Creating PDF Forms for Intuit QuickBooks

Introduction

Beginning with version 9, Adobe® Acrobat® supports the integration of PDF forms with Intuit's QuickBooks® financial management software. It enables companies ranging from single proprietorships to large enterprises to create and distribute intelligent electronic PDF forms that:

- Embed customer, product, and service data for fast and accurate data entry
- Contain custom business logic or calculations
- Validate data at the point of origin
- Eliminate manual data transfer or rekeying
- Can be filled-out using the free Adobe Reader
- Can be tracked using Acrobat Tracker

The completed forms can be easily distributed, and users can complete the forms using Adobe Reader for Macintosh, Windows, Linux[®], Solaris[®], AIX[®], or HP-UX[®].

Acrobat 9 provides a set of sample templates for the most frequentlyused QuickBook forms. The sample templates come complete with the data connection and QuickBooks schema specified, and with all needed calculations, validations, and scripting.

If you only need to customize the appearance of a sample form, such as to add company contact information and logo, and to change colors and fonts, then you do not need this document. You can use Adobe LiveCycle Designer (included with Acrobat 9 for Windows[®]), and then use Acrobat Help which describes how to prepare the form for distribution.

This document describes procedures to use when you need to change what data is transmitted to and from QuickBooks. For example, if you need to add an additional field, reduce the amount of data displayed in prepopulated drop-down lists, or create a new form not based on the samples, then you will need the procedures presented in this document.

This document has four main sections:

Getting Started, page 2 — Explains where to start based on use of the sample templates and whether modifications affect only the appearance of the form, or affect the data transmitted to and from QuickBooks.



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- **Overview of QuickBooks Forms Workflow**, page 3 Gives an overview of the workflows for the creation of forms, user completion and submission of the forms, and the uploading of the resulting data to QuickBooks.
- *Customizing QuickBooks Forms*, page 5 Procedures to change sample form templates for cases where modifications affect the data transmitted.

Appendix: Sample Template Descriptions, page 22 — Describes features of individual sample forms as well as general features of all samples.

NOTE: References to Adobe Acrobat 9 also refer to Acrobat Pro and Acrobat Extended. Also, for Acrobat 9, the sample templates are currently only available in English.

Audience

While simple modifications affecting only the appearance of the sample templates (contact information, logo, colors, fonts, etc.) can be handled by users without technical knowledge, this document is intended for the forms designer who has experience with JavaScript scripting, an understanding of XML, and experience with Adobe LiveCycle Designer.

System Requirements:

The following products and version numbers are required:

- Adobe Acrobat Professional 9 or Adobe Acrobat Professional 9 Extended
- Adobe LiveCycle Designer 9 (included only with Acrobat for Windows)
- Windows XP or Windows VIsta
- Intuit QuickBooks application
- Intuit QuickBooks SDK

Template development must be done using LiveCycle Designer, which is only available for Windows. Also, Acrobat 9 for Windows must be used for distribution, tracking, and data transmission.

Getting Started

You should first determine if one or more of the sample templates included with Acrobat 9 will be a good starting point for the forms you need. The sample forms can be customized for both appearance and content (see below), but if you need a significantly different form, you will need to use LiveCycle Designer to create a new template.

The sample form templates are included Acrobat 9 installation, and are located at: \Program Files\Adobe\Acrobat 9.0\Acrobat\QuickBooksTemplates\ENU

For a description of the sample templates, see "Appendix: Sample Template Descriptions" on page 22.

When you have determined whether you can use one or more of the samples, and the extent of customization needed, choose one of the options below.

If you need to:

 Modify the appearance of the sample PDF templates — if you only need to change the appearance of one of the sample forms, such as adding company contact information and logo, changing colors and fonts, or moving and resizing form fields and buttons, you do not need this document.

Where to begin: Use LiveCycle Designer to make modifications to the form appearance, and then use Acrobat to prepare the form for distribution.

- Customize what data is transmitted to (prepopulation), or received from, the form — If you need to add a new data field, customize the prepopulation of data displayed in drop-down menus, or change what is submitted to QuickBooks, you need to use the procedures in this document.
 - Where to begin: Use this document for procedures to add and customize form fields, using LiveCycle Designer. Also use LiveCycle Designer to customize the form's appearance, using the Help procedures for guidance. Use Acrobat to prepare the form for distribution.
- Create a new form If the provided sample templates are not what you need, you will need to develop the form using Adobe LiveCycle Designer. Doing so will require experience with LiveCycle Designer, JavaScript scripting, and XML.
 - Where to begin: Develop the form using LiveCycle Designer; then see sections in this document about creating a data connection, preparing drop-down lists for prepopulation, and, if needed, tieing selection states and creating editable combo boxes.

