.5].
jdf:ProofItem New in PrintTalk 1.3	element	Details of the items to be proofed. jdf:ProofItem/@ProofName and ProofItem/@ProofTarget SHALL be used to reference the proof that is requested. See [JDF1.5].
<content of element> Deprecated in PrintTalk 1.3	text	Body of the response description. **Deprecation note:** starting with PrintTalk 1.3, use jdf:Comment to specify human readable comments.

3.8.13 Invoice

The *Print Provider* typically sends an Invoice to the *Print Buyer* after the job is shipped. It may also send an Invoice several times, when certain milestones during the *Production Phase* are reached or after a Job is cancelled. An Invoice MAY include additional charges or discounts.

To request payment, the *Print Provider* SHALL send an Invoice whose @*BusinessRefID* references either the

- PurchaseOrder for a completed Job or for milestones during the *Production Phase* or
- Cancellation for a cancelled Job.

Table 37: Invoice

Subclass of: Abstract BusinessObject

Name	Data Type	Description
Currency	NMTOKEN	Three-digit currency definition according to [ISO4217] Identifies the currency that this Invoice uses.
Expires	dateTime	Date/time when this Invoice becomes *Invalid*. This date is the due date after which a subsequent Invoice MAY contain late payment fees.
jdf:JDF ? Deprecated in PrintTalk 1.5	element	Description of the *Print Product* or service. **Deprecation note:** starting with PrintTalk 1.5, use ReturnJob business object. See [JDF1.5].
Pricing New in PrintTalk 1.3	element	The price of the Products or services described by this Invoice. **Note:** starting with PrintTalk 1.3, the pricing information is moved from JDF to PrintTalk. See Table 16: Pricing.

3.8.14 ReturnJob

The *Print Provider* MAY send to the *Print Buyer* a ReturnJob whose @*BusinessRefID* references the order's PurchaseOrder. The ReturnJob/jdf:JDF MAY contain all the production information for the Job.

Table 38: ReturnJob

Subclass of: Abstract BusinessObject

Name	Data Type	Description
jdf:JDF *	element	The JDF Nodes after processing including the Audit Information. This is the PrintTalk equivalent to the JMF ReturnQueueEntry message. See [JDF1.5].

4 PrintTalk Workflow Diagram

The PrintTalk 1.5 workflow is described in the following diagrams:
- Figure 2: A simplified/streamlined Workflow Diagram, representative of web-based catalog ordering.
- Figure 3: Proof Cycle
- Figure 4: Status Request Cycle
- Figure 5: Change Order Cycle
- Figure 6: A detailed Workflow Diagram showing the possible workflows using PrintTalk *Business Objects*. The diagram covers both the *Negotiation Phase* and the *Production Phase*, along with all possible loops that might occur.

Figure 2: Simplified Workflow Diagram
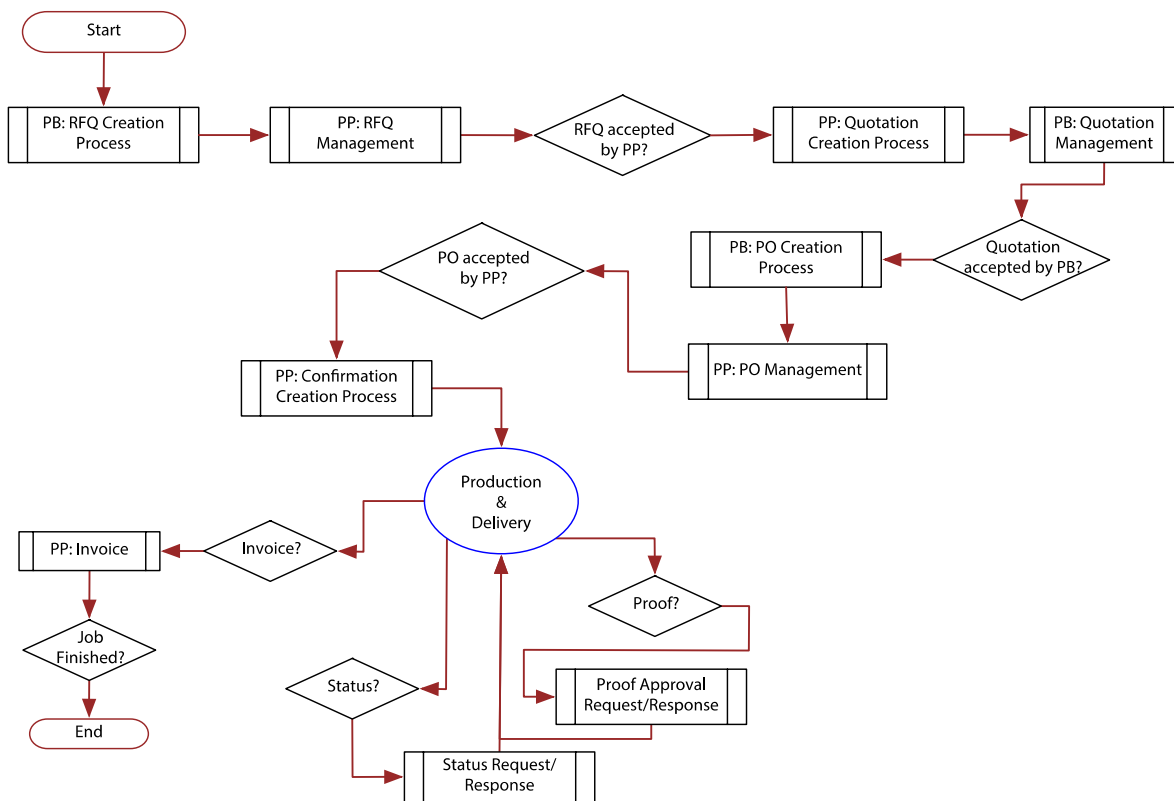
Figure 3: Proof Cycle
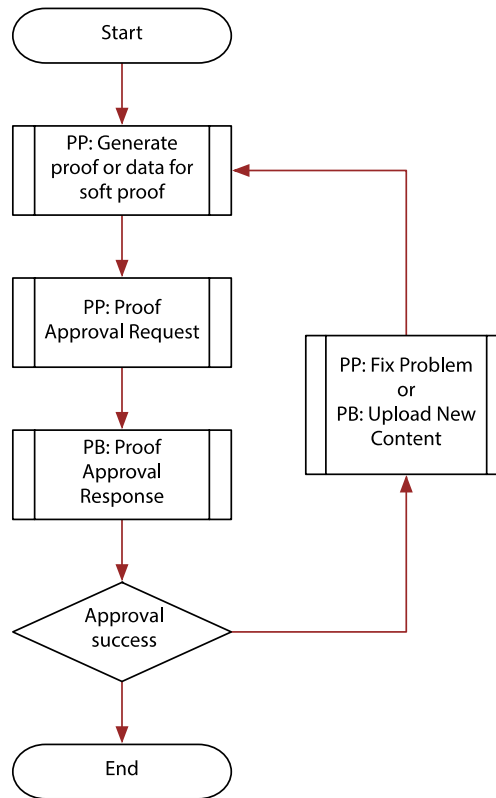
Figure 4: Status Request Cycle
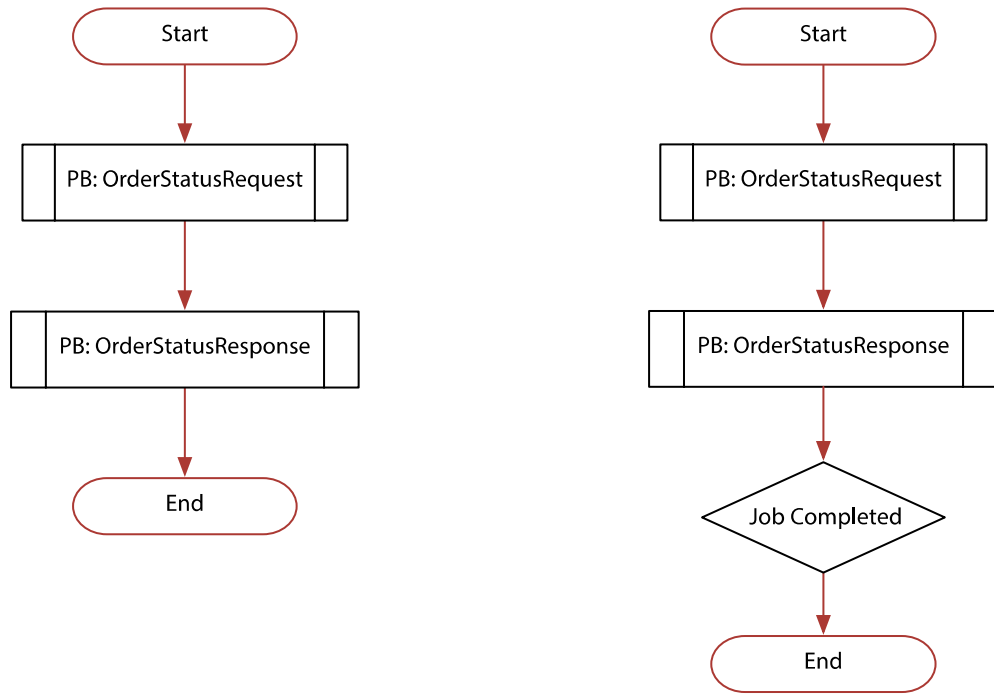
Figure 5: Change Order Management
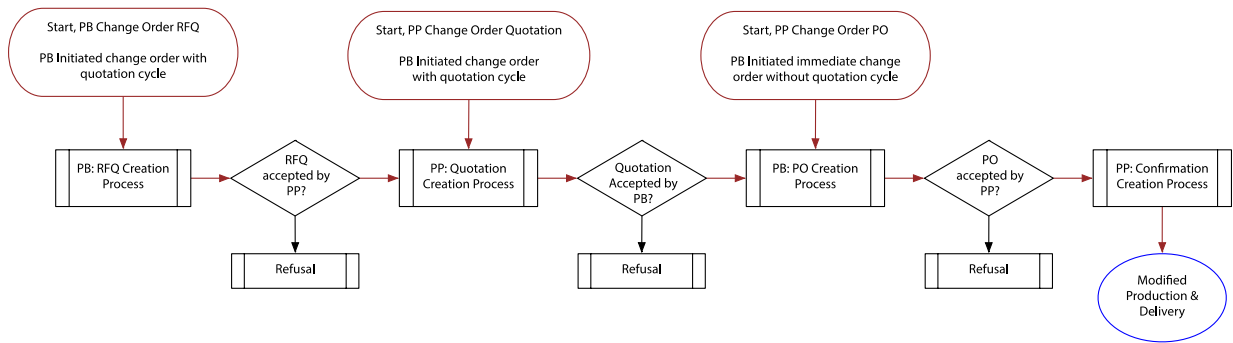
Figure 6: Workflow Diagram
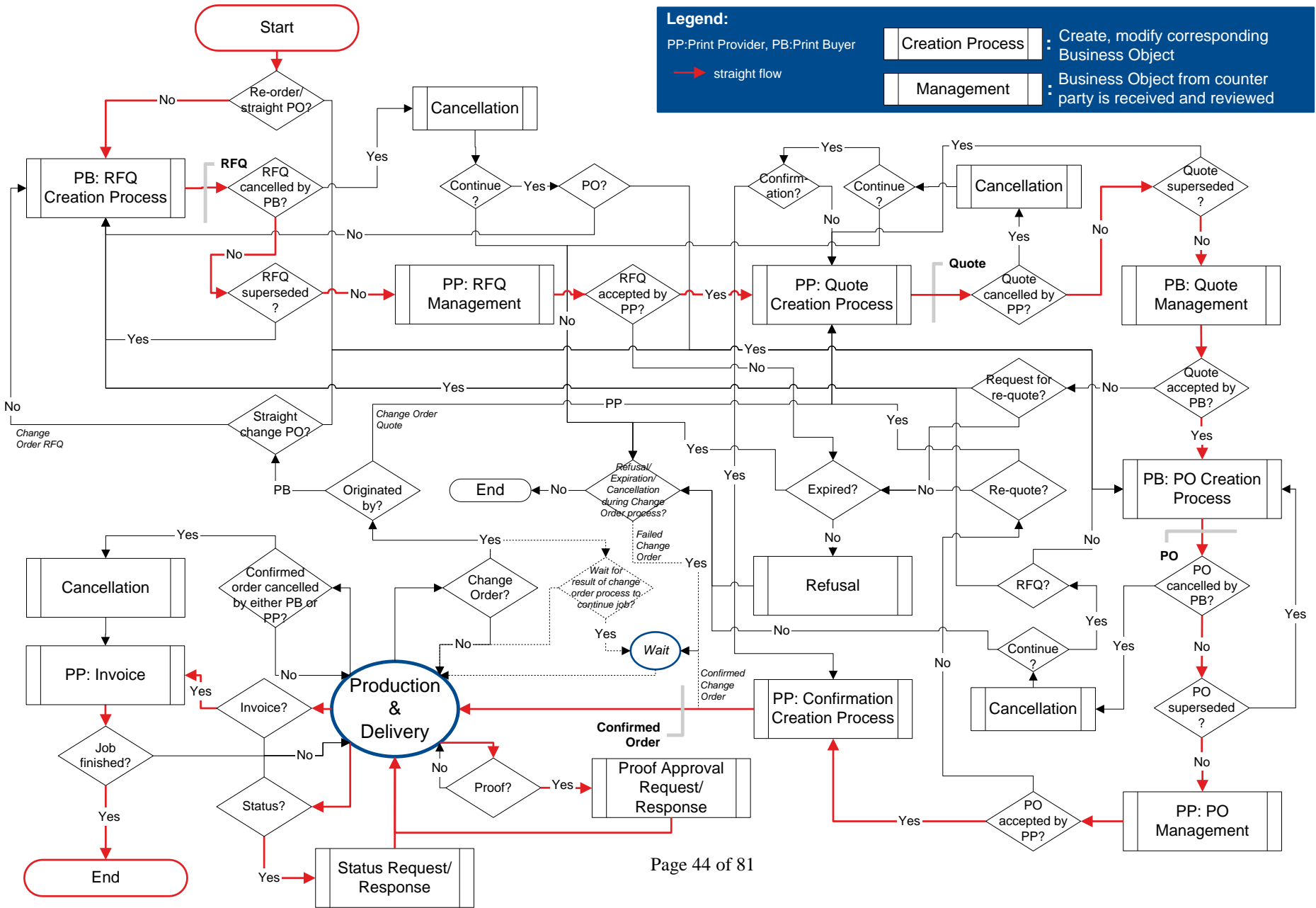
5 Usage of the PrintTalk IDs

This section illustrates the semantics and usage of the various IDs in typical workflow scenarios:

5.1 BusinessID and BusinessRefID:

This section illustrates the use of the @*BusinessID* and @*BusinessRefID*. The @*BusinessRefID* references a *Business Object* that originates from the other side of the Workflow. Thus, a *Business Object* that originates from the *Print Buyer* references a *Business Object* that originates from the *Print Provider* and vice versa. Once a PurchaseOrder has been placed, PurchaseOrder/@*BusinessID* SHALL be used as the @*BusinessRefID* of all following *Business Object*s.

