

PIDX XML Invoice Response Usage Guideline

Introduction

Following the PIDX Spring 2005 conference BMWG session, a proposed modification to the Invoice Response document was circulated to the group. This modification was drafted to address several design constraints found within the original document, that was limiting the widespread adoption of the Invoice Response message. This guideline covers how these proposed changes should be used to meet some of the shortcomings previously identified, namely:

- Invoice acceptance or rejection should be flagged at the Invoice Response Properties (i.e. header) level.
- The schema should support the reporting of errors identified in the original invoice header.
- Line item status reporting should be optional and not mandatory.
- InvoiceResponseNumber usage needs to be clarified.

As determined at the Spring 2005 conference, no effort to tackle additional housekeeping tasks related to the Invoice Response XSD where to be undertaken.

Usage Guideline

The PIDX BMWG recommends that the Invoice Response document be used to indicate only the acceptance or rejection of an invoice.

The existing version of the document infers that it could be used for dispute resolution, enabling a buyer to use the invoice response to indicate updates to the original invoice. The business process required to accommodate this activity is undefined and the current schema offers no guideline as to how this might be deployed – encouraging non-standard implementations. The PIDX BMWG recommends that the Invoice Response document not be used for this purpose.

When receiving an Invoice Response, a Trading Partner has no obligation to process any elements other than the mandatory elements as defined by the schema.

To facilitate the use of the Invoice Response document for acceptance or rejection, the sender of the invoice response is required to provide the receiver, the minimum amount of information necessary to match the invoice response to the original invoice.

If the original invoice is being rejected, then in addition to the rejection status flag, the document should contain the appropriate level of information necessary for the receiver to determine the cause of the rejection. Within the schema this requirement cannot be enforced therefore a rejection reason comment is optional within the schema but is required by this Usage Guideline.

Page 1 of 13



The Invoice Response document must be used to accept or reject the entire, associated, Invoice document. A partial acceptance of an invoice is to be avoided.

Within the Invoice Response document, an accept at the Invoice Response Properties level implies that you cannot have a reject at the Invoice Response Details level.

Invoice Response Accept

When an invoice has been accepted the following minimum information must be included within the invoice response:

Description	Element
Invoice Response Number	<pre><invoiceresponse><invoiceresponseproperties> <invoiceresponsenumber></invoiceresponsenumber></invoiceresponseproperties></invoiceresponse></pre>
Status Code (Header)	<pre><invoiceresponse><invoiceresponseproperties> <statuscode></statuscode></invoiceresponseproperties></invoiceresponse></pre>
Invoice Response Date	<pre><invoiceresponse><invoiceresponseproperties> <invoiceresponsedate></invoiceresponsedate></invoiceresponseproperties></invoiceresponse></pre>
Partner Information	<pre><invoiceresponse><invoiceresponseproperties> <partnerinformation><partneridentifier></partneridentifier></partnerinformation></invoiceresponseproperties></invoiceresponse></pre>
Invoice Number	<pre><invoiceresponse><invoiceresponseproperties> <invoiceinformation><invoicenumber></invoicenumber></invoiceinformation></invoiceresponseproperties></invoiceresponse></pre>

Invoice Response Reject – Header

When an invoice has been rejected, for an issue at the header level, the following minimum information must be included within the invoice response:

Description	Element
Invoice Response Number	<invoiceresponse><invoiceresponseproperties> <invoiceresponsenumber></invoiceresponsenumber></invoiceresponseproperties></invoiceresponse>
Status Code (Header)	<invoiceresponse><invoiceresponseproperties> <statuscode></statuscode></invoiceresponseproperties></invoiceresponse>
Response Reason Code (Header)	<invoiceresponse><invoiceresponseproperties> <invoiceresponsereason> <responsereasoncode></responsereasoncode></invoiceresponsereason></invoiceresponseproperties></invoiceresponse>
Response Reason Comments (Header)	<invoiceresponse><invoiceresponseproperties> <invoiceresponsereason> <responsereasoncomments></responsereasoncomments></invoiceresponsereason></invoiceresponseproperties></invoiceresponse>
Invoice Response Date	<invoiceresponse><invoiceresponseproperties> <invoiceresponsedate></invoiceresponsedate></invoiceresponseproperties></invoiceresponse>
Partner Information	<invoiceresponse><invoiceresponseproperties> <partnerinformation><partneridentifier></partneridentifier></partnerinformation></invoiceresponseproperties></invoiceresponse>
Invoice Number	<invoiceresponse><invoiceresponseproperties> <invoiceinformation><invoicenumber></invoicenumber></invoiceinformation></invoiceresponseproperties></invoiceresponse>