Overview of QuickBooks Forms Workflow

The following is an overview of the basic steps for:

- Creating a Form Template
- Form Completion and Submission by User
- Data Migration to QuickBooks

Creating a Form Template

1. The form designer installs Adobe Acrobat Pro 9; the Intuit QuickBooks application, and the QuickBooks SDK. If needed, a Company File is created using QuickBooks.

- 2. The form designer creates a form, or modifies an existing template.
- 3. Data connection and XML schema are specified using the QuickBooks SDK.
- 4. New QuickBooks fields can be added to the form:
 - Drag and drop desired form fields
 - Customize fields as needed
 - Specify data type and validation pattern
 - If drop-down lists need to be prepopluated, use the procedure "Preparing Drop-down Lists for Pre-Population" on page 14
 - Tie field selection choices together, if needed
 - Specify custom calculations and validations, if needed
- 5. The form is prepared for distribution using Acrobat 9
 - Drop-down lists are prepopulated using Acrobat and the QuickBooks database

Form Completion and Submission by User

- 1. User opens the form using Adobe Reader
- 2. User enters data into form fields
 - Data is validated as it is entered
 - Taxes, subtotals and totals are calculated and recalculated as new items are added.
 - User can edit drop-down lists, such as for a list of customers
- 3. User clicks the submit button
 - Reader checks required fields to make sure data was entered
 - Data is transmitted back to the office (where the QuickBooks application is installed)

Data Migration to QuickBooks

- 1. At the corporate office, forms can be tracked and managed using Acrobat Tracker.
- 2. Acrobat can be used to collect the data submitted by users; each returned form appears as a component file in a PDF portfolio. Response files can be added to, or deleted from, the portfolio.
- 3. Person managing the form chooses "Transmit to Quickbooks" in Acrobat 9 to export data to QuickBooks (without any rekeying of data). Data can also be exported to an existing data file, spreadsheet, or XML file.

Form Creation and Modification Workflow

Figure 1 shows the steps required to create QuickBooks forms, using either the sample templates included with Acrobat, or for creating a new form using Adobe LiveCycle Designer.





Customizing QuickBooks Forms

The following procedures describe how to customize the sample templates for desired changes that affect the data sent to, or retrieved from, a QuickBook PDF form. For example, you might want to add a new field, or customize what data is displayed in a drop-down menu.

The procedures would also be needed if you are developing a new form that is not based on the sample templates. You would first create the basic form in LiveCycle Designer, and then define the data connection and do any other customization that is required.

Customization of the data is done using JavaScript scripting in LiveCycle Designer. It is important to note that while previous JavaScript knowledge is transferable, to effectively use JavaScript on your form design you must understand how to construct LiveCycle Designer ES reference syntax, and you must be able to correctly use the XML Form Object Model reference syntax to access objects on your form design.

This section contains the following procedures to help you customize the form:

Creating a Data Connection 6 Adding QuickBooks Fields to the Form 8 Customizing Form Fields 9 Preparing Drop-down Lists for Pre-Population 14 Customizing a Drop-down List 17 Tieing Selection States 19 Editable Combo Boxes 20

Initial Setup

To get started, do the following:

- 1. Download and install the QuickBooks SDK: <u>http://developer.intuit.com/</u>
- 2. Open the QuickBooks application.
- 3. Open Adobe LiveCycle Designer and use it to open the template you want to customize.

Creating a Data Connection

Use the following steps to create a form template QuickBooks-capable template:

- 1. Choose File > New Data Connection.
 - **NOTE:** The sample templates supplied with Acrobat already have their data connection defined.