5.1.1 Simple Negotiation

1. *Print Buyer* sends RFQ

   ```
   <RFQ BusinessID="RFQ_1">
   ```

2. *Print Provider* sends Quotation referencing RFQ "RFQ_1"

   ```
   <Quotation BusinessID="Quotation_1" BusinessRefID="RFQ_1">
      <Quote QuoteID ="Quote_1"/>
      <Quote QuoteID ="Quote_2"/>
   </Quotation>
   ```

3. *Print Buyer* sends PurchaseOrder referencing Quote "Quote_1"

   ```
   <PurchaseOrder BusinessID="PO_1" BusinessRefID="Quotation_1"
       QuoteID="Quote_1"/>
   ```

4. *Print Provider* sends Confirmation referencing PurchaseOrder "PO_1"

   ```
   <Confirmation BusinessID="Confirmation_1" BusinessRefID="PO_1"/>
   ```

5.1.2 Change Order Initiated by Print Buyer and Starting with RFQ

1. *Print Buyer* sends *Change Order* RFQ referencing earlier "Confirmation_1"

   ```
   <RFQ BusinessID="CO_RFQ" BusinessRefID="Confirmation_1">
   ```

2. *Print Provider* sends *Change Order* Quotation referencing "CO_RFQ"

   ```
   <Quotation BusinessID="Quotation_4" BusinessRefID="CO_RFQ">
      <Quote QuoteID ="Quote_1"/>
      <Quote QuoteID ="Quote_2"/>
   </Quotation>
   ```

3. *Print Buyer* sends *Change Order* PurchaseOrder referencing "Quote_1"

   ```
   <PurchaseOrder BusinessID="PO_3" BusinessRefID="Quotation _4"
       QuoteID="Quote_1">
   ```

4. *Print Provider* sends *Change Order* Confirmation referencing "PO_3"

   ```
   <Confirmation BusinessID="Confirmation_2" BusinessRefID="PO_3">
   ```

5.1.3 Change Order Initiated by Print Buyer and Starting with PurchaseOrder

1. *Print Buyer* sends *Change Order* PurchaseOrder referencing earlier "Confirmation_1"

   ```
   <PurchaseOrder BusinessID="PO_4" BusinessRefID="Confirmation_1"
         QuoteID="Quote_2">
   ```

2. *Print Provider* sends *Change Order* Confirmation referencing "PO_4"

   ```
   <Confirmation BusinessID="Confirmation_3" BusinessRefID="PO_4">
   ```

5.1.4 Change Order Initiated by Print Provider and Starting with Quotation

1. *Print Provider* sends *Change Order* Quotation referencing earlier "PO_1"

```
<Quotation BusinessID="Quotation_5" BusinessRefID="PO_1">
    <Quote QuoteID ="Quote_1"/>
    <Quote QuoteID ="Quote_2"/>
</Quotation>
```

2. *Print Buyer* sends *Change Order* PurchaseOrder referencing "Quote _2"

```
<PurchaseOrder BusinessID="PO_5" BusinessRefID="Quotation_5"
      QuoteID="Quote_2">
```

3. *Print Provider* sends *Change Order* Confirmation referencing "PO_5"

```
<Confirmation BusinessID="Confirmation_2" BusinessRefID="PO_5">
```

5.1.5 Complex Negotiation

1. *Print Buyer* sends RFQ

```
<RFQ BusinessID="RFQ_1">
```

2. *Print Provider* sends Quotation referencing RFQ "RFQ_1"

```
<Quotation BusinessID="Quotation_1" BusinessRefID="RFQ_1">
    <Quote QuoteID ="Quote_1"/>
    <Quote QuoteID ="Quote_2"/>
</Quotation>
```

3. *Print Buyer* sends an RFQ for a *Re-Quote* referencing "Quotation_1".

```
<RFQ BusinessID="RFQ_2"    BusinessRefID="Quotation_1">
```

4. *Print Provider* sends Quotation for *Re-Quote* referencing RFQ_2

```
<Quotation BusinessID="Quotation_2" BusinessRefID="RFQ_2"
      ReplaceID="Quotation_1">
    <Quote QuoteID="Quote_1" ReplaceID="Quote_1" >
</Quotation>
```

5. *Print Buyer* sends PurchaseOrder referencing "Quote_1".

```
<PurchaseOrder BusinessID="PO_6" BusinessRefID="Quotation_2"
      QuoteID="Quote_1">
```

6. *Print Provider* sends Confirmation referencing "PO_6".

```
<Confirmation BusinessID="Confirmation_6" BusinessRefID="PO_6">
```

5.2 ReplaceID

This section illustrates the @*ReplaceID*. A *Print Buyer* or *Print Provider* uses @*ReplaceID* to *Supersede* a previously sent *Business Object* that has not been answered yet by the counter party.

5.2.1 Print Buyer Supersedes RFQ

1. The *Print Buyer* sends an original RFQ identified by "RFQ_1"

```
<RFQ BusinessID="RFQ_1">
```

2. The *Print Buyer* send a superseding RFQ by referencing RFQ "RFQ_1":

```
<RFQ BusinessID="RFQ_2" ReplaceID="RFQ_1">
```

5.2.2 Print Buyer Supersedes PurchaseOrder

1. The *Print Buyer* sends an original PurchaseOrder identified by "PO_1"

```
<PurchaseOrder BusinessID="PO_1" BusinessRefID="Quotation_1"
      QuoteID="Quote_1">
```

2.   The *Print Buyer* send a superseding PurchaseOrder by referencing PurchaseOrder "PO_1":

```
<PurchaseOrder BusinessID="PO_2" BusinessRefID="PO_1" ReplaceID="PO_1"
       QuoteID="Quote_2">
```

5.2.3 Print Provider Supersedes Quotation

The Print Provider has replaced Quotation_1 which had two Quote elements. The new Quotation_2 retains ONLY the Quote[Quote_ID="Quote_1"].

1.   *Print Provider* sends Quotation identified "Quotation _1"

```
<Quotation BusinessID="Quotation_1" BusinessRefID="RFQ_1">
   <Quote QuoteID ="Quote_1"/>
   <Quote QuoteID ="Quote_2"/>
</Quotation>
```

2.   *Print Provider* sends a superseding Quotation by referencing Quotation "Quotation _1":

```
<Quotation BusinessID="Quotation_2" BusinessRefID="RFQ_1"
       ReplaceID="Quotation_1">
   <Quote QuoteID="Quote_1">
</Quotation>
```

5.3   ReorderID

This section illustrates the @*ReorderID*. A *Print Buyer* or *Print Provider* uses a @*ReorderID* to place orders of one or more previously sent PurchaseOrder *Business Objects* for which the *Print Provider* has also sent a Confirmation. In all three examples below "old_PO_ID_1" and "old_PO_ID_2" refer to confirmed PurchaseOrder *Business Objects.*

5.3.1 Print Buyer Reorders via an RFQ

1.   *Print Buyer* sends a RFQ to start reorder process with "old_PO_ID_1" and "old_PO_ID_2"

```
<RFQ BusinessID="RFQ_10" ReorderID="Master_PO_ID">
```

Note that Master_PO_ID could be a contract reference and not require reference to the previous purchase orders.

5.3.2 Print Buyer Reorders via an PurchaseOrder

1.   *Print Buyer* sends a PurchaseOrder to reorder "old_PO_ID_1" and "old_PO_ID_2"

```
<PurchaseOrder BusinessID="PO_10" ReorderID="old_PO_ID_1 old_PO_ID_2">
```

5.3.3 Print Provider Quotes using ReorderID

1.   *Print Provider* sends a Quotation using as basis "old_PO_ID_1" and "old_PO_ID_2"

```
<Quotation BusinessID="Quotation_10" ReorderID="old_PO_ID_1 old_PO_ID_2">
```

Note that in the case where the original purchase orders were based upon a contract, no negotiation will be required for this new Quotation.

5.4   JDF/@JobID:

The jdf:JDF/@*JobID* is the ID of the job within the *Print Providers* workflow system.

5.5   JDF/@JobPartID

The jdf:JDF/@*JobPartID* is the ID of a part of the job within the customer's workflow system.

When a JDF is created by a *Print Buyer*, e.g. in an RFQ, @*JobID* SHOULD be specified. If a *Print Provider* cannot maintain an external @*JobID*, the @*JobID* SHOULD be copied to jdf:CustomerInfo/@*CustomerOrderID*.

All interactions between *Print Buyer* and *Print Provider* SHALL be based on the initial @*JobID* as specified by the *Print Buyer*.

Note that this implies that the JDF/@*JobID* within a production job of the *Print Provider*'s workflow system NEED NOT be identical to JDF/@*JobID* when communicating with the *Print Buyer*.

5.6   jdf:CustomerInfo/@CustomerOrderID?

The jdf:CustomerInfo/@*CustomerOrderID* is the ID of the job in the context of *Print Buyer*'s MIS or ERP system.

6   Examples

This section has four examples.

6.1   Example A – "Learn to Fly" Mailer

In the first example, a *Print Provider* produces a folded mailer, which is basically a sheet of paper that is printed, folded and delivered to two addresses.

6.1.1   Outline of JDF Structure

JDF provides us with a very flexible mechanism for specifying shipment information. This item is shipped to 2 different locations so, 2 DropIntents are used. Here's the basic outline of the delivery portion of the ResourcePool:

```
 1 <Component DescriptiveName="4 Page folded Flyer" ID="Item01" >
 2 <Company OrganizationName="Pan-O-Ramic" ID="Company1">
 3 <Company OrganizationName="Tinker Mailing" ID="Company2">
 4 <DeliveryIntent>
 5     <DropIntent>
 6        <Required Actual="2013-07-26" …>
 7        <CompanyRef rRef="Company1">
 8        <DropItemIntent> Amount="10"
 9           <ComponentRef> rRef="Item01">
10        </DropItemIntent>
11     </DropIntent>
12     <DropIntent>
13        <Required Actual="2013-07-26" …>
14        <CompanyRef> rRef="Company2">
15        <DropItemIntent> Amount="7990"
16           <ComponentRef> rRef="Item01">
17        </DropItemIntent>
18     </DropIntent>
19 <DeliveryIntent>
```

Line 1 is the description of the shipped component.
Line 2 describes the first company to ship to
Line 3 describes the second company to ship to
Line 4 DeliveryIntent start tag
Line 5 DropIntent start tag
Line 6 with date / time required for first shipment
Line 7 CompanyRef pointing to the company for this shipment (Company1)
Line 8 DropItemIntent with amount to ship
Line 9 ComponentRef pointing to the component to ship (Item01)
Line 10 DropItemIntent end tag
Line 11 DropIntent end tag
Line 12 DropIntent start tag
Line 13 with date / time required for second shipment
Line 14 CompanyRef pointing to the company for this shipment (Company2)
Line 15 DropItemIntent with amount to ship
Line 16 ComponentRef pointing to the component to ship (Item01)

6.1.2 Text Version of RFQ

The following page contains the original text RFQ from the *Print Buyer*. Key reference points are annotated with AA, BB, and CC… in the text and cross-referenced in the PrintTalk XML.