Invoice Response Reject – Line Item

Additionally, the Invoice Response document can be used to provide more detailed information regarding an invoice rejection by enabling comments to be added to any line item elements that are being disputed. In this scenario the following minimum information must be included within the invoice response:

Page 2 of 13



Description	Element
Invoice Response Number	<pre><invoiceresponse><invoiceresponseproperties> <invoiceresponsenumber></invoiceresponsenumber></invoiceresponseproperties></invoiceresponse></pre>
Status Code (Header)	<invoiceresponse><invoiceresponseproperties> <statuscode></statuscode></invoiceresponseproperties></invoiceresponse>
Response Reason Code (Header)	<invoiceresponse><invoiceresponseproperties> <invoiceresponsereason> <responsereasoncode></responsereasoncode></invoiceresponsereason></invoiceresponseproperties></invoiceresponse>
Response Reason Comments (Header)	<invoiceresponse><invoiceresponseproperties> <invoiceresponsereason> <responsereasoncomments></responsereasoncomments></invoiceresponsereason></invoiceresponseproperties></invoiceresponse>
Invoice Response Date	<invoiceresponse><invoiceresponseproperties> <invoiceresponsedate></invoiceresponsedate></invoiceresponseproperties></invoiceresponse>
Partner Information	<invoiceresponse><invoiceresponseproperties> <partnerinformation><partneridentifier></partneridentifier></partnerinformation></invoiceresponseproperties></invoiceresponse>
Invoice Number	<invoiceresponse><invoiceresponseproperties> <invoiceinformation><invoicenumber></invoicenumber></invoiceinformation></invoiceresponseproperties></invoiceresponse>
Status Code (Line Item)	<invoiceresponse><invoiceresponsedetails> <statuscode></statuscode></invoiceresponsedetails></invoiceresponse>
Response Reason Code (Line Item)	<invoiceresponse><invoiceresponsedetails> <invoiceresponsereason> <responsereasoncode></responsereasoncode></invoiceresponsereason></invoiceresponsedetails></invoiceresponse>
Response Reason Comments (Line Item)	<invoiceresponse><invoiceresponsedetails> <invoiceresponsereason> <responsereasoncomments></responsereasoncomments></invoiceresponsereason></invoiceresponsedetails></invoiceresponse>

For each line item in dispute, an *InvoiceResponseReason* element should be populated to indicate the exact cause of the dispute.

Element Usage

The *InvoiceResponseNumber* is a unique number issued to each invoice response by the sender of the Invoice Response document.

The *StatusCode* is used to indicate the invoice response, "Accept", "Reject". The use of any other codes in the *StatusCode* element is not defined.

The *ResponseReasonCode* is used to categorize the reason for an invoice rejection, "Missing Content", "Disputed Content", "Routing Error", "Other".

A textual description, *ResponseReasonComments*, must also accompany the rejection reason code, *ResponseReasonCode*, in order to facilitate the quick resolution of the disputed invoice.

The *InvoiceResponseDate* is the date on which the document was generated by the sender of the invoice response document.

The *PartnerIdentifier* is the unique identifier for each trader partner. This is the same information that was transmitted and received in the original invoice.

The *InvoiceNumber* is the invoice number from the original invoice.

The *InvoiceResponseReason* element within *InvoiceResponseProperties* should only be used for header level issues, whereas the *InvoiceResponseReason* element within *InvoiceResponseDetails* should only be used for line item level issues.

Page 3 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)



Within the *InvoiceResponse* element the *TransactionPurposeIndicator* is a required attribute. When transmitting an Invoice Response document the type code "*Add*" should always be used. The usage of other types is undefined at this time.

Summary

The Usage Guideline for the draft Invoice Response XSD, documents a light weight implementation that meets the requirements for the PIDX Invoice Response Process defined by PIDX BPWG and laid out as an immediate objective for the PIDX BMWG at the Spring 2005 conference.