FIGURE 2 Adding a Data Connection



2. Select "XML Schema" and "Next"

FIGURE 3 Selecting the Data Connection Type

New Data Connection	K
Name New Connection:	
DataConnection	
Get data description from: XML Schema OLEDB Database Sample XML Data	
O WSDL File	
	_
< Back Next > Cancel Help)

3. Select the XML Schema file "QBSDK6.0\tools\validator\qbxml60.xsd" in the QuickBooks SDK.

FIGURE 4 Selecting the QuickBooks XML Schema



4. Select the desired XML Data Root Element Name. In cases where the form will be populated by the end user, the Root Element Name should have an "Add" suffix like "InvoiceAdd" in the figure below:

FIGURE 5 Selecting the Root Element

lew Data Connection		X
Select XML Schema File: \\Program Files\Intuit\QBSDK6.0\	tools\validator\qbxml60.xsd	6
Options		
Use XML Data Root Element Name:	InvoiceAdd	~
Embed XML Schema Transform Incoming Data XSLT File: Transform Outgoing Data XSLT File:	InvoiceLineRet InvoiceLineGroupRet InvoiceLineGroupAdd InvoiceLineModd InvoiceLineGroupMod InvoiceRet InvoiceRet	
	InvoiceMod EstimateLineRet EstimateLineAdd EstimateLineMod in EstimateLineGroupRet EstimateLineGroupAdd	

- 5. Select "Embed XML Schema"
- 6. Select "Finish"

Adding QuickBooks Fields to the Form

This section describes how to add additional fields to one of the sample form templates included with Acrobat 9.

1. Drag and drop the desired form fields from the Data View onto the form.

For items having a name which ends in "Ref" and two child items named ListID and FullName, select the ListID field only. The ListID is a unique identifier assigned by QuickBooks; using it ensures that the data entered on the form is correctly associated when it is transferred back to QuickBooks. (See "Preparing Drop-down Lists for Pre-Population" on page 14)





2. If a field must be filled out, and is not optional, use Designer to set its type to "Required" at Window > Object > Value > Type.

- 3. Customize your fields accordingly. See "Customizing Form Fields" on page 9.
- 4. Save the file.

Customizing Form Fields

When you add new fields to your form, you must specify the data type so it corresponds to the data types expected by QuickBooks, and the data pattern so the data entry can be validated.

Table 1, "QBXML Type to Designer Field Type Mapping," provides guidelines for customizing the fields you have added to your form. It contains the data types used in the provided Acrobat PDF form templates.

The first two shaded columns in the table show a selection of some of the mostused data types supported by the QBXML schema, and the unshaded columns show the corresponding data patterns supported by LiveCycle Designer.

The table shows, for example, that the QuickBooks' *DATETYPE* data type, as defined in the QBXML schema, maps to the LiveCycle Designer *Date/Time* field. The LiveCycle *Data Pattern* is the one used by QuickBooks, while the other patterns—Display, Edit, and Validation, are only used for the UI.

QBXML Schema		LiveCycle Designer			
Element Type	Data Pattern	Display Pattern	EditPattern	Validation Pattern	Data Pattern
		Decimal Field			
PERCENTTYPE	7.5	null{} num{z,zzz,zzz.999}	ZZZZZZZ.ZZZ	Null{} mum{zzzzz9.999}	zzzzz9.999
QUANTYPE	7.5	null{} num{zzz,zzz,zz9.zzzz}	ZZZZZZZ.ZZZZZ	null{} num{zzzzz9.99999}	zzzzz9.99999
PRICETYPE	8.5	null{} num{\$zz,zzz,zz9.99}	ZZZZZZZZ.ZZ	null{} num{zzzzzz29.99}	zzzzzz9.99
ΑΜΤΤΥΡΕ	8.2	null{} num{\$zzz,zzz,zzz,zzz,zz9.99}	N/A	N/A (Calculated)	zzzzzz9.99
		Date/Time Field			
DATETYPE	CCCC- MM-DD	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY	YYYY-MM-DD

TABLE 1 QBXML Type to Designer Field Type Mapping

In order to determine the respective types and formatting for a field, crossreference the selected field with the QuickBooks SDK Onscreen Reference using the following procedure:

1. Open the QuickBooks SDK Onscreen Reference (located at, for example:

\Program Files\Intuit\QBSDK6.0\newOSR\OnscreenRef.html

FIGURE 7 Launching the QuickBooks SDK Onscreen Reference



- 2. Select "New OSR"
- 3. If the root node element in your template is, for example, "InvoiceAdd," select that message from the "Select message..." drop-down in the OSR.