Request for Quote -

Date: Today is 1 July 2013. AA

Printer: Polkadot Litho Inc. BB

ECommerce system: Ecompany Ltd. CC

Buyer:

Mary Martin DD
1929 Peter Pan Wy.
Island Drive, CA 90028
213-555-1212
mmartin@ pan-o-ramic.com

Description:

"Learn to Fly" seminar mailer EE

Quantity: 8,000 FF and addl. M GG

11"x17" Flyer HH, printed black plus 1PMS II on coated book JJ. Fold to 5.5"x8.5" KK, and ship to mail LL house (address below). Want 60 or 70# stock MM, but cannot exceed 1 oz. for mail purposes NN.

OO Customer will furnish Quark files for the 4 pages, with cropped and scaled scans for halftones in Photoshop files.

Bleeds, solids, and reverses completed and in the files. PP Proof PDF file to Mary.

Files in Jul 23, and finished product must be posted via 1st class mail August 1. QQ

Deliver 10 samples to Mary, balance to: LL

Tinker Mailing RR

1234 Hurryup Ave.

Hawthorne, CA 90250

Attn: Wendy

(No underruns allowed, up to 5% overs accepted) SS

Quote required by end of business 5 July 2013. TT

6.1.3 PrintTalk Version of RFQ

```xml
<?xml version="1.0" encoding="utf-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.printtalk.org/schema_15"
      xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
      xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
      version="1.1" payloadID="Christian 01 Jul 2013"
      timestamp="2013-07-01T22:39-08:00" >
      <!--version: This is the PrintTalk version; borrowed from cXML.-->
      <!--payloadID: This is transport unique ID of the message; borrowed from cXML.-
            ->
      <!--AA timestamp: PrintTalk date/time taken from ISO 8601; the preferred
            representation is "complete (full date and time)"
            and "extended (with punctuation)" with a time zone designation; borrowed
            from cXML.-->
    <Header>
      <!--Header, Request structure borrowed from cXML.-->
      <From>
            <!-- DD.-->
            <!-- The required credentials must be agreed upon by trading partners;
                  here are some examples of what can be done.-->
        <Credential domain="DNS">
              <!--The originating organization identification within a public
                    domain (Domain Name Service).-->
          <Identity>pan-o-ramic.com</Identity>
        </Credential>
        <Credential domain="ECompany.com">
              <!--The originating organization identification within a private
                    domain (ECompany's private registry)-->
          <Identity>PeterPan</Identity>
        </Credential>
        <Credential domain="DUNS">
              <!--The originating organization identification within a public
                  domain (Dun and Bradstreet registry).-->
          <Identity>93009388</Identity>
        </Credential>
      </From>
      <To>
            <!--BB The required credentials must be agreed upon by trading partners;
                  here are some examples of what can be done.-->
        <Credential domain="DNS">
              <!--The originating organization identification within a public
                    domain (Domain Name Service).-->
          <Identity>AnExcellentPrinter.com</Identity>
        </Credential>
        <Credential domain="ECompany.com">
              <!--The originating organization identification within a private
                    domain (ECompany's private registry)-->
          <Identity>Polkadot</Identity>
        </Credential>
        <Credential domain="DUNS">
              <!--The originating organization identification within a public
                    domain (Dun and Bradstreet registry).-->
          <Identity>3040392</Identity>
        </Credential>
      </To>
      <Sender>
            <!--CC The required credentials must be agreed upon by trading partners;
                  here are some examples of what can be done.-->
            <!--The Sender credential authenticate the message.-->
        <Credential domain="DNS">
```

```xml
                    <!--The originating organization identification within a public
                           domain (Domain Name Service).-->
               <Identity>ECompany.com</Identity>
               <SharedSecret>password</SharedSecret>
                    <!--The SharedSecret is part of the message authentication.-->
          </Credential>
          <UserAgent>Print Buyer v.54.9</UserAgent>
                    <!--The UserAgent is unique to the Sender element and identifies the
                           software agent that generated the message.-->
     </Sender>
</Header>
<Request>
          <!--The Request element contains a single PrintTalk business document;
                 borrowed from cXML.-->
     <RFQ AgentID="Lara" AgentDisplayName="Lara Garcia-Daniels"
          BusinessID="RFQ 8884" Currency="USD"
          DescriptiveName="RFQ for simple job" Estimate="false"
          Expires="2013-07-05T17:00-08:00"
          RequestDate="2013-07-01T22:39-08:00">
          <!--A PrintTalk Request for Quote document;  the content of this element
                 is independent of cXML-->
          <!--AgentID: The unique identity of the commerce system user that "pushed
                 the button" to send this document.-->
          <!--AgentDisplayName: The dispaly name of the user.-->
          <!--BusinessID: A unique identifier for this document; opaque to the
                 receiver.-->
          <!--Currency: For RFQ, preferred currency for quotes.-->
          <!--DescriptiveName: Human-readable description.-->
          <!--Estimate: For RFQ, whether a subsequent quote should be a casual
                 "estimate" or
          <!--TT Expires: Date/time when financial information becomes invalid. -->
          <!--AA RequestDate: Date/time when Business Object was sent. -->
          <jdf:Comment Attribute="Expires">If you send the Quote until midnight of
                 that day, it's also ok.</jdf:Comment>
          <jdf:JDF DescriptiveName="Learn to Fly seminar mailer" ID="root"
                 JobID="HDM20002124161007"
                 ProjectID="HDM_Prod20001124161007" Type="Product" Status="Waiting"
                 Version="1.1"
                 xmlns="http://www.CIP4.org/JDFSchema_1_1">
                 <!--A single JDF element is the only element content of an RFQ
                        element.-->
                 <!--Structure of a JDF node is defined by the JDF specification.
                        However there is a best practice structure as indicated in
                        section 3.3 of this spec. Alternative JDF structures are
                        permitted although not illustrated here.-->
                 <!--EE DescriptiveName: Courtesy display text.-->
                 <!--ID: An XML ID-->
                 <!--JobID: sender's reference to a job.-->
                 <!--ProjectID: sender's reference to a project.-->
                 <!--Type: For RFQ, always "Product."-->
                 <!--SettingsPolicy: indicates what happens, when unsupported settings
                        are present.-->
                 <!--status: For RFQ, always "waiting."-->
                 <!--Version: JDF version.-->
                 <!--xmlns: XML namespace.-->
            <AuditPool>
                    <!--Not required by PrintTalk, may be used at the discretion of
                           the document creator.-->
                 <Created Author="Christian@heidelberg.com"
                        TimeStamp="2013-07-01T1127+0100"/>
            </AuditPool>
            <ResourceLinkPool>
```

```xml
        <!--In the root JDF node only a DeliveryIntentLink for each of the
                independent alternatives that constitute the request for
                quote; Usage = "Input."-->
    <DeliveryIntentLink rRef="Deliv1" Usage="Input"/>
    <CustomerInfoLink rRef="Customer1" Usage="Input"/>
</ResourceLinkPool>
<ResourcePool>
    <CustomerInfo ID="Customer1" CustomerID="cu/4563-02" >
        <ContactRef rRef="Contact1"/>
    </CustomerInfo>
    <!--In the root JDF node any Resources required by the JDF structure
            rule like resources referenced in the CustomerInfo, but
            including the required DeliveryIntents and from the
            ResourceLinkPool.-->
    <DeliveryIntent DescriptiveName=
            "Delivery of samples to buyer, rest to mail house" ID="Deliv1"
            Class="Intent" Status="Available">
            <!--Status: All intent resources are "Available."-->
            <!--Other attribute values determined by JDF structure rules.--
                >
        <Overage DataType="NumberSpan" Priority="Required" Preferred="5">
                <!--SS Overage: Percentage by which actual count of
                        delivered items may exceed ordered quantity.-->
        </Overage>
        <Underage DataType="NumberSpan" Priority="Required" Preferred="0">
                <!--SS Underage: Percentage by which actual count of
                        delivered items may be less than ordered quantity.-->
        </Underage>
        <Method DataType="NameSpan" Priority="Required"
                Preferred="1stClassMail">
                <!--QQ-->
        </Method>
        <Required DataType="TimeSpan" Priority="Required" Preferred="2013-
                07-26T09:30-08:00">
                <!--QQ-->
        </Required>
        <DropIntent>
            <ContactRef rRef="Contact1"/>
            <DropItemIntent Amount="10">
                <!--Amount: Count of items to be delivered.-->
                <!--Delivery is made to the Contact(Ref) with ContactTypes
                        including "Delivery" found in this element, or its
                        parent, or its parent's parent.-->
                <ComponentRef rRef="Item01"/>
            </DropItemIntent>
        </DropIntent>
        <DropIntent>
            <ContactRef rRef="Contact2"/>
            <DropItemIntent Amount="7990" AdditionalAmount="1000">
                    <!--FF LL-->
                    <!--GG AdditionalAmount: A quote returned for this RFQ
                            should include a price for additional quantities
                            of this amount.-->
                <ComponentRef rRef="Item01"/>
            </DropItemIntent>
        </DropIntent>
    </DeliveryIntent>
    <Contact ID="Contact1" Class="Parameter" Status="Available"
            ContactTypes="Customer Delivery">
        <Address Street="1929 Peter Pan Wy." City="Island Drive"
                Region="CA" PostalCode="90028" Country="United States"
                CountryCode="US"/>
```

```xml
        <Person JobTitle="Print Buyer" FirstName="Mary"
                FamilyName="Martin">
            <ComChannel ChannelType="Phone" Locator="1 213 555 1212"/>
            <ComChannel ChannelType="Email" Locator="mailto:mmartin@pan-o-
                ramic.com"/>
        </Person>
        <Company DescriptiveName="Customer: Pan-O-Ramic" ID="Company1"
                Class="Parameter" Status="Available" OrganizationName="Pan-
                O-Ramic"/>
            <!--DD-->
    </Contact>
    <Contact ID="Contact2" Class="Parameter" Status="Available"
            ContactTypes="Delivery">
        <Address Street="1234 Hurry-up Avenue" City="Hawthorne"
                Region="CA" PostalCode="90250" Country="United States"
                CountryCode="US"/>
        <Person FirstName="Wendy"/>
        <Company DescriptiveName="Mail fulfillment: Tinker Mailing"
                ID="Company2" Class="Parameter" Status="Available"
                OrganizationName="Tinker Mailing">
                <!--RR-->
        </Company>
            <!--LL-->
    </Contact>
</ResourcePool>
<JDF DescriptiveName="folded flyer" ID="Link0005"
        JobPartID="HDM20002124161007-folded" Type="Product"
        Status="Waiting">
    <!--This element describes the folded flyer that is made up by the
            the flat, printed article; the child JDF element makes the
            flat, printed article.-->
    <ResourceLinkPool>
        <ComponentLink rRef="Item01" Usage="Output"/>
        <ComponentLink rRef="Item01flat" Usage="Input"/>
        <FoldingIntentLink rRef="Fold1" Usage="Input"/>
    </ResourceLinkPool>
    <ResourcePool>
        <Component DescriptiveName="4-page folded flyer" ID="Item01"
                Class="Quantity" Status="Unavailable"
                ComponentType="FinalProduct">
            <Comment Name="Instruction"> NN Check that the weight of the
                    finished piece does not exceed 1oz. (28.3 grams) to
                    qualify for U.S. postage
            </Comment>
        </Component>
        <FoldingIntent ID="Fold1" Class="Intent" Status="Available">
            <FoldingCatalog DataType="NameSpan" Preferred="F8-7"
                    Priority="Required">
                    <!--KK Preferred: "F8-7" is an item from the folding
                            catalog in the JDF specification.-->
            </FoldingCatalog>
        </FoldingIntent>
    </ResourcePool>
    <JDF DescriptiveName="flat flyer" ID="Link0006"
            JobPartID="HDM20002124161007-flat" Type="Product"
            Status="Waiting">
        <!--This element describes the flat flyer and the intents that
                are used to describe it.-->
        <ResourceLinkPool
            <ComponentLink rRef="Item01flat" Usage="Output"/>
            <ArtDeliveryIntentLink rRef="Art1" Usage="Input"/>
            <ColorIntentLink rRef="Color1" Usage="Input"/>
            <MediaIntentLink rRef="Media1" Usage="Input"/>
```

```xml
            <LayoutIntentLink rRef="Size1" Usage="Input"/>
            <ProofingIntentLink rRef="Proof1" Usage="Input"/>
    </ResourceLinkPool>
    <ResourcePool>
        <Component DescriptiveName="flyer" ID="Item01flat"
                Class="Quantity" Status="Unavailable"
                ComponentType="PartialProduct"/>
        <LayoutIntent ID="Size1" Class="Intent" Status="Available">
            <Dimensions DataType="XYPairSpan" Preferred="1224  792"
                    Priority="Required">
                <!--HH This is the size of the flat, printed
                        article.-->
            </Dimensions>
            <Pages DataType="IntegerSpan" Preferred="2"/>
        </LayoutIntent>
        <ArtDeliveryIntent ID="Art1" Class="Intent" Status="Available">
            <ArtDeliveryDate DataType="TimeSpan"
                    Preferred="2013-07-23T17:00-08:00"/>
            <Transfer DataType="EnumerationSpan"
                    Preferred="BuyerToPrinterDeliver"/>
            <ArtDelivery HasBleeds="true" PageList="0~3"
                    ArtDeliveryType="DigitalMedia">
                <RunList Pages="0~3">
                    <LayoutElement HasBleeds="true"
                            ElementType="Document">
                        <FileSpec Application="Quark"/>
                    </LayoutElement>
                </RunList>
                <!--OO-->
            </ArtDelivery>
            <ArtDelivery HasBleeds="true"
                    ArtDeliveryType="DigitalMedia">
                <RunList>
                    <LayoutElement HasBleeds="true" ElementType="Image">
                        <FileSpec Application="Photoshop"/>
                        <Comment Name="Description"
                                Attribute="ElementType">
                            Cropped and scaled scans for halftones.
                        </Comment>
                    </LayoutElement>
                </RunList>
                <!--OO-->
            </ArtDelivery>
            <Comment Name="Description">Solids and reverses completed
                    and in the files.
                <!--OO-->
            </Comment>
        </ArtDeliveryIntent>
        <ColorIntent ID="Color1" Class="Intent" Status="Available">
            <ColorStandard DataType="NameSpan" Preferred="MonoChrome"/>
            <ColorsUsed>
                <!--II This is a 2-color job; colors must be listed
                        since they are exactly those implied by
                        ColorStandard =
                        "MonoChrome."-->
                <!--Here "PMSxxx" is used to mean "some unspecified
                        PMS color."-->
                <SeparationSpec Name="Black"/>
                <SeparationSpec Name="PMSxxx"/>
            </ColorsUsed>
        </ColorIntent>
        <MediaIntent ID="Media1" Class="Intent" Status="Available">
            <!--JJ-->
```

```xml
                                <FrontCoatings DataType="EnumerationSpan"
                                        Preferred="Semigloss"/>
                                <StockType DataType="NameSpan" Preferred="Offset"/>
                                <USWeight DataType="NumberSpan" Range="60~70">
                                    <!--MM-->
                                </USWeight>
                            </MediaIntent>
                            <ProofingIntent ID="Proof1" Class="Intent" Status="Available">
                                    <!--PP-->
                                <ProofItem
                                        ProofTarget="mailto:mmartin@pan-o-ramic.com">
                                    <ColorType DataType="EnumerationSpan"
                                            Preferred="BasicColor"/>
                                    <ProofType DataType="EnumerationSpan" preferred="Page"/>
                                    <Technology DataType="NameSpan" Preferred="SoftProof">
                                        <Comment Name="Instruction">Send PDF file
                                        </Comment>
                                    </Technology>
                                </ProofItem>
                            </ProofingIntent>
                        </ResourcePool>
                    </JDF>
                </JDF>
            </jdf:JDF>
        </RFQ>
    </Request>
</PrintTalk>
```