The Usage Guideline shows the minimum amount of information that the invoice response document must contain in order for the Invoice Response Business Process to be supported.

The changes to the schema have been limited to meeting only the problems identified with the original schema.

The addition of the *StatusCode* element at the Properties level enables a quick determination to be made of the status of the original invoice.

The addition of *InvoiceResponseReason* complex type allows for invoice header level problems to be identified. While the inclusion of the XPath element ensures that accurate identification of any invoice problems can be identified and communicated.

Modifying mandatory line item elements so that they are optional, allows for a very simple accept response and enables header level issues on the original invoice to also be communicated.

The Usage Guideline itself, documents how trading partners should use the Invoice Response document and thus ensure more consistent implementations across multiple trading partners.

Page 4 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)



Appendices

1. Sample Invoice Response Usage - Accept

This example illustrates a very simple example of using the Invoice Response document to accept an invoice.

Inbound Invoice Document edited with XML Spy v4.4 U (http://www.xmlspy.com)	
<pre><pre><pre><pre>click</pre>interview</pre>interview</pre>interview</pre> interviewinterviewinterviewinterviewinterview	
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"	
xsi:schemaLocation="http://www.pidx.org/pidXML/v1.2	
C:\Temp\PIDXSchema\Invoice.xsd" pidx:transactionPurposeIndicator="Add"	
pidx:version="1.0">	
<pre><pidx:invoiceproperties></pidx:invoiceproperties></pre>	Original Invoice
<pre><pidx:invoicenumber>36431</pidx:invoicenumber></pre>	Number
<pre><pidx:invoicedate>2005-07-24</pidx:invoicedate></pre>	
<pre><pre><pre><pre>cpidx:PartnerInformation partnerRoleIndicator="SoldTo"></pre></pre></pre></pre>	
<pre><pre>cpidx:PartnerIdentifier</pre></pre>	
partnerldentifierIndicator="AssignedByBuyer">000000002	Buyer ID
<pre><pre>cpidx:PartnerName>Well Inc</pre>/pidx:PartnerName></pre>	
<pre><pre>cpidx:AddressInformation></pre></pre>	
<pidx:addressline>W Loop S, 765</pidx:addressline>	
<pre><pidx:cityname>Houston</pidx:cityname></pre>	
<pre><pidx:stateprovince>TX</pidx:stateprovince></pre>	
<pre><pidx:postalcode>77027</pidx:postalcode></pre>	
<pre><pidx:contactinformation contactinformationindicator="OrderContact"></pidx:contactinformation></pre>	Seller ID
<pre></pre>	Seller ID
	-
<pre><pidx:partnerinformation partnerroleindicator="Seller"></pidx:partnerinformation></pre>	
<pre><pidx:partneridentifier< pre=""></pidx:partneridentifier<></pre>	
partnerIdentifierIndicator="AssignedBySeller">432156789	
<pre><pidx:partnername>Big M Little Organ, Inc</pidx:partnername></pre>	
<pre><pidx:addressinformation></pidx:addressinformation></pre>	
<pre><pidx:addressline>P.O. Box 99999</pidx:addressline></pre>	
<pidx:cityname>Midland</pidx:cityname>	
<pre><pidx:stateprovince>TX</pidx:stateprovince></pre>	
<pre><pidx:postalcode>79711-0365</pidx:postalcode></pre>	
<pre><pidx:contactinformation></pidx:contactinformation></pre>	
<pre><pidx:telephone telephoneindicator="Voice"></pidx:telephone></pre>	
<pidx:phonenumber>(713) 563-1299</pidx:phonenumber>	
<pidx:invoicetypecode>ProductOrService</pidx:invoicetypecode>	
<pidx:primarycurrency></pidx:primarycurrency>	
<pre><pidx:currencycode>USD</pidx:currencycode></pre>	

PIDX XML Invoice Response Usage Guideline Document ID: 01-133-20-50-2006

Page 5 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)