FIGURE 8 Selecting the QBXML Message



The "Request" structure should be displayed (as below). If the "Response" structure is displayed, click on "Request" next to "Show:"

Max SDK Version: 6	Select message:					
SDK	InvoiceAdd	✓ Se	lect Subscription/I	Event Message ⊻]	
⊙ QB SDK ○ QBMS SDK	T	Tunn	Max (DT)	Mar. (OF)	Implementation	0
	Tag InvoiceAddRg	Туре	Max (DT)	Max (OE)	Implementation	Occurrence
View:	InvoiceAdd(defMacro)					1
Request O Response	CustomerRef					1
Format	ListID	IDTYPE				0 - 1
	FullName	STRTYPE	209 chars	1000 chars		0 - 1
	ClassRef	SIRIFE	209 citars	1000 chars		0 - 1
QB Editions	ListID	IDTYPE				0 - 1
US DE	FullName	STRTYPE	159 chars	1000 chars		0 - 1
Allow CA and UK 2008+	ARAccountRef	Sherric	155 churs	1000 01013		0 - 1
Allow CA dilu UK 2000*	ListID	IDTYPE				0 - 1
	FullName	STRTYPE	159 chars	1000 chars		0 - 1
	TemplateRef	STRIFE	155 chara	1000 chara	3.0	0 - 1
	ListID	IDTYPE			5.0	0 - 1
	FullName	STRTYPE	31 chars	100 chars		0 - 1
	TxnDate	DATETYPE	51 61613	100 61013		0 - 1
	RefNumber	STRTYPE	11 chars	21 chars		0 - 1
	BillAddress	Untille	11 01010	22 01010		0 - 1
	Addr1	STRTYPE	41 chars	500 chars		0 - 1
	Addr2	STRTYPE	41 chars	500 chars		0 - 1
	Addr2	STRTYPE	41 chars	500 chars		0 - 1
	Addr4	STRTYPE	41 chars	500 chars	2.0	0 - 1
	Addr5	STRTYPE	41 chars		6.0	0 - 1
	City	STRTYPE	31 chars	255 chars		0 - 1

FIGURE 9 Displaying the Request Structure

4. The field that was dragged from the Data View in Designer will be bound (Binding Tab in Designer) to the element listed under Tag (the example below shows "TxnDate"). The QuickBooks Type is listed in the "Type" column.

FIGURE 10 Determining the Element Type

InvoiceAdd	✓ Se	elect Subscription/E	-vent Message	~
Tag	Туре	Max (DT)	Max (OE)	
InvoiceAddRq				
InvoiceAdd(defMacro)				
CustomerRef				
ListID	IDTYPE			
FullName	STRTYPE	209 chars	1000 chars	
ClassRef				
ListID	IDTYPE			
FullName	STRTYPE	159 chars	1000 chars	

 Cross-reference this information to determine the formatting and the Designer type using the table "QBXML Type to Designer Field Type Mapping" on page 9.

In this example, the selected element is "TxnDate" which has a QBXML data type of "DateType". Referencing the table above, the DateType is mapped to the Designer "Date/Time Field".

Note: If the Object window is not visible, select Window > Object, and select the Field tab. From the Type drop-down list, select "Date/Time Field" as shown below.

Enter the text you want displayed in the error message if the user's data is not in the correct format.



FIGURE 11 Setting the Designer Type

- 6. Read the "Validation" entry from Table 1, "QBXML Type to Designer Field Type Mapping, above for the selected Designer Type (for this example, it is MM/DD/YYYY.
- 7. Select the Value tab: Window > Object > Value
- 8. Enter the Validation Pattern in Designer: select Window > Object > Value (tab) and click the "Validation Pattern..." button.
- 9. For each tab in the "Patterns Date Field" window (for example, Validation, Display, Edit, and Data), in the "Select Type:" menu pane, click on the date sample with the desired format (for example, "04/01/2008" corresponds to the MM/DD/YYYY), and continue until the pattern is entered for all tabs.

FIGURE 12 Setting the Display Pattern in Designer

date full{} 4/1/07	Sample: Pattern: date{MM/DD/YYYY} Handling Empty and Zero Values
Sunday, April 1, 2007 4/1/2007 04/01/07 07/04/01 Locale: Default locale	Allow Empty Allow Zero Display Pattern is used to specify how the data will appear.

10. If you wish to change any properties for the field, return to the Field tab and set those properties.

FIGURE 13 Setting Field Properties

Object 🗵	<u>`</u>	
Field Va	lue Binding	
Type: 🔯 🛛	Date/Time Field 🛛 👻]
Caption:	Txn Date]
Appearance:	Solid Box 💙]
Limit Lei	None Underlined	
	Solid Box	
Pat	Sunken Box	
	Custom	
Presence:	Visible 🗸]
Locale:	Default locale 🗸 🗸 🗸]
	English (USA)	

Set Field Binding Properties

The Binding tab (see Figure 13) shows the binding of the value for the field, to the corresponding QuickBooks variable (in this example, \$.TxnDate). Check to make sure it is correct.