6.2 Example B – Bible

In the second example, the *Print Provider* produces two Bibles, one with a soft cover and another with a hard case cover and dust jacket. Just to make things interesting, the text is shared by both versions of books. We are producing 5,000 soft cover versions and 7,500 hard case versions. All are shipping to the same address.

6.2.1 Outline of JDF Structure

A simple outline of the JDF for this project looks like this:

```
 1  <JDF DescriptiveName="Hard & Soft Cover Book">
 2      <ResourcePool>
 3          <CustomerInfo>
 4          <DeliveryIntent>
 5      </ResourcePool>
 6      <JDF DescriptiveName="Hard Cover Bound Book">
 7          <ResourcePool>
 8              <BindingIntent>
 9              <ComponentLink DescriptiveName="Text for both">
10          </ResourcePool>
11          <JDF> DescriptiveName="Hard Cover">
12              <MediaIntent>
13          </JDF>
14          <JDF> DescriptiveName="Dust Jacket">
15              <MediaIntent>
16          </JDF>
17      </JDF>
18      <JDF DescriptiveName="Soft Cover Bound Book">
19          <BindingIntent>
20          <ComponentLink DescriptiveName="Text for both">
21          <JDF> DescriptiveName="Soft Cover">
22              <MediaIntent>
23          </JDF>
24      </JDF>
25      <JDF DescriptiveName="Text for both">
26          <MediaIntent>
27      </JDF>
```

Line 1 is the JDF description of the project.
Line 3 represents the *Print Buyer* buying these books. It would refer to contact and address information.
Line 4 explains the delivery instructions and refers to the same contact as on line 2 as the delivery destination.
Line 6 is the JDF description of the hard cover version.
Line 8 is the specification for the bindery used to bring the case, dust jacket, and text together to produce the hard cover version of the book.
Line 9 is the link to the text being produced.
Line 11 is the JDF describing the production of the case.
Line 12 is the **MediaIntent** describing the stock used to produce the hard cover.
Line 14 is the JDF describing the production specifications of the dust jacket.
Line 15 is the **MediaIntent** describing the paper used to produce the dust jacket.
Line 18 is the JDF description of the soft cover version.
Line 19 is the specification for the bindery used to bring the soft cover and text together to produce the soft cover version of the book.
Line 20 is the link to the text being produced.
Line 21 is the JDF description of the soft cover itself.
Line 22 is the **MediaIntent** describing the paper used to produce the soft cover.
Line 25 is the description of the text used by both books.
Line 26 is the **MediaIntent** describing the paper used to produce the text.

The JDF Root Node of this project combines the 2 finished Products (soft and hard cover book), with the **DeliveryIntent**. The second tier of JDF Nodes shows the individual intents to produce each book. The

specification for the text could be part of the specification on each of the books separately. Because it's a shared JDF Node, it is promoted to a higher level and can be referred (and consumed) by each of the lower JDF Nodes.

Figure 7: Outline of JDF Structure for the "Bible" Example
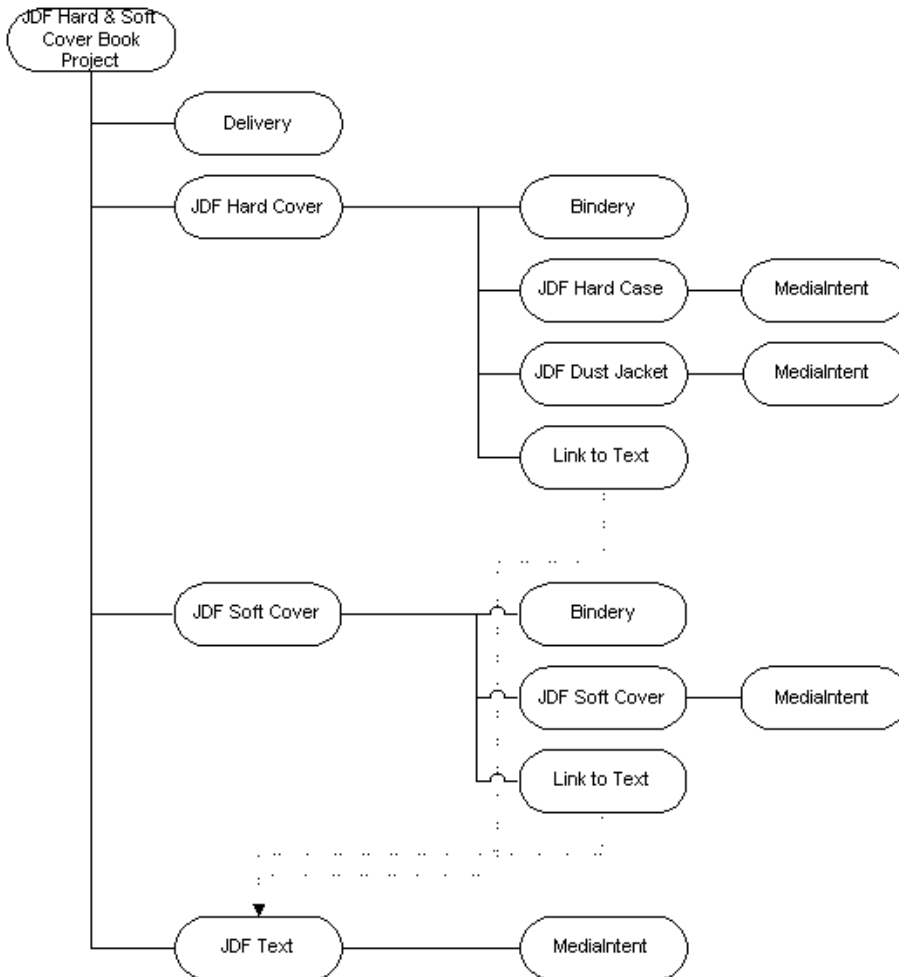
6.2.2 PrintTalk Version of RFQ