<pidx:JobLocationInformation> <pidx:JobLocationIdentifier jobLocationIdentifierIndicator="Other"/> <pidx:JobLocationDescription>Well #9, Andrews County</pidx:JobLocationDescription> </pidx:JobLocationInformation> <pidx:ServiceDateTime dateTypeIndicator="ServicePeriodStart">2005-07-20T00:00:00</pidx:ServiceDateTime> </pidx:InvoiceProperties> <pidx:InvoiceDetails> <pidx:InvoiceLineItem> <pidx:LineItemNumber>1</pidx:LineItemNumber> <pidx:InvoiceQuantity> <pidx:Quantity>1000</pidx:Quantity> <pidx:UnitOfMeasureCode>GAL</pidx:UnitOfMeasureCode> </pidx:InvoiceQuantity> <pidx:LineItemInformation> <pidx:LineItemIdentifier identifierIndicator="AssignedBySeller">15-A</pidx:LineItemIdentifier> <pidx:LineItemDescription>15% HCI</pidx:LineItemDescription> </pidx:LineItemInformation> <pidx:Pricing> <pidx:UnitPrice> <pidx:MonetaryAmount>1.21</pidx:MonetaryAmount> <pidx:UnitOfMeasureCode>EA</pidx:UnitOfMeasureCode> </pidx:UnitPrice> </pidx:Pricing> <pidx:LineItemTotal> <pidx:MonetaryAmount>1210</pidx:MonetaryAmount> </pidx:LineItemTotal> </pidx:InvoiceLineItem> <pidx:InvoiceLineItem> <pidx:LineItemNumber>2</pidx:LineItemNumber> <pidx:InvoiceQuantity> <pidx:Quantity>10</pidx:Quantity> <pidx:UnitOfMeasureCode>GAL</pidx:UnitOfMeasureCode> </pidx:InvoiceQuantity> <pidx:LineItemInformation> <pidx:LineItemIdentifier identifierIndicator="AssignedBySeller">BC-156</pidx:LineItemIdentifier> <pidx:LineItemDescription>Fe/AS-2X, Anti-Sludge</pidx:LineItemDescription> </pidx:LineItemInformation> <pidx:Pricing> <pidx:UnitPrice> <pidx:MonetaryAmount>21.35</pidx:MonetaryAmount> <pidx:UnitOfMeasureCode>EA</pidx:UnitOfMeasureCode> </pidx:UnitPrice> </pidx:Pricing> <pidx:LineItemTotal> <pidx:MonetaryAmount>213.50</pidx:MonetaryAmount> </pidx:LineItemTotal> </pidx:InvoiceLineItem> <pidx:InvoiceLineItem> <pidx:LineItemNumber>3</pidx:LineItemNumber> <pidx:InvoiceQuantity> <pidx:Quantity>2</pidx:Quantity> <pidx:UnitOfMeasureCode>GAL</pidx:UnitOfMeasureCode> </pidx:InvoiceQuantity> <pidx:LineItemInformation>

Page 6 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)