FIGURE 14 Setting Field Binding Properties

Object 🗷			
Field Value Binding			
Name: TxnDate 0]		
Default Binding (Open, Save, Submit):			
\$.TxnDate ∷≣⊿	Normal	1	
Data Format: Date 🗸	Global		
	DataConnection 🕨	@defMacro	
	None	CustomerRef ClassRef	1
Import/Export Bindings (Execute):		ARAccountRef	
		TemplateRef	
		TxnDate	
		RefNumber	45
		BillAddress	•

Preparing Drop-down Lists for Pre-Population

Note: The actual prepopulation of a drop-down list is done by Acrobat as part of the Prepare for Distribution step. The following procedure prepares the drop-down list in advance. It is not necessary to use this procedure for the existing drop-down lists in the Acrobat template samples.

In order to populate a drop-down list from data in QuickBooks, the form field must be bound to the ListID member of a Reference Type within the QBXML Schema. In the figure below, the InvoiceAdd Element contains a CustomerRef element with two children, ListID and FullName.



Onscreen Reference fo	r QuickBooks SDK AJAX Beta	
Max SDK Version: 6	Select message:	
SDK	InvoiceAdd	✓ Sele
💿 QB SDK 🔘 QBMS SDK	Tag	Туре
View:	InvoiceAddRq	
Request O Response	InvoiceAdd(defMacro)	
© Request © Response	CustomerRef	
Format	ListIg	IDTYPE
⊙ XML ○ QBFC	FullName	STRTYPE
	ClassRef	
QB Editions	ListID	IDTYPE
🗹 US 📃 OE	FullName	STRTYPE
Allow CA and UK 2008+	ARAccountRef	
	ListID	IDTYPE
	FullName	STRTYPE

To populate a drop-down list with Customer names, bind the drop-down list to CustomerRef.ListID by dragging the child field ListID to the form.

When the form is prepared for distribution, Acrobat 9 needs to know what information will be displayed in the drop-down list and what value will be returned to QuickBooks when the data is submitted. The sample forms supplied with Acrobat are set to do this, but customized drop-down list fields must be bound as above.

Acrobat 9 looks for a specific Script Object when the user selects to "Prepare QuickBooks Template for Distribution..."

To create the script object:

- Right-click on the topmost node in Designer's Hierarchy Tab (InvoiceAdd in our example) and select "Insert Script Object".
- Rename the Script Object "QuickBooks"

FIGURE 16 Creating the QuickBooks Script Object



For each drop-down List that will be prepopulated from QuickBooks, you must make two entries in the QuickBooks Script Object:

1. The first entry is a listing in an array that the QuickBooks interface uses to relate a specific drop-down List in the form to a QuickBooks QBXML Schema element and a JavaScript routine that pulls the data from QuickBooks for consumption by the drop-down List.

The array listing has the following configuration:

```
- - InvoiceAdd.#variables[0].QuickBooks - (JavaScript, client)
var Filters= [ // Field Binding, QBXML Type, Filter Function Name
[ "$record.CustomerRef.ListID", "Customer", "FilterCustomer" ],
[ "BillAddress.Addr1", "Customer", "FilterBillAddress" ],
[ "ermsRef.ListID", "Terms", "FilterTerms" ],
[ "ItemRef.Desc", "Item", "FilterItem" ],
[ "CompanyRef.CompanyName", "Company", "FilterAddressBlock" ],
[ "ItemSalesTaxRef.ListID", "Item", "FilterSalesTaxRateList" ],
];
```

2. The next step is to provide the JavaScript routine referenced in the Filters array listing. The routine is passed a reference to a collection of nodes that contain an "Item List" from QuickBooks. By searching for the specific name of a QBXML Type, the routine creates a filtered two-dimensional array with the Item ListID (unique identifier in QuickBooks) as the first element, and whatever other properties are required in the second element. In the following example, the customer list is filtered and the array is populated with the customers' ListID and FullName.

FIGURE 17 Filtering the Customer List

```
function FilterCustomer(oNodes)
{
  var res = new Array();
  for (var i=0; i<oNodes.length; i++)</pre>
  {
     var itm= oNodes.item(i);
     if (itm.name == "CustomerRet")
     {
         var itm2 = itm.nodes.item(0);
         if ((itm2.FullName!=null)&&(itm2.FullName.value!=""))
           {
             res.push(new
               Array(itm2.ListID.value,itm2.FullName.value));
           }
     }
  }
  return res;
}
```

The routine runs when the template is prepared for distribution. After preparation, the FullName is displayed in the drop-down List and the rawValue property of the drop-down will contain the selected customer's ListID.