Both the RFQ and subsequent Quotation are included in this example. The major difference between the 2 *PrintTalk Documents* is the addition of Pricing in the quote.

```xml
<?xml version="1.0" encoding="utf-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.printtalk.org/schema"
      xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
      xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
      version="1.1" payloadID="107778" timestamp="2013-07-1T22:39-08:00">
      <!--version: This is the PrintTalk version; borrowed from cXML.-->
      <!--payloadID: This is transport unique ID of the message; borrowed from cXML.-
            -->
   <Header>
      <From>
         <Credential domain="DNS">
            <Identity>www.billsfinebooks.com</Identity>
         </Credential>
         <Credential domain="ECompany.com">
```

```xml
              <Identity>Bill's Fine Books</Identity>
           </Credential>
           <Credential domain="DUNS">
              <Identity>06-388-7745</Identity>
           </Credential>
        </From>
        <To>
           <Credential domain="ECompany.com">
              <Identity>JJ Printing</Identity>
           </Credential>
           <Credential domain="DUNS">
              <Identity>06-358-9998</Identity>
           </Credential>
        </To>
        <Sender>
           <Credential domain="DNS">
              <Identity>PrintORama.com</Identity>
              <SharedSecret>rosebud</SharedSecret>
           </Credential>
           <UserAgent>Print Buyer v.54.9</UserAgent>
        </Sender>
     </Header>
     <Request>
        <RFQ AgentID="Marge" AgentDisplayName="Margaret Simpson"
             RequestDate="2013-07-1T10:00-08:00" BusinessID="RFQ_A3317" Currency="USD"
             Estimate="true" Expires="2013-08-25T1700-0800">
           <!--Buyer requests a non-binding price.  Just an estimate.-->
           <jdf:JDF DescriptiveName="224 page hard and soft cover book" ID="JDF000-
               Root" JobID="BuyerJob001"
               Type="Product" Status="Waiting" Version="1.1"
               xmlns="http://www.CIP4.org/JDFSchema_1_1">
               <!--JobID: sender's reference to a job/project.-->
               <!--Version: JDF version.-->
           <AuditPool>
                 <!--Not required by PrintTalk, may be used at the discretion of
                       the document creator.-->
              <Created Author="PrintTalk" TimeStamp="2013-07-1T11:20-08:00"/>
           </AuditPool>
           <ResourcePool>
              <CustomerInfo CustomerID="pb4653/99" >
                 <ContactRef rRef="Contact01"/>
              </CustomerInfo>
              <LayoutIntent ID="Size001(Finished)" Class="Intent"
                    Status="Available">
                 <Dimensions Range="576 720~648 864" DataType="XYPairSpan"
                       Preferred="612 792"/>
                 <Pages DataType="IntegerSpan" Preferred="224"/>
              </LayoutIntent>
              <DeliveryIntent ID="Delivery001" Class="Intent" Status="Available">
                 <DropIntent>
                       <!--Date by which the product is to be delivered-->
                    <Required DataType="TimeSpan"
                          Preferred="2013-09-30T09:30-8:00"/>
                    <ContactRef rRef="Contact02"/>
                    <DropItemIntent Amount="7500" AdditionalAmount="1000">
                       <ComponentRef rRef="Item001(HardBook)"/>
                    </DropItemIntent>
                    <DropItemIntent Amount="5000" AdditionalAmount="1000">
                       <ComponentRef rRef="Item003(SoftBook)"/>
                    </DropItemIntent>
                 </DropIntent>
                 <Comment>Delivery of hardcover and softcover job</Comment>
              </DeliveryIntent>
```

```xml
            <Company ID="Company01" Class="Parameter" Status="Available"
                    OrganizationName="Mega Corp"/>
            <Contact ID="Contact01" Class="Parameter" Status="Available"
                    ContactTypes="Customer Billing">
                <Address Street="820 N. French Street" City="Wilmington"
                        Region="DE" PostalCode="19801">
                    <ExtendedAddress>Attention: Accounts Payable</ExtendedAddress>
                </Address>
                <Person JobTitle="Purchasing Manager" FirstName="Lisa"
                        FamilyName="Luft"/>
                <CompanyRef rRef="Company01"/>
            </Contact>
            <Contact ID="Contact02" Class="Parameter" Status="Available"
                    ContactTypes="Delivery">
                <Address Street="555 Maple Drive" City="San Mateo" Region="CA"
                        PostalCode="94403">
                    <ExtendedAddress>Suite 245</ExtendedAddress>
                </Address>
                <Person JobTitle="Head of Book Division" FirstName="William"
                        FamilyName="Johnson"/>
                <CompanyRef rRef="Company01"/>
            </Contact>
        </ResourcePool>
        <ResourceLinkPool>
            <DeliveryIntentLink rRef="Delivery001" Usage="Input"/>
            <CustomerInfoLink rRef="pb4653/99" Usage="Input"/>
        </ResourceLinkPool>
        <JDF DescriptiveName=
                "224 page hard case bound book with a 4/0 dust jacket"
                ID="JDF001(HardBook)" Type="Product" Status="Waiting">
                <!--For RFQ, whatever JDF "Product" elements necessary to specify
                        components to be delivered.-->
            <ResourcePool>
                <Component ID="Item001(HardBook)" Class="Quantity"
                        Status="Unavailable"
                        DescriptiveName=
                        "224 page hard case bound book with a 4/0 dust jacket"
                        ComponentType="FinalProduct"/>
                <BindingIntent ID="Bind001(HardCover)" Class="Intent"
                        Status="Available">
                    <BindingType DataType="EnumerationSpan" Preferred="Sewn"/>
                    <BindingLength DataType="EnumerationSpan" Preferred="Long"/>
                </BindingIntent>
            </ResourcePool>
            <ResourceLinkPool>
                <ComponentLink rRef="Item001(HardBook)" Usage="Output"/>
                <ComponentLink rRef="Item002(HardCase)" Usage="Input"
                        ProcessUsage="Cover"/>
                <ComponentLink rRef="Item004(Text)" Usage="Input"/>
                <ComponentLink rRef="Item006(DustJacket)" Usage="Input"/>
                <BindingIntentLink rRef="Bind001(HardCover)" Usage="Input"/>
                <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
            </ResourceLinkPool>
            <JDF DescriptiveName="DustJacket for Hard Cover"
                    ID="JDF004(DustJacket)" Type="Product" Status="Waiting">
                <ResourcePool>
                    <Component ID="Item006(DustJacket)" Class="Quantity"
                            Status="Unavailable" DescriptiveName="Dust Jacket"
                            ComponentType="PartialProduct"/>
                    <ColorIntent ID="Color002(DustJacket)" Class="Intent"
                            Status="Available">
                        <Coverage DataType="NumberSpan" Preferred="50"/>
```

```xml
                    <ColorStandard Range="CMYK" DataType="NameSpan"
                            Preferred="CMYK"/>
                    <InkManufacturer Range="ToyoCrayola " DataType="NameSpan"
                            Preferred="ToyoCrayola"/>
                </ColorIntent>
                <MediaIntent ID="Media002(DustJacket)" Class="Intent"
                        Status="Available">
                    <FrontCoatings DataType="NameSpan" Preferred="None"/>
                    <StockType DataType="NameSpan" Preferred="Offset"/>
                </MediaIntent>
            </ResourcePool>
            <ResourceLinkPool>
                <ComponentLink rRef="Item006(DustJacket)" Usage="Output"/>
                <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
                <ColorIntentLink rRef="Color002(DustJacket)" Usage="Input"/>
                <MediaIntentLink rRef="Media002(DustJacket)" Usage="Input"/>
            </ResourceLinkPool>
        </JDF>
        <JDF DescriptiveName="Case for Hard Cover" ID="JDF006(Case)"
                Type="Product" Status="Waiting">
            <ResourcePool>
                <Component ID="Item002(HardCase)" Class="Quantity"
                        Status="Unavailable" DescriptiveName="Book Case"
                        ComponentType="PartialProduct"/>
                <MediaIntent ID="Media001(Case)" Class="Intent"
                        Status="Available">
                    <MediaColor DataType="EnumerationSpan" Preferred="Black"/>
                    <StockType DataType="NameSpan" Preferred="Cloth"/>
                </MediaIntent>
            </ResourcePool>
            <ResourceLinkPool>
                <ComponentLink rRef="Item002(HardCase)" Usage="Output"/>
                <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
                <MediaIntentLink rRef="Media001(Case)" Usage="Input"/>
            </ResourceLinkPool>
        </JDF>
    </JDF>
    <JDF DescriptiveName="224 page soft cover, perfect bound book"
            ID="JDF002(SoftBook)" Type="Product" Status="Waiting">
        <ResourcePool>
            <Component ID="Item003(SoftBook)" Class="Quantity"
                    Status="Unavailable"
                    DescriptiveName="soft cover, perfect bound book"
                    ComponentType="FinalProduct"/>
            <BindingIntent ID="Bind002(SoftCover)" Class="Intent"
                    Status="Available">
                <BindingType DataType="EnumerationSpan" Preferred="Adhesive"/>
            </BindingIntent>
        </ResourcePool>
        <ResourceLinkPool>
            <ComponentLink rRef="Item003(SoftBook)" Usage="Output"/>
            <ComponentLink rRef="Item005(SoftCover)" Usage="Input"/>
            <MediaIntentLink rRef="Media003(SoftCover)" Usage="Input"/>
            <ComponentLink rRef="Item004(Text)" Usage="Input"/>
            <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
            <BindingIntentLink rRef="Bind002(SoftCover)" Usage="Input"/>
        </ResourceLinkPool>
        <JDF DescriptiveName="Soft Cover" ID="JDF005(SoftCover)"
                Type="Product" Status="Waiting">
            <ResourcePool>
                <Component ID="Item005(SoftCover)" Class="Quantity"
                        Status="Unavailable" DescriptiveName="soft cover"
                        ComponentType="PartialProduct"/>
```

```xml
                        <MediaIntent ID="Media003(SoftCover)" Class="Intent"
                                Status="Available">
                            <FrontCoatings DataType="NameSpan" Preferred="None"/>
                            <StockType DataType="NameSpan" Preferred="offset"/>
                        </MediaIntent>
                        <ColorIntent ID="Color003(SoftCover)" Class="Intent"
                                Status="Available">
                            <Coverage DataType="NumberSpan" Preferred="50"/>
                            <ColorStandard Range="CMYK" DataType="NameSpan"
                                    Preferred="CMYK"/>
                            <InkManufacturer Range="ToyoCrayola " DataType="NameSpan"
                                    Preferred="ToyoCrayola"/>
                        </ColorIntent>
                    </ResourcePool>
                    <ResourceLinkPool>
                        <ComponentLink rRef="Item005(SoftCover)" Usage="Output"/>
                        <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
                        <ColorIntentLink rRef="Color003(SoftCover)" Usage="Input"/>
                        <MediaIntentLink rRef="Media003(SoftCover)" Usage="Input"/>
                    </ResourceLinkPool>
                </JDF>
            </JDF>
            <JDF DescriptiveName="text for 224 page book" ID="JDF003(Text)"
                    Type="Product" Status="Waiting">
                <ResourcePool>
                    <Component ID="Item004(Text)" Class="Quantity"
                            Status="Unavailable" DescriptiveName=
                            "Reader text for hard or soft cover 224 page book"
                            ComponentType="PartialProduct"/>
                    <ColorIntent ID="Color001(Text)" Class="Intent"
                            Status="Available">
                        <Coverage DataType="NumberSpan" Preferred="10"/>
                        <ColorStandard DataType="NameSpan" Preferred="MonoChrome"/>
                        <InkManufacturer Range="Black" DataType="NameSpan"/>
                    </ColorIntent>
                    <MediaIntent ID="Media001(Text)" Class="Intent"
                            Status="Available">
                        <FrontCoatings DataType="NameSpan" Preferred="None"/>
                        <StockType DataType="NameSpan" Preferred="bond"/>
                        <USWeight DataType="NumberSpan" Preferred="9"/>
                        <Opacity DataType="EnumerationSpan" Preferred="Opaque"/>
                    </MediaIntent>
                </ResourcePool>
                <ResourceLinkPool>
                    <ComponentLink rRef="Item004(Text)" Usage="Output"/>
                    <ColorIntentLink rRef="Color001(Text)" Usage="Input"/>
                    <MediaIntentLink rRef="Media001(Text)" Usage="Input"/>
                    <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
                </ResourceLinkPool>
            </JDF>
        </jdf:JDF>
    </RFQ>
  </Request>
</PrintTalk>
```