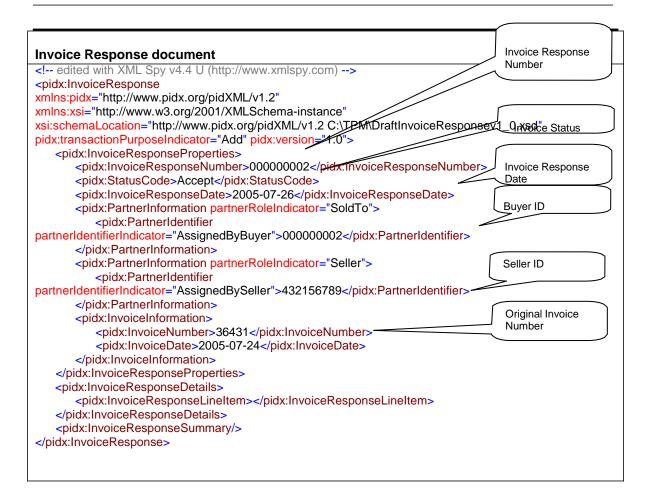


<pre><pidx:lineitemidentifier identifierindicator="AssignedBySeller">BC-</pidx:lineitemidentifier></pre>
103
<pre><pidx:lineitemdescription>I-8, Corrosion Inhibitor</pidx:lineitemdescription></pre>
<pre><pre>></pre></pre>
<pre><pidx:unitprice></pidx:unitprice></pre>
<pre><pidx:monetaryamount>40.70</pidx:monetaryamount></pre>
<pre><pidx:unitofmeasurecode>EA</pidx:unitofmeasurecode></pre>
<pre><pidx:lineitemtotal></pidx:lineitemtotal></pre>
<pre><pidx:monetaryamount>81.40</pidx:monetaryamount></pre>
<pre><pidx:invoicesummary></pidx:invoicesummary></pre>
<pre><pidx:totallineitems>3</pidx:totallineitems></pre>
<pre><pidx:invoicetotal></pidx:invoicetotal></pre>
<pre><pidx:monetaryamount>1549.26</pidx:monetaryamount></pre>
<pre><pidx:tax></pidx:tax></pre>
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
<pre><pidx:monetaryamount>15.14</pidx:monetaryamount></pre>
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
<pre><pidx:monetaryamount>29.22</pidx:monetaryamount></pre>

Page 7 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)





Page 8 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)



2. Sample Invoice Response Usage – Header Reject

This example shows the same invoice that was used above, now being rejected because of a header level issue.

	Invoice Response
Invoice Response document	Number
edited with XML Spy v4.4 U (http://www.xmlspy.com)	
<pre><pre><pre>cpidx:InvoiceResponse</pre></pre></pre>	
xmlns:pidx="http://www.pidx.org/pidXML/v1.2"	
xmins:xsi="http://www.w3.org/2001/XMLSchema-instance"	
ksi:schemaLocation="http://www.pidx.org/pidXML/v1.2 C:TPM\DraftInvoiceR	esponsev1_Unterice Status
pidx:transactionPurposeIndicator="Add" pidx:version=1.0">	
<pre><pidx:invoiceresponseproperties></pidx:invoiceresponseproperties></pre>	
<pre><pidx:invoiceresponsenumber>000000002</pidx:invoiceresponsenumber></pre>	
<pidx:statuscode>Reject</pidx:statuscode>	Date
<pre><pidx:invoiceresponsereason></pidx:invoiceresponsereason></pre>	
<pre><pidx:responsereasoncode>Disputed Content</pidx:responsereasoncode></pre>	
<pre><pre><pre><pre><pre>c<pre>pidx:ResponseReasonComments>Invalid Job Location Descripti</pre></pre></pre></pre></pre></pre>	on. Weil #9 is not a valid
location.	
<pre><pidx:invoiceresponsedate>2005-07-26</pidx:invoiceresponsedate></pre>	Buyer ID
<pidx:partnerinformation partnerroleindicator="SoldTo"> ridu:Detts ad destifier</pidx:partnerinformation>	Buyer ID
<pre><pidx:partneridentifier< pre=""></pidx:partneridentifier<></pre>	ifian
partnerldentifierIndicator="AssignedByBuyer">000000002 <td>ilier></td>	ilier>
<pre><pidx:partnerinformation partnerroleindicator="Seller"></pidx:partnerinformation></pre>	Seller ID
<pre><pidx:partneridentifier< pre=""></pidx:partneridentifier<></pre>	
partnerldentifierIndicator="AssignedBySeller">432156789 <td>liler>-</td>	liler>-
	Original Invoice
<pre><pidx:invoiceinformation> <pre>cpidx:InvoiceNumber: 26421 </pre>/pidx:InvoiceNumber:</pidx:invoiceinformation></pre>	Number
<pre><pidx:invoicenumber>36431</pidx:invoicenumber> <pre><pre>cpidx:InvoiceDate>2005-07-24</pre></pre></pre>	
2005-07-24	
<pre></pre> /pidx:InvoiceResponseDetails>	
<pre><pidx:invoiceresponselineitem></pidx:invoiceresponselineitem></pre>	
<pre></pre> /pidx.InvoiceResponseDetails>	
<pre></pre> /pidx:InvoiceResponseDetails> <pre></pre>	> \
	Reject Reasons
<pre><pre><pre>vpiux.invoicer/esp015e></pre></pre></pre>	