FIGURE 18 The Populated Customer List

CUSTOMER	
	-
Boeing	-
Customer 1	
Customer 2	
Customer 4	
Customer 5	
Minimimalist Inc	
Montessa Kins	1
Montessa Kita Website Development	
Addrs	

Customizing a Drop-down List

You can add drop-down lists to your form and use them as is, but you can also filter out data which you may not want to display for security reasons. You can do that by providing a JavaScript script to filter the data provided by QuickBooks. For example, you can create drop-down lists which populate with data pairs other than (Name,ID) and (FullName,ID), or you can populate the sales receipt form's description field with (Desc,ID) pairs.

A drop-down list populated with (Value,ID) pairs will export the ID to QuickBooks, not the Value. This will break data validation and the QBXML export layers unless you make the following simple patch. Just modify the drop-down field's "exit script" to make sure that the current selection is always a value and never an ID by adding:

```
if (this.selectedIndex != -1)
this.rawValue= this.getDisplayItem(this.selectedIndex);
```

Then add Filter functions to the QuickBooks global script object as follows:

- 1. In LiveCycle Designer, select "Window > Hierarchy".
- If there is no "QuickBooks" global script in the Variable node at the bottom of the pane, create one, right-click the root node and select Insert Script Object. Then click on the "(untitled Script Object)" at the bottom of the pane and rename it "QuickBooks".
- 3. If there is no "Filters" declaration in the QuickBooks global script, add one using the following format:

var Filters= [// Binding, Type, Filter Function Name];

(sample code shown below)

- 4. Get the binding for your drop-down list from the "Default Binding" edit box in LiveCycle Designer's Value tab (Window > Object > Value).
- 5. Find the type of QuickBooks data you need to request by reading the QuickBooks SDK Documentation. For example, the Description and Rate fields in a Sales Receipt line item are obtained using the "Item" Query.
- 6. Add a line item for your field to the Filters Variable. Each line item is an array of three strings, the Binding, Type, and Filter Function Name. the Filter Function Name is the Name of a Custom JavaScript Function you will define later. You can choose any valid JavaScript function name. Each function in the QuickBooks global script must have a unique name. Here is the Filters declaration after adding four filter line items:

```
var Filters= [ // Binding, Type, Filter Function Name
      [ "CustomerRef.ListID", "Customer", "FilterCustomer" ],
      [ "SalesReceiptLineAdd[*].ItemRef.ListID", "Item",
      "FilterItem" ],
      [ "$.SalesReceiptLineAdd[*].Desc", "Item", "FilterDesc" ],
      [ "$.SalesReceiptLineAdd[*].Rate", "Item", "FilterRate" ],
    ];
```

7. Add a filter function to the QuickBooks global script. Below are the four filter functions for the above Filters declaration:

```
function FilterCustomer(oNodes)
ł
   var res= new Array();
   for (var i=0; i<oNodes.length; i++)</pre>
   {
     var itm= oNodes.item(i);
           if (itm.name == "CustomerRet")
      {
           var itm2= itm.nodes.item(0);
           if ((itm2.FullName!=null) &&
     (itm2.FullName.value!=""))
           {
                 res.push(new Array(itm2.ListID.value,
                       itm2.FullName.value));
            1
   }
   return res;
}
function FilterItem(oNodes)
{
   var res= new Array();
   for (var i=0; i<oNodes.length; i++)</pre>
   {
     var itm= oNodes.item(i);
     if ((itm.name == "ItemServiceRet") ||
            (itm.name == "ItemNonInventoryRet"))
      {
           var itm2= itm.nodes.item(0);
           if ((itm2.FullName!=null) &&
     (itm2.FullName.value!=""))
            {
                 res.push(new Array(itm2.ListID.value,
                       itm2.FullName.value));
            1
      }
   }
   return res;
}
function FilterDesc(oNodes)
{
   var res= new Array();
   for (var i=0; i<oNodes.length; i++)</pre>
   {
     var itm= oNodes.item(i);
     if ((itm.name == "ItemServiceRet") ||
                 (itm.name == "ItemNonInventoryRet"))
      {
           var itm2= itm.nodes.item(0);
           if ((itm2.SalesOrPurchase!=null) &&
                 (itm2.SalesOrPurchase.Desc!=null)
                 && (itm2.SalesOrPurchase.Desc.value!=""))
            {
                 res.push(new Array(itm2.ListID.value,
```

```
itm2.SalesOrPurchase.Desc.value));
           }
      }
   }
   return res;
}
function FilterRate (oNodes)
ł
   var res= new Array();
   for (var i=0; i<oNodes.length; i++)</pre>
   {
      var itm= oNodes.item(i);
     if ((itm.name == "ItemServiceRet") ||
            (itm.name == "ItemNonInventoryRet"))
      {
           var itm2= itm.nodes.item(0);
           if ((itm2.SalesOrPurchase!=null) &&
                 (itm2.SalesOrPurchase.Price!=null)
                 && (itm2.SalesOrPurchase.Price.value!=""))
            {
                 res.push(new Array(itm2.ListID.value,
                 itm2.SalesOrPurchase.Price.value));
           }
   }
   return res;
}
```