6.2.3 PrintTalk Version of Quotation

```xml
<?xml version="1.0" encoding="utf-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.printtalk.org/schema"
      xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
      xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
      version="1.1" payloadID="107778"
      timestamp="2013-07-25T22:39-08:00">
      <!--version: This is the PrintTalk version; borrowed from cXML.-->
      <!--payloadID: This is transport unique ID of the message; borrowed from cXML.-
            -->
   <Header>
      <From>
         <Credential domain="ECompany.com">
            <Identity>JJ Printing</Identity>
         </Credential>
         <Credential domain="DUNS">
            <Identity>06-358-9998</Identity>
         </Credential>
      </From>
      <To>
         <Credential domain="DNS">
            <Identity>www.billsfinebooks.com</Identity>
         </Credential>
         <Credential domain="ECompany.com">
            <Identity>Bill's Fine Books</Identity>
         </Credential>
         <Credential domain="DUNS">
            <Identity>06-388-7745</Identity>
         </Credential>
      </To>
      <Sender>
         <Credential domain="DNS">
            <Identity>www.JJPrinting.com</Identity>
            <SharedSecret>rosebud</SharedSecret>
         </Credential>
         <UserAgent>EFD 6.0</UserAgent>
      </Sender>
   </Header>
   <Request>
      <Quotation AgentID="Carlos" AgentDisplayName="Carlos Chavez" RequestDate="2013-
            07-25T10:00-08:00"
            BusinessID="Quote744910" BusinessRefID="RFQ_A3317" Currency="USD"
            Estimate="true" Expires="2013-08-26T1700-0800">
            <!--Print Provider sends a non-binding price.  Just an estimate-->
         <Quote QuoteID="Quote_1">
            <Pricing>
               <Price LineID="DI1_1" DescriptiveName="Hard Cover Books"
                     Amount="7500" Unit="copies" Price="24150.00">
                  <Additional Amount="1000" Price="2650.00"/>
                  <jdf:Comment>Estimated price $3.22 per book.  Additional price
                        $2.65 per book + shipping</Comment>
               </Price>
               <Price LineID="DI1_2" DescriptiveName="Shipping" Price="1233.00">
                  < jdf:Comment>Shipped UPS bookrate</Comment>
               </Price>
               <Price LineID="DI2_1" DescriptiveName="Soft Cover Book" Amount="7500"
                     Unit="copies" Price="8800.00">
                  <Additional Amount="1000" Price="1230.00"/>
```

```xml
            <jdf:Comment>Estimated price $1.76 per book.  Additional price
                $1.23 per book + shipping </Comment>
        </Price>
        <Price LineID="DI2_2" DescriptiveName="Shipping" Price="783.00">
            < jdf:Comment>Shipped UPS bookrate</Comment>
        </Price>
    </Pricing>
    <jdf:JDF DescriptiveName="224 page hard and soft cover book" ID="JDF000-
        Root" JobID="BuyerJob001"
        Type="Product" Status="Waiting" Version="1.1"
        xmlns="http://www.CIP4.org/JDFSchema_1_1">
        <!--JobID: sender's reference to a job/project.-->
        <!--Version: JDF version.-->
    <AuditPool>
        <!--Not required by PrintTalk, may be used at the discretion of
            the document creator.-->
        <Created Author="PrintTalk"
            TimeStamp="2013-07-1T11:20-08:00"/>
    </AuditPool>
    <ResourcePool>
        <CustomerInfo CustomerID="pb4653/99">
            <ContactRef rRef="Contact01"/>
        </CustomerInfo>
        <DeliveryIntent ID="Delivery001" Class="Intent"
            Status="Available">
            <DropIntent>
                <Required DataType="TimeSpan"
                    Preferred="2013-09-30T09:30-8:00"/>
                <!--Date by which the product is to be delivered-->
                <ContactRef rRef="Contact02"/>
                <DropItemIntent Amount="7500" >
                    <ComponentRef rRef="Item001(HardBook)"/>
                    <jdf:GeneralID IDUsage="LineID" IDValue=" DI1_1"/>
                    <jdf:GeneralID IDUsage="LineID" IDValue=" DI1_2"/>
                </DropItemIntent>
                <DropItemIntent Amount="5000" >
                    <ComponentRef rRef="Item003(SoftBook)"/>
                    <jdf:GeneralID IDUsage="LineID" IDValue=" DI2_1"/>
                    <jdf:GeneralID IDUsage="LineID" IDValue=" DI2_2"/>
                </DropItemIntent>
            </DropIntent>
            <Comment>Delivery of hardcover and softcover job</Comment>
        </DeliveryIntent>
        <Company ID="Company01" Class="Parameter" Status="Available"
            OrganizationName="Mega Corp"/>
        <Contact ID="Contact01" Class="Parameter" Status="Available"
            ContactTypes="Customer Billing">
            <Address Street="820 N. French Street" City="Wilmington"
                Region="DE" PostalCode="19801">
                <ExtendedAddress>Attention: Accounts
                    Payable</ExtendedAddress>
            </Address>
            <Person JobTitle="Purchasing Manager" FirstName="Lisa"
                FamilyName="Luft"/>
            <CompanyRef rRef="Company01"/>
        </Contact>
        <Contact ID="Contact02" Class="Parameter" Status="Available"
            ContactTypes="Delivery">
            <Address Street="555 Maple Drive" City="San Mateo" Region="CA"
                PostalCode="94403">
                <ExtendedAddress>Suite 245</ExtendedAddress>
            </Address>
```

```xml
                <Person JobTitle="Head of Book Division" FirstName="William"
                        FamilyName="Johnson"/>
                <CompanyRef rRef="Company01"/>
            </Contact>
        </ResourcePool>
        <ResourceLinkPool>
            <DeliveryIntentLink rRef="Delivery001" Usage="Input"/>
            <CustomerInfoLink rRef="pb4653/99" Usage="Input"/>
        </ResourceLinkPool>
        <JDF DescriptiveName=
            "224 page hard case bound book with a 4/0 dust jacket"
            ID="JDF001(HardBook)" Type="Product" Status="Waiting">
            <!--For Quote, whatever JDF "Product" elements necessary to
                    specify components to be delivered.-->
            <ResourcePool>
                <Component ID="Item001(HardBook)" Class="Quantity"
                        Status="Unavailable"
                        DescriptiveName="224 page hard case bound book with a
                        4/0 dust jacket" ComponentType="FinalProduct"/>
                <LayoutIntent ID="Size001(Finished)" Class="Intent"
                        Status="Available">
                    <Dimensions DataType="XYPairSpan" Preferred="612 792"
                            Range="576 720~648 864"/>
                    <Pages DataType="IntegerSpan" Preferred="224"/>
                </LayoutIntent>
                <BindingIntent ID="Bind001(HardCover)" Class="Intent"
                        Status="Available">
                    <BindingType DataType="EnumerationSpan"
                            Preferred="HardCover"/>
                    <BindingLength DataType="EnumerationSpan"
                            Preferred="Long"/>
                </BindingIntent>
            </ResourcePool>
            <ResourceLinkPool>
                <ComponentLink rRef="Item001(HardBook)" Usage="Output"/>
                <ComponentLink rRef="Item002(HardCase)" Usage="Input"
                        ProcessUsage="Cover"/>
                <ComponentLink rRef="Item004(Text)" Usage="Input"/>
                <ComponentLink rRef="Item006(DustJacket)" Usage="Input"/>
                <BindingIntentLink rRef="Bind001(HardCover)" Usage="Input"/>
                <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
            </ResourceLinkPool>
            <JDF DescriptiveName="DustJacket for Hard Cover"
                    ID="JDF004(DustJacket)" Type="Product" Status="Waiting">
                <ResourcePool>
                    <Component ID="Item006(DustJacket)" Class="Quantity"
                            Status="Unavailable"
                            DescriptiveName="Dust Jacket"
                            ComponentType="PartialProduct"/>
                    <ColorIntent ID="Color002(DustJacket)" Class="Intent"
                            Status="Available">
                        <Coverage DataType="NumberSpan" Preferred="50"/>
                        <ColorStandard DataType="NameSpan" Preferred="CMYK"
                                Priority="Required"/>
                        <InkManufacturer DataType="NameSpan"
                                Preferred="ToyoCrayola" Priority="Required"/>
                    </ColorIntent>
                    <MediaIntent ID="Media002(DustJacket)" Class="Intent"
                            Status="Available">
                        <FrontCoatings DataType="EnumerationSpan"
                                Preferred="None"/>
                        <StockType DataType="NameSpan" Preferred="Offset"/>
                    </MediaIntent>
```

```xml
        </ResourcePool>
        <ResourceLinkPool>
            <ComponentLink rRef="Item006(DustJacket)" Usage="Output"/>
            <ColorIntentLink rRef="Color002(DustJacket)"
                    Usage="Input"/>
            <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
            <MediaIntentLink rRef="Media002(DustJacket)"
                    Usage="Input"/>
        </ResourceLinkPool>
    </JDF>
    <JDF DescriptiveName="Case for Hard Cover" ID="JDF006(Case)"
            Type="Product" Status="Waiting">
        <ResourcePool>
            <Component ID="Item002(HardCase)" Class="Quantity"
                    Status="Unavailable" DescriptiveName="Book Case"
                    ComponentType="PartialProduct"/>
            <MediaIntent ID="Media001(Case)" Class="Intent"
                    Status="Available">
                <MediaColor DataType="EnumerationSpan"
                        Preferred="Black"/>
                <StockType DataType="NameSpan" Preferred="Cloth"/>
            </MediaIntent>
        </ResourcePool>
        <ResourceLinkPool>
            <ComponentLink rRef="Item002(HardCase)" Usage="Output"/>
            <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
            <MediaIntentLink rRef="Media001(Case)" Usage="Input"/>
        </ResourceLinkPool>
    </JDF>
</JDF>
<JDF DescriptiveName="224 page soft cover, perfect bound book"
        ID="JDF002(SoftBook)" Type="Product" Status="Waiting">
    <ResourcePool>
        <Component ID="Item003(SoftBook)" Class="Quantity"
                Status="Unavailable"
                DescriptiveName="soft cover, perfect bound book"
                ComponentType="FinalProduct"/>
        <BindingIntent ID="Bind002(SoftCover)" Class="Intent"
                Status="Available">
            <BindingType DataType="EnumerationSpan"
                    Preferred="SoftCover"/>
        </BindingIntent>
    </ResourcePool>
    <ResourceLinkPool>
        <ComponentLink rRef="Item003(SoftBook)" Usage="Output"/>
        <ComponentLink rRef="Item005(SoftCover)" Usage="Input"
                ProcessUsage="Cover"/>
        <ComponentLink rRef="Item004(Text)" Usage="Input"/>
        <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
        <BindingIntentLink rRef="Bind002(SoftCover)" Usage="Input"/>
    </ResourceLinkPool>
    <JDF DescriptiveName="Soft Cover" ID="JDF005(SoftCover)"
            Type="Product" Status="Waiting">
        <ResourcePool>
            <Component ID="Item005(SoftCover)" Class="Quantity"
                    Status="Unavailable"
                    DescriptiveName="soft cover"
                    ComponentType="PartialProduct"/>
            <MediaIntent ID="Media003(SoftCover)" Class="Intent"
                    Status="Available">
                <FrontCoatings DataType="EnumerationSpan"
                        Preferred="None"/>
                <StockType DataType="NameSpan" Preferred="Offset"/>
```

```xml
                    </MediaIntent>
                    <ColorIntent ID="Color003(SoftCover)" Class="Intent"
                            Status="Available">
                        <Coverage DataType="NumberSpan" Preferred="50"/>
                        <ColorStandard DataType="NameSpan" Preferred="CMYK"
                                Priority="Required"/>
                        <InkManufacturer DataType="NameSpan"
                                Preferred="ToyoCrayola" Priority="Required"/>
                    </ColorIntent>
                </ResourcePool>
                <ResourceLinkPool>
                    <ComponentLink rRef="Item005(SoftCover)" Usage="Output"/>
                    <LayoutIntentLink rRef="Size001(Finished)" Usage="Input" />
                    <ColorIntentLink rRef="Color003(SoftCover)" Usage="Input"/>
                    <MediaIntentLink rRef="Media003(SoftCover)" Usage="Input"/>
                </ResourceLinkPool>
            </JDF>
        </JDF>
        <JDF DescriptiveName="text for 224 page book" ID="JDF003(Text)"
                Type="Product" Status="Waiting">
            <ResourcePool>
                <Component ID="Item004(Text)" Class="Quantity"
                        Status="Unavailable"
                        DescriptiveName=
                        "Reader text for hard or soft cover 224 page book"
                        ComponentType="PartialProduct"/>
                <ColorIntent ID="Color001(Text)" Class="Intent"
                        Status="Available">
                    <ColorStandard DataType="NameSpan" Preferred="MonoChrome"/>
                    <Coverage DataType="NumberSpan" Preferred="10"/>
                    <InkManufacturer Range="Black" DataType="NameSpan"/>
                </ColorIntent>
                <MediaIntent ID="Media001(Text)" Class="Intent"
                        Status="Available">
                    <FrontCoatings DataType="EnumerationSpan"
                            Preferred="None"/>
                    <Opacity DataType="EnumerationSpan" Preferred="Opaque"/>
                    <StockType DataType="NameSpan" Preferred="Bond"/>
                    <USWeight DataType="NumberSpan" Preferred="9"/>
                </MediaIntent>
            </ResourcePool>
            <ResourceLinkPool>
                <ComponentLink rRef="Item004(Text)" Usage="Output"/>
                <ColorIntentLink rRef="Color001(Text)" Usage="Input"/>
                <MediaIntentLink rRef="Media001(Text)" Usage="Input"/>
                <LayoutIntentLink rRef="Size001(Finished)" Usage="Input"/>
            </ResourceLinkPool>
        </JDF>
    </jdf:JDF>
  </Quote>
 </Quotation >
 </Request>
</PrintTalk>
```

6.3   Example C – Sunrise PurchaseOrder

In PrintTalk, the Quotation response to an RFQ looks similar to that RFQ, usually restating many of the items in the original RFQ.   In the same way, a PurchaseOrder response to a Quotation looks similar to the Quotation. Of course, in the PurchaseOrder, any options are eliminated and the pricing specifies the exact quantity and tolerance for each delivery. It is also acceptable for the PurchaseOrder to simply acknowledge the quote and respond with acceptance without restating any of the specifications.

By using JDF, PrintTalk can support another kind of PurchaseOrder entirely. Sometimes, it's necessary to purchase an item from a printer that has a pre-established price and well-defined content. To embrace this Catalog-based part of the print market, JDF/PrintTalk allows finished goods to be ordered in a PurchaseOrder as components using GeneralID[@IDUsage="CatalogID"].

The following example uses Catalog elements as the contents of a Purchase Order.

6.3.1   Text Version of RFQ

MEGA corporation

Bill to:
Mega Corporation
4100 State Street
Little Rock, AR 72201

PURCHASE ORDER

24022

Provider:

Sunrise Printing
444 South Main Street
Albany, NY 12205

SUPPLIER ID:	730995
ORDER DATE:	10-Jul-2007
REQUESTOR:	Pat Butler
EMAIL:	pbutler@megacorp.com
FAX NO.:	973-555-1212
REFERENCE:	Sales

Ship To:

Phil Chavez
c/o Reylon Division
24 Madison Avenue
Suite 1
New York, NY 10022

Terms	Shipping Method	Due Date
2% 10, Net 30	UPS	8/22/02

Item	Quantity	U / M	Description	Unit Price	Disc %	Total
1	1	500	Business Cards-Phil Chavez	62.50	0	62.50
2	1	500	Notepad-Phil Chavez	54.00	10	48.60
3	250	1	Reylon Mailer	3.04	0	760.00

Please state our PO number on all invoices.

1. Refer all inquiries to buyer.
2. We reserve the right to return all over shipments for credit at Vendor's expense.
3. This order subject to Terms and Conditions on reverse side.

TOTAL:	871.10
DISCOUNT:	.00
TAX:	.00
SHIPPING:	12.00
OTHER:	.00
ORDER TOTAL:	883.10

6.3.2 PrintTalk Version of RFQ

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.printtalk.org/schema"
      xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
      xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
      version="1.1" payloadID="107448"
      timestamp="2013-07-10T22:39Z">
   <Header>
      <From>
         <Credential domain="DNS">
            <Identity>www.megacorp.com</Identity>
         </Credential>
         <Credential domain="ECompany.com">
            <Identity>Mega Corp</Identity>
         </Credential>
         <Credential domain="DUNS">
            <Identity>063887745</Identity>
         </Credential>
      </From>
      <To>
         <Credential domain="ECompany.com">
            <Identity>Sunrise Printing</Identity>
         </Credential>
         <Credential domain="DUNS">
            <Identity>063589998</Identity>
         </Credential>
      </To>
      <Sender>
         <Credential domain="DNS">
            <Identity>PrintORama.com</Identity>
            <SharedSecret>firehose</SharedSecret>
         </Credential>
         <UserAgent>Print Buyer v.54.9</UserAgent>
      </Sender>
   </Header>
   <Request>
      <PurchaseOrder AgentID="Patb" AgentDisplayName="Pat Butler" RequestDate="2013-
            07-10T1000-0800" BusinessID="24022" Currency="USD" Expires="2013-08-
            10T1700-0800">
         <Pricing>
            <Price LineID="DI1_1" DescriptiveName="Total" Price="62.50"/>
            <Price LineID="DI1_2" DescriptiveName="Discount"Unit="Percent"/>
            <Price LineID="DI2_1" DescriptiveName="Total" Price="54.00"/>
            <Price LineID="DI2_2" DescriptiveName="Discount" Price="5.40"/>
            <Price LineID="DI3_1" DescriptiveName="Total" Price="760.00"/>
            <Price LineID="DI4_1" DescriptiveName="Total" Price="871.10"/>
            <Price LineID="DI4_2" DescriptiveName=" Shipping and Handling"
                  Price="12.00" />
            <Price LineID="DI4_3" DescriptiveName="Tax" />
            <Price LineID="DI4_4" DescriptiveName="Discount" />
            <Payment>
               <PayTerm > 2% 10, Net 30</PayTerm>
            </Payment>
         </Pricing>
         <jdf:JDF DescriptiveName="Purchase Order 24022" ID="JDF000-Root"
               JobID="0901-1243" Type="Product" Status="Waiting" Version="1.1"
               xmlns="http://www.CIP4.org/JDFSchema_1_1">
            <ResourcePool>
               <CustomerInfo CustomerID="423163" >
                  <ContactRef rRef="Contact02"/>
```