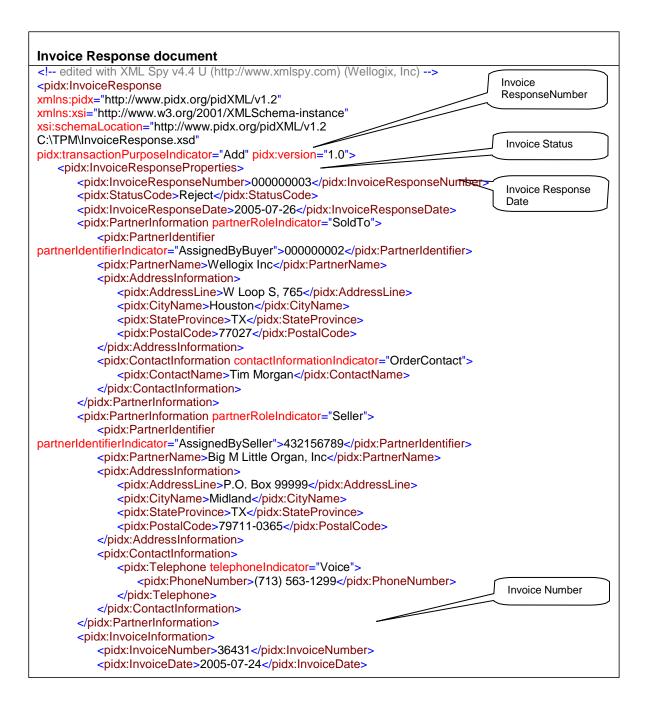
PIDX XML Invoice Response Usage Guideline Document ID: 01-133-20-50-2006 Page 9 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)



3. Sample Invoice Response Usage – Line Item Level Reject

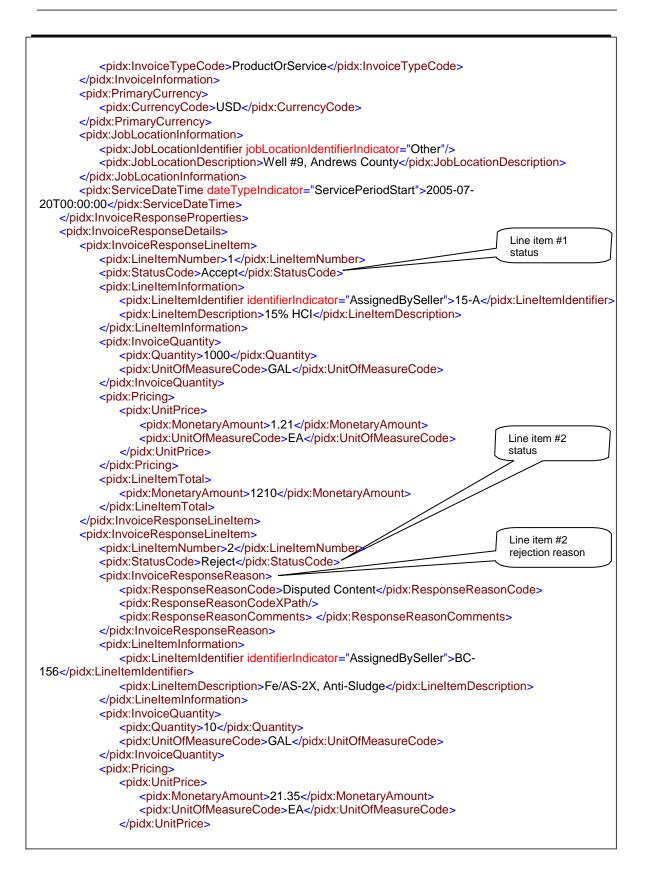
This example shows the same invoice that was used above, now being rejected because of a line item issue. The StatusCode element at the header level shows the invoice being rejected, while the StatusCode element at the line item level shows which elements have been accepted and rejected. The rejected line item is accompanied by an *InvoiceResponseReason* element.