Here is what happens when the QuickBooks Interface populates a field having a binding that appears in the Filters variable declaration.

- 1. All items of the type in the "Type" column are retrieved from QuickBooks, using the QuickBooks Query "<Type>Query"
- 2. The QuickBooks response XML is loaded into a DOM.
- 3. The node list at "<Type>QueryRs.nodes" is passed as a calling argument to the Function named in the "Filter FunctionName" column.
- 4. The Filter Function traverses the DOM to extract the desired items, and returns an array of (ID,Value) pairs. DOM traversal is programmed using standard Acrobat script methods as shown in the above example. For documentation on the "Type>Query" response see the QuickBooks QBXML documentation.
- 5. The items returned from the custom filter function replace any items already in the drop-down.

Tieing Selection States

It is also possible to tie lists together so that they update automatically based on selections made in other fields. For example, selecting an Item in a Sales Receipt should automatically select the corresponding item in the Description field.

For example, the following JavaScript could be added to the "Item" field as an "exit" script, to tie the item and description ields together:

```
var rawValue= this.rawValue;
var ctls= ["Desc","Rate"];
for (var j=0; j<ctls.length; j++)</pre>
{
    var fctl= this.parent.resolveNode(ctls[j]);
    var tctl=
xfa.template.resolveNode("SalesReceiptAdd.#subform[0]."+ctls[j]);
    if ((fctl!=null) && (tctl!=null))
    {
        var vals= tctl.resolveNode("items[0]");
        var ids= tctl.resolveNode("items[1]");
        if (ids.save != "1")
        {
vals= tctl.resolveNode("items[1]");
             ids= tctl.resolveNode("items[0]");
        }
        var sFound= "";
        if ((rawValue!=null) && (rawValue != ""))
        {
            for (var i=0; i<ids.nodes.length; i++)</pre>
            {
                 if (rawValue ==
                   ids.nodes.item(i).nodes.item(0).value)
                     sFound=
                        vals.nodes.item(i).nodes.item(0).value;
            }
        }
        fctl.rawValue= sFound;
    }
}
var ctl1= this.parent.Quantity;
if ((rawValue!=null) && (rawValue != ""))
{
    if ((ctl1.rawValue==null) || (ctl1.rawValue == ""))
        ctl1.rawValue= "1";
}
else
    ctl1.rawValue= "";
```

Editable Combo Boxes

}

Drop-down lists described so far do not have the ability to enter custom text. This is limiting to some Accountants who may request the ability to type in a new name and submit it in one shot. For example if a Sales Receipt form contains an editable list of Customers and the Accountant types in a new name, a new customer is created and a new sales receipt is logged against that customer; with a single "Send to QuickBooks" operation. To make a combo box editable select "Allow Custom Text Entry" in LiveCycle Designer.

Prepare for Distribution

To prepare a form for distribution, open the PDF template file in Acrobat, and use Acrobat Help for guidance:

- 1. Open QuickBooks Company file
- 2. Open the template in Acrobat
- Select: Forms > QuickBooks > Prepare QuickBooks Template for Distribution..." from the menu.
 - the "Prepare QuickBooks Template for Distribution" dialog opens.
- 4. Select "Use the currently open QuickBooks Template" radio button.
- 5. Click Next
- 6. Click Next
- 7. Click Next
- 8. Click the Distribute Later radio button.
- 9. Click Done – Observe "Save As" dialog
- 10. Append "auto" to the end of the File name.
- 11. Click Save
- 12. Observe document name update in the Acrobat Title bar

Resources

Acrobat Help (from the Help menu)

Adobe Developer Connection for LiveCycle Forms:

http://www.adobe.com/devnet/livecycle/designing_forms.html

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Appendix: Sample Template Descriptions

The form templates provided by Acrobat cover a variety of the most-used QuickBooks forms. The following descriptions of the forms should give you an idea of whether any of the samples might be appropriate for your needs.