```xml
        </CustomerInfo>
        <Contact ID="Contact01" Class="Parameter" Status="Available"
                ContactTypes="Delivery">
            <Address Street="24 Madison Avenue" City="New York" Region="NY"
                    PostalCode="10022">
                <ExtendedAddress>Suite 1</ExtendedAddress>
            </Address>
            <Person JobTitle="Sales Manager, East Coast" FirstName="Phil"
                    FamilyName="Chavez"/>
            <Company ID="Company01" Class="Parameter" Status="Available"
                    OrganizationName="Reylon Division"/>
        </Contact>
        <Contact ID="Contact02" Class="Parameter" Status="Available"
                ContactTypes="Billing Customer">
            <Address Street="4100 State Street"
                    City="Little Rock" Region="AR" PostalCode="72201"/>
            <Company ID="Company02" Class="Parameter" Status="Available"
                    OrganizationName="Mega Corporation"/>
        </Contact>
        <DeliveryIntent ID="Delivery001" Class="Intent" Status="Available">
            <Method DataType="NameSpan" Preferred="UPS"/>
            <DropIntent>
                <Required DataType="TimeSpan"
                        Preferred="2013-08-22T09:30-8:00"/>
                <ContactRef rRef="Contact01"/>
                <DropItemIntent Amount="1" Unit="500">
                        <ComponentRef rRef="Item001"/>
                        <jdf:GeneralID IDUsage="LineID" IDValue=" DI1_1"/>
                        <jdf:GeneralID IDUsage="LineID" IDValue=" DI1_2"/>
                </DropItemIntent>
                <DropItemIntent Amount="1" Unit="500">
                    <ComponentRef rRef="Item002"/>
                    <jdf:GeneralID IDUsage="LineID" IDValue=" DI2_1"/>
                    <jdf:GeneralID IDUsage="LineID" IDValue=" DI2_2"/>
                </DropItemIntent>
                <DropItemIntent Amount="250" Unit="1">
                    <ComponentRef rRef="Item003"/>
                    <jdf:GeneralID IDUsage="LineID" IDValue=" DI3_1"/>
                </DropItemIntent>
            </DropIntent>
            <jdf:GeneralID IDUsage="LineID" IDValue=" DI4_1"/>
            <jdf:GeneralID IDUsage="LineID" IDValue=" DI4_2"/>
            <jdf:GeneralID IDUsage="LineID" IDValue=" DI4_3"/>
            <jdf:GeneralID IDUsage="LineID" IDValue=" DI4_4"/>
        </DeliveryIntent>
        <Component ID="Item001" Class="Quantity" Status="Available"
                DescriptiveName="Business Cards - Phil Chavez"
                ComponentType="FinalProduct" CatalogID="BC-Phil Chavez"
                ProductID="Reylon-123"
                CatalogDetails="Business Cards - Phil Chavez"/>
        <Component ID="Item002" Class="Quantity" Status="Available"
                DescriptiveName="Notepad - Phil Chavez"
                ComponentType="FinalProduct" CatalogID="NP-Phil Chavez"
                ProductID="Reylon-124"
                CatalogDetails="Notepad - Phil Chavez"/>
        <Component ID="Item003" Class="Quantity" Status="Available"
                DescriptiveName="Reylon Mailer"
                ComponentType="FinalProduct" CatalogID="RM 25.5"
                ProductID="Reylon-125"
                CatalogDetails="Reylon Mailer"/>
    </ResourcePool>
    <ResourceLinkPool>
        <DeliveryIntentLink rRef="Delivery001" Usage="Input"/>
```

```
                    <CustomerLink rRef="423163" Usage="Input"/>
                </ResourceLinkPool>
            </jdf:JDF>
        </PurchaseOrder>
    </Request>
</PrintTalk>
```

6.4   Example D – Collaboration Scenario

The fourth example illustrates a scenario that occurs among four parties involved in a print production process. A *Print Buyer* PB1 and a *Print Buyer* PB2 both are ordering products via a "dealer" which in turns forwards the orders to a *Print Provider*.

In a first step, both *Print Buyers* send a PurchaseOrder to the dealer. The dealer then merges the two PurchaseOrder elements into a new PurchaseOrder (PO3) and sends it to the *Print Provider*. The *Print Provider* finally sends status information back to the dealer who in turn might forward that back to his customers. The *Print Provider* sends the physical products directly to the two *Print Buyers* and identifies them with the *Print Buyers'* purchase order numbers.

Note: the Confirmation *Business Objects* that are sent in between the PurchaseOrder elements and the OrderStatusResponse elements are not shown explicitly for sake of space.

Figure 8: Diagram of Business Transactions among Four Collaborating Parties
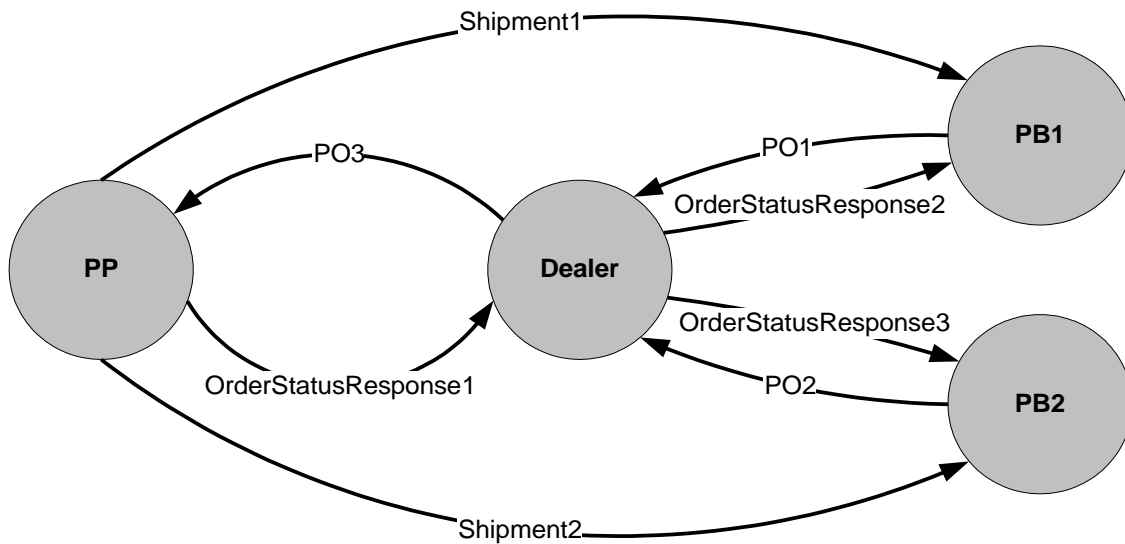
6.4.1 PrintTalk Version of PurchaseOrder for Print Buyer PB1

The PrintTalk/JDF files exchanged by the parties might look as follows (please note that the JDF part is not fully specified):

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.printtalk.org/schema"
      xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
      xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
      version="1.1" payloadID="107448" timestamp="2013-09-05T1000-0800">
   <Header>
      <From>
         <Credential domain="DNS">
            <Identity>www.fredsfinerugs.com</Identity>
         </Credential>
         <Credential domain="DUNS">
            <Identity>063333745</Identity>
         </Credential>
      </From>
      <To>
         <Credential domain="ECompany.com">
            <Identity>Print Dealer</Identity>
         </Credential>
         <Credential domain="DUNS">
            <Identity>063566668</Identity>
         </Credential>
      </To>
      <Sender>
         <Credential domain="DNS">
            <Identity>PrintORama.com</Identity>
            <SharedSecret>firehose</SharedSecret>
         </Credential>
         <UserAgent>PrintORama v.1.0</UserAgent>
      </Sender>
   </Header>
   <Request>
      <PurchaseOrder AgentID="LisaL" AgentDisplayName="Lisa Luft" RequestDate="2013-
            09-05T1000-0800" BusinessID="12345" Currency="USD" Expires="2013-09-
            10T1700-0800">
         <jdf:JDF DescriptiveName="Winter Sales Promo" ID="JDF000-Root" JobID="0901-
               1243" Type="Product" Status="Waiting" Version="1.1"
               xmlns="http://www.CIP4.org/JDFSchema_1_1">
            <ResourcePool>
               <CustomerInfo ID="Customer01" CustomerID="952425" >
                  <ContactRef rRef="Contact01"/>
               </CustomerInfo>
               <Contact ID="Contact01" Class="Parameter" Status="Available"
                     ContactTypes="Billing Delivery Customer">
                  <Address Street="1745 First Street" City="Dublin" Region="OH"
                        PostalCode="43202"/>
                  <Person JobTitle="Sales Administrator" FirstName="June"
                        FamilyName="Jones"/>
                  <Company ID="Company01" Class="Parameter" Status="Available"
                        OrganizationName="Fred's fine Rugs"/>
               </Contact>
               <DeliveryIntent ID="Delivery001" Class="Intent" Status="Available">
                  <Method DataType="NameSpan" Preferred="UPS"/>
                  <DropIntent>
                     <Required DataType="TimeSpan"
                           Preferred="2013-09-22T09:30-8:00"/>
```

```xml
                        <ContactRef rRef="Contact01"/>
                        <DropItemIntent Amount="1" Unit="500">
                            <ComponentRef rRef="Item001"/>
                        </DropItemIntent>
                    </DropIntent>
                </DeliveryIntent>
            </ResourcePool>
            <ResourceLinkPool>
                <DeliveryIntentLink rRef="Delivery001" Usage="Input"/>
                <CustomerInfoLink rRef="Customer01" Usage="Input"/>
            </ResourceLinkPool>
            <JDF DescriptiveName="Ordered Product" ID="JDF001" Type="Product"
                    Status="Waiting">
                <ResourcePool>
                    <!--ResourcePool only added as placeholder-->
                </ResourcePool>
                <ResourceLinkPool>
                    <!--ResourceLinkPool only added as placeholder-->
                </ResourceLinkPool>
                <JDF>
                    <!--Sub-JDF-node only added as placeholder-->
                </JDF>
            </JDF>
        </jdf:JDF>
        <Pricing >
            <Price DescriptiveName="Total" Price="1531.00"/>
            <Price DescriptiveName ="Shipping and Handling" Price="42.00"/>
            <Price DescriptiveName ="Tax" />
            <Price DescriptiveName ="Discount" />
            <Payment>
                <PayTerm>2% 10, Net 30</PayTerm>
            </Payment>
        </Pricing>
    </PurchaseOrder>
  </Request>
</PrintTalk>
```

6.4.2 PrintTalk Version of PurchaseOrder for Print Buyer PB2

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns="http://www.printtalk.org/schema"
     xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
     xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
     version="1.1" payloadID="273743" timestamp="2013-09-05T900-0800">
  <Header>
    <From>
        <Credential domain="DNS">
            <Identity>www.texascabinet.com</Identity>
        </Credential>
        <Credential domain="DUNS">
            <Identity>05284945563</Identity>
        </Credential>
    </From>
    <To>
        <Credential domain="ECompany.com">
            <Identity>Print Dealer</Identity>
        </Credential>
        <Credential domain="DUNS">
            <Identity>063589998</Identity>
        </Credential>
    </To>
    <Sender>
```

```xml
            <Credential domain="DNS">
                <Identity>PrintORama.com</Identity>
                <SharedSecret>rosebud</SharedSecret>
            </Credential>
            <UserAgent>PrintORama v.1.0</UserAgent>
        </Sender>
    </Header>
    <Request>
        <PurchaseOrder AgentID="SteveP" AgentDisplayName="Steve Phillips"
                RequestDate="2013-09-05T900-0800" BusinessID="6789" Currency="USD"
                Expires="2013-09-09T1700-0800">
            <jdf:JDF DescriptiveName="New Years Clearance sale" ID="JDF000-Root"
                    JobID="0901-1266" Type="Product" Status="Waiting" Version="1.1"
                    xmlns="http://www.CIP4.org/JDFSchema_1_1">
                <ResourcePool>
                    <CustomerInfo ID="Customer01" CustomerID="952501" >
                        <ContactRef rRef="Contact01"/>
                    </CustomerInfo>
                    <Contact ID="Contact01" Class="Parameter" Status="Available"
                            ContactTypes="Billing Delivery Customer">
                        <Address Street="42425 Maple Street" City="San Antonio"
                                Region="TX" PostalCode="78294"/>
                        <Person JobTitle="Marketing Officer" FirstName="John"
                                FamilyName="Stockton"/>
                        <Company ID="Company02" Class="Parameter" Status="Available"
                                OrganizationName="Texas Cabinet Company"/>
                    </Contact>
                    <DeliveryIntent ID="Delivery001" Class="Intent" Status="Available">
                        <Method DataType="NameSpan" Preferred="UPS"/>
                        <DropIntent>
                            <Required DataType="TimeSpan"
                                    Preferred="2013-09-30T12:00-8:00"/>
                            <ContactRef rRef="Contact01"/>
                            <DropItemIntent Amount="100" Unit="1">
                                <ComponentRef rRef="Item001"/>
                            </DropItemIntent>
                        </DropIntent>
                    </DeliveryIntent>
                </ResourcePool>
                <ResourceLinkPool>
                    <DeliveryIntentLink rRef="Delivery001" Usage="Input"/>
                    <CustomerInfoLink rRef= "Customer01" Usage="Input"/>
                </ResourceLinkPool>
                <JDF DescriptiveName="Ordered Product" ID="JDF001" Type="Product"
                        Status="Waiting">
                    <ResourcePool>
                        <!--ResourcePool only added as placeholder-->
                    </ResourcePool>
                    <ResourceLinkPool>
                        <!--ResourceLinkPool only added as placeholder-->
                    </ResourceLinkPool>
                    <JDF>
                        <!--Sub-JDF-node only added as placeholder-->
                    </JDF>
                </JDF>
            </jdf:JDF>
            <Pricing >
                <Price DescriptiveName="Total" Price="1012.80"/>
                <Price DescriptiveName="Shipping and Handling" Price="34.00"/>
                <Price DescriptiveName="Tax"/>
                <Price DescriptiveName="Discount" />
                <Payment>
                    <PayTerm>2% 10, Net 30</PayTerm>
```