PIDX XML Invoice Response Usage Guideline Document ID: 01-133-20-50-2006 Page 10 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)

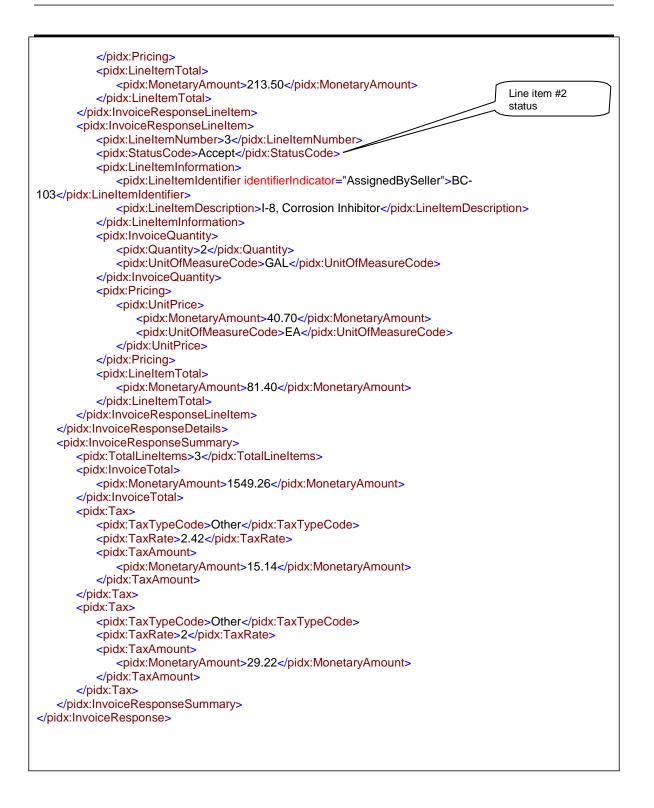




Page 11 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)





Page 12 of 13

PIDX XML Invoice Response Usage Guideline 02/13/2006 (and later)



2. Schema Change Record

The draft PIDX specification contains changes to the following 3 Schema files:

InvoiceResponse.xsd PIDXLib.xsd PIDXCodeLists.xsd

Changes incurred pertain exclusively to XML content related to the InvoiceResponse message. PIDX implementers currently using the 'InvoiceResponseReason' element or the 'InvoiceResponseReasonType' complexType will incur a backwards compatibility issue with this newest version of PIDXLib. All changes are denoted (in each Schema) by an annotations that begins with 'BMWG to review:'

The table below captures the changes made to the InvoiceResponse.xsd version 1.0 to meet the objectives outlined in this Usage Guideline.

Description of Change	Element Effected
Added mandatory element StatusCode to	<invoiceresponse><invoiceresponseproperties></invoiceresponseproperties></invoiceresponse>
InvoiceResponseProperties	<statuscode></statuscode>
Added optional element	<invoiceresponse><invoiceresponseproperties></invoiceresponseproperties></invoiceresponse>
InvoiceResponseReason to	<invoiceresponsereason></invoiceresponsereason>
InvoiceResponseProperties	
Modified element LineItemNumber of	<invoiceresponse><invoiceresponsedetails></invoiceresponsedetails></invoiceresponse>
InvoiceResponseDetails from mandatory to	<lineitemnumber></lineitemnumber>
optional	
Replaced element LineStatusCode of	<invoiceresponse><invoiceresponsedetails></invoiceresponsedetails></invoiceresponse>
InvoiceResponseDetails with StatusCode	<linestatusĉode></linestatusĉode>
Replaced element	<invoiceresponse><invoiceresponsedetails></invoiceresponsedetails></invoiceresponse>
LineResponseReasonCode of	<lineresponsereason></lineresponsereason>
InvoiceResponseDetails with	
InvoiceResponseReason	
Modified element LineItemInformation of	<invoiceresponse><invoiceresponsedetails></invoiceresponsedetails></invoiceresponse>
InvoiceResponseDetails from mandatory to	<lineiteminformation></lineiteminformation>
optional	
Modified element InvoiceQuantity of	<invoiceresponse><invoiceresponsedetails></invoiceresponsedetails></invoiceresponse>
InvoiceResponseDetails from mandatory to	<invoicequantity></invoicequantity>
optional	
Modified element TotalLineItems of	<invoiceresponse><invoiceresponsesummary></invoiceresponsesummary></invoiceresponse>
InvoiceResponseSummary from	<totallineitems></totallineitems>
mandatory to optional	
Modified element InvoiceTotal of	<invoiceresponse><invoiceresponsesummary></invoiceresponsesummary></invoiceresponse>
InvoiceResponseSummary from	<invoicetotal></invoicetotal>
mandatory to optional	

Page 13 of 13