NOTE: Samples are located at:

\Program Files\Adobe\Acrobat 9.0\Acrobat\QuickBooksTemplates\ENU

The samples are of two general types:

- **Internal** designed to be filled out by employees. Some fields and drop-down lists can be prepopulated from the QuickBooks database, such as from a known list of vendors or customers.
- **External** designed to be filled out by customers. Some information should not be exposed to customers, so fields tend to be editable by the customer, rather than prepopulating names of existing customers. The filled-in names and addresses will be added to QuickBooks when the form is submitted.

Sample Template Form Descriptions

Invoice — Product (Internal)

File name: Product Invoice.pdf

Target form filler is Internal Employee (e.g. Sales), therefore "Bill To" field is selectable from drop-down list. Posts to QuickBooks as "Pending Invoice" (although user can edit this in Designer). Works in QuickBooks Pro, Premier, and Enterprise.

Invoice — Product (External)

File name: Purchase Order for Product Sales Order.pdf

Target form filler is External User (e.g. Customer), therefore "Bill To" field can be filled by user (rather than prepopolated from the list of known customers). Posts to QuickBooks as "Pending Invoice". Works in QuickBooks Pro, Premier, and Enterprise.

Invoice — Service (Internal)

File name: Service Invoice.pdf

Target form filler is Internal Employee (e.g. Sales), therefore "Bill To" field is selectable from drop-down list. Posts to QuickBooks as "Pending Invoice". Works in QuickBooks Pro, Premier, and Enterprise.

Invoice — Service (External)

File name: Purchase Order for Service Invoice.pdf

Target form filler is External User (e.g. Customer) - therefore "Bill To" field should be fill-able. Posts to QuickBooks as "Pending Invoice" (although user can edit this in Designer). Works in QuickBooks Pro, Premier, and Enterprise.

Sales Order — Product (External)

File name: Purchase Order for Product Invoice.pdf

Target form filler is External User (e.g. Customer) - therefore "Bill To" field should be fill-able. Posts to QuickBooks as "Order". Works only in QuickBooks Premier and Enterprise (Pro does not have Order posting).

Sales Order — Service (External)

File name: Purchase Order for Service Sales Order.pdf

Target form filler is External User (e.g. Customer) - therefore "Bill To" field can be filled in by the customer. Posts to QuickBooks as "Order". Works only in QuickBooks Premier and Enterprise (Pro does not have Order posting).

Estimate — Retail (Internal)

File name: Internal Estimate.pdf

Target form filler is Internal Employee (e.g. Sales) - therefore "Bill To" field is selectable from drop-down list. Posts to QuickBooks as "Estimate". Works in QuickBooks Pro, Premier, and Enterprise.

Description of Features Common to all Sample Forms:

The Form Page

- All templates are one page, but because they are dynamic forms, additional rows can be added by the user.
- The user can click a button to "add row" and "delete row"
- If the form fields overflow the page (8.5 x 11 inches) a new page is spawned
- If new pages are spawned, the column Headers (Quantity, Item Code, Rate/Price, Description, and Amount) are repeated at the top of spawned page, and new pages are labelled "page X of Y".
- All templates have an "Additional Notes" text field so internal or external user can add supporting information. The Notes field are not be synchronized back to QuickBooks.

Calculations

- All sample templates calculate subtotals and totals, adding in the sales tax where appropriate. If items are added to the form fields so that the form flows to an additional page or pages, the total moves to last page.
- Subtotals are calculated

Prepopuation

• In all templates, the Description and Rate/Price values are prepopulated given the Item Code chosen. However, the user can overwrite the Description and Rate/Price fields.

Calculate Sales Tax

• Form preparer can select the sales tax item (Tax Jurisdiction and Tax Rate) when form is prepared for distribution

Validation

- The Quantity/Ordered, Price/Rate/Cost fields are validated when the user clicks Submit.
- Invalid Quantity/Ordered, Price/Rate/Cost values cannot be submitted to QuickBooks using the "%%Send to QuickBooks" menu item.
- Form-level validation of the numeric values outside the specified limits cause the submission to be cancelled.
- Date (pop-up)