```
                </Payment>
            </Pricing>
        </PurchaseOrder>
    </Request>
</PrintTalk>
```

6.4.3 PrintTalk Version of PurchaseOrder for Dealer

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.printtalk.org/schema"
      xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
      xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
      version="1.1" payloadID="13474875" timestamp="2013-09-06T1000-0800">
    <Header>
        <From>
            <Credential domain="DNS">
                <Identity>Print Dealer</Identity>
            </Credential>
            <Credential domain="DUNS">
                <Identity>063589998</Identity>
            </Credential>
        </From>
        <To>
            <Credential domain="AvalonPrinting.com">
                <Identity>Avalon Printing</Identity>
            </Credential>
            <Credential domain="DUNS">
                <Identity>012737459</Identity>
            </Credential>
        </To>
        <Sender>
            <Credential domain="DNS">
                <Identity>PrintORama.com</Identity>
                <SharedSecret>catsndogs</SharedSecret>
            </Credential>
            <UserAgent>PrintORama v.1.0</UserAgent>
        </Sender>
    </Header>
    <Request>
        <PurchaseOrder AgentID="MLow" AgentDisplayName="Margaret Low"
              RequestDate="2013-09-06T1000-0800" BusinessID="1111" Currency="USD"
              Expires="2013-09-10T1700-0800">
            <jdf:JDF DescriptiveName="Flyers" ID="JDF000-Root" JobID="0901-1299"
                  Type="Product" Status="Waiting" Version="1.1"
                  xmlns="http://www.CIP4.org/JDFSchema_1_1">
                <ResourcePool>
                    <CustomerInfo ID="Customer01" CustomerID="752354" >
                        <ContactRef rRef="Contact01"/>
                    </CustomerInfo>
                    <Contact ID="Contact01" Class="Parameter" Status="Available"
                          ContactTypes="Billing Customer">
                        <Address Street="123 5th Street" City="New York" Region="NY"
                              PostalCode="10024"/>
                        <Person JobTitle="Sales Manager" FirstName="Bill"
                              FamilyName="Mayers"/>
                        <Company ID="Dealer01" Class="Parameter" Status="Available"
                              OrganizationName="Print Dealer"/>
                    </Contact>
                    <Contact ID="Contact02" Class="Parameter" Status="Available"
                          ContactTypes="Delivery">
                        <Address Street="1745 First Street" City="Dublin" Region="OH"
                              PostalCode="43202"/>
```

```xml
                <Person JobTitle="Sales Administrator" FirstName="June"
                        FamilyName="Jones"/>
                <Company ID="Company01" Class="Parameter" Status="Available"
                        OrganizationName="Fred's Fine Rugs"/>
        </Contact>
        <Contact ID="Contact03" Class="Parameter" Status="Available"
                ContactTypes="Delivery">
                <Address Street="42425 Maple Street" City="San Antonio"
                        Region="TX" PostalCode="78294"/>
                <Person JobTitle="Marketing Officer" FirstName="John"
                        FamilyName="Stockton"/>
                <Company ID="Company02" Class="Parameter" Status="Available"
                        OrganizationName="Texas Cabinet Company"/>
        </Contact>
        <DeliveryIntent ID="Delivery001" Class="Intent" Status="Available">
            <Method DataType="NameSpan" Preferred="UPS"/>
            <DropIntent>
                <Required DataType="TimeSpan"
                        Preferred="2013-09-22T09:30-8:00"/>
                <ContactRef rRef="Contact02"/>
                <DropItemIntent Amount="1" Unit="500">
                    <ComponentRef rRef="Item001"/>
                </DropItemIntent>
                <jdf:GeneralID IDUsage="LineID" IDValue=" DI1_1"/>
                <jdf:GeneralID IDUsage="LineID" IDValue=" DI1_2"/>
                <jdf:GeneralID IDUsage="LineID" IDValue=" DI1_3"/>
                <jdf:GeneralID IDUsage="LineID" IDValue=" DI1_4"/>
            </DropIntent>
            <DropIntent>
                <Required DataType="TimeSpan"
                        Preferred="2013-09-30T12:00-8:00"/>
                <ContactRef rRef="Contact03"/>
                <DropItemIntent Amount="100" Unit="1">
                    <ComponentRef rRef="Item002"/>
                </DropItemIntent>
                <jdf:GeneralID IDUsage="LineID" IDValue=" DI2_1"/>
                <jdf:GeneralID IDUsage="LineID" IDValue=" DI2_2"/>
                <jdf:GeneralID IDUsage="LineID" IDValue=" DI2_3"/>
                <jdf:GeneralID IDUsage="LineID" IDValue=" DI2_4"/>
            </DropIntent>
        </DeliveryIntent>
    </ResourcePool>
    <ResourceLinkPool>
        <DeliveryIntentLink rRef="Delivery001" Usage="Input"/>
        <CustomerLink rRef="Customer01" Usage="Input"/>
    </ResourceLinkPool>
    <JDF DescriptiveName="Winter Sales Promo" ID="JDF001" JobPartID="0901-
        1243"
        Type="Product" Status="Waiting">
        <ResourcePool>
            <CustomerInfo ID="Customer02" CustomerJobName="0901-1243"
                    CustomerOrderID="12345">
                <ContactRef rRef="Contact02"/>
            </CustomerInfo>
        </ResourcePool>
        <ResourceLinkPool>
            <CustomerInfoLink rRef="Customer02" Usage="Input"/>
        </ResourceLinkPool>
        <JDF>
            <!--Sub-JDF-node only added as placeholder-->
        </JDF>
    </JDF>
```

```xml
                    <JDF DescriptiveName=" New Years Clearance sale" ID="JDF002"
                         JobPartID="0901-1266" Type="Product" Status="Waiting">
                      <ResourcePool>
                          <CustomerInfo ID="Customer03" CustomerJobName="0901-1266"
                                  CustomerOrderID="6789">
                            <ContactRef rRef="Contact03"/>
                          </CustomerInfo>
                      </ResourcePool>
                      <ResourceLinkPool>
                          <CustomerInfoLink rRef="Customer03" Usage="Input"/>
                      </ResourceLinkPool>
                      <JDF>
                          <!--Sub-JDF-node only added as placeholder-->
                      </JDF>
                    </JDF>
                </jdf:JDF>
                <Pricing >
                    <Price LineID="DI1_1" DescriptiveName="Total" Price="871.10"/>
                    <Price LineID="DI1_2" DescriptiveName="Shipping and Handling"
                            Price="12.00"/>
                    <Price LineID="DI1_3" DescriptiveName="Tax" />
                    <Price LineID="DI1_4" DescriptiveName="Discount" />
                    <Price LineID="DI2_1" DescriptiveName="Total" Price="612.80"/>
                    <Price LineID="DI2_2" DescriptiveName="Shipping and Handling"
                            Price="34.00"/>
                    <Price LineID="DI2_3" DescriptiveName="Tax" HasPrice="false"/>
                    <Price LineID="DI2_4" DescriptiveName="Discount" HasPrice="false"/>
                    <Payment>
                        <PayTerm>2% 10, Net 30</PayTerm>
                    </Payment>
                </Pricing>
            </PurchaseOrder>
        </Request>
</PrintTalk>
```

6.4.4 PrintTalk Version of OrderStatusResponse (1) for Dealer

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.printtalk.org/schema"
      xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
      xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
      version="1.1" payloadID="187455"
      timestamp="2013-09-20T1000-0800">
    <Header>
      <From>
          <Credential domain="AvalonPrinting.com">
            <Identity>Avalon Printing</Identity>
          </Credential>
          <Credential domain="DUNS">
            <Identity>012737459</Identity>
          </Credential>
      </From>
      <To>
          <Credential domain="DNS">
            <Identity>Print Dealer</Identity>
          </Credential>
          <Credential domain="DUNS">
            <Identity>063589998</Identity>
          </Credential>
      </To>
      <Sender>
          <Credential domain="DNS">
```

```
                <Identity>PrintORama.com</Identity>
                <SharedSecret>newyork</SharedSecret>
            </Credential>
            <UserAgent>PrintORama v.1.0</UserAgent>
        </Sender>
    </Header>
    <Request>
        <OrderStatusResponse AgentID="PrintORama"
                AgentDisplayName="PrintORama Auto Generated"
                RequestDate="2013-09-20T1000-0800" BusinessID="234"
                BusinessRefID="Conf_1111">
            <jdf:Notification JobID = "0901-1243" Type = "Milestone">
                <Milestone MilestoneType = "ShippingCompleted"/>
            </jdf:Notification>
            <jdf:Notification JobID = "0901-1266" Type = "Milestone">
                <Milestone MilestoneType = "ShippingCompleted"/>
            </jdf:Notification>
        </OrderStatusResponse>
    </Request>
</PrintTalk>
```

6.4.5 PrintTalk Version of OrderStatusResponse (2) for Print Buyer PB1

```
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns="http://www.printtalk.org/schema"
        xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
        xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
        version="1.1" payloadID="187655"
        timestamp="2013-09-20T1030-0800">
    <Header>
        <From>
            <Credential domain="DNS">
                <Identity>Print Dealer</Identity>
            </Credential>
            <Credential domain="DUNS">
                <Identity>063589998</Identity>
            </Credential>
        </From>
        <To>
            <Credential domain="DNS">
                <Identity>www.fredsfinerugs.com</Identity>
            </Credential>
            <Credential domain="DUNS">
                <Identity>063887745</Identity>
            </Credential>
        </To>
        <Sender>
            <Credential domain="DNS">
                <Identity>PrintORama.com</Identity>
                <SharedSecret>catsndogs</SharedSecret>
            </Credential>
            <UserAgent>PrintORama v.1.0</UserAgent>
        </Sender>
    </Header>
    <Request>
        <OrderStatusResponse AgentID="Dealer" AgentDisplayName="Dealer User"
                RequestDate="2013-09-20T1030-0800"
                BusinessID="1222" BusinessRefID="Conf_12345">
            <jdf:Notification JobID = "0901-1243" Type = "Milestone">
                <Milestone MilestoneType = "ShippingCompleted"/>
            </jdf:Notification>
        </OrderStatusResponse>
```

```
        </Request>
</PrintTalk>
```

6.4.6 PrintTalk Version of OrderStatusResponse (3) for Print Buyer PB2

```xml
<?xml version="1.0" encoding="UTF-8"?>
<PrintTalk xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.printtalk.org/schema"
      xmlns:jdf="http://www.CIP4.org/JDFSchema_1_1"
      xsi:schemaLocation="http://www.printtalk.org/schema PrintTalk_1_1.xsd"
      version="1.1" payloadID="187655"
      timestamp="2013-09-20T1030-0800">
   <Header>
      <From>
         <Credential domain="DNS">
            <Identity>Print Dealer</Identity>
         </Credential>
         <Credential domain="DUNS">
               <Identity>063589998</Identity>
         </Credential>
      </From>
      <To>
         <Credential domain="DNS">
            <Identity>www.texascabinet.com</Identity>
         </Credential>
         <Credential domain="DUNS">
            <Identity>05284945563</Identity>
         </Credential>
      </To>
      <Sender>
         <Credential domain="DNS">
            <Identity>PrintORama.com</Identity>
            <SharedSecret>catsndogs</SharedSecret>
         </Credential>
         <UserAgent>PrintORama v.1.0</UserAgent>
      </Sender>
   </Header>
   <Request>
      <OrderStatusResponse AgentID="Dealer" AgentDisplayName="Dealer User"
            RequestDate="2013-09-20T1030-0800"
            BusinessID="1223" BusinessRefID="Conf_6789">
         <jdf:Notification JobID = "0901-1266" Type = "Milestone">
            <Milestone MilestoneType = "ShippingCompleted"/>
         </jdf:Notification>
      </OrderStatusResponse>
   </Request>
</PrintTalk>
```

7   References

7.1   Normative References

[JDF1.5]   Job Definition Format (JDF), Version 1.5, published December 2013, available at
                http://www.cip4.org.

[cXML 1.2]   cXML User's Guide, version 1.2, published April 2013, available at
                http://xml.cxml.org/current/cXMLUsersGuide.pdf

[ISO4217]   ISO 4217:2008, Codes for the representation of currencies and funds, published 2008, available at
                http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=46121

[ISO8601]   ISO 8601:2004, Data elements and interchange formats -- Information interchange --
                Representation of dates and times, published in 2004, available at
                http://www.iso.org/iso/catalogue_detail?csnumber=40874

[XML]   Extensible Markup Language (XML) 1.0 (Fifth Edition), published November 2008, available at
                http://www.w3.org/TR/2008/REC-xml-20081126/

[XMLNS]   Namespaces in XML 1.0 (Third Edition), published December 2009, available at
                http://www.w3.org/TR/REC-xml-names/