

# Using BI Publisher Excel Templates with PeopleTools

Randy Groncki 9/21/2020

# Summary

Starting with the release of PeopleTools 8.58, PeopleTools can now use Excel Spreadsheets as BI Publisher templates. Before this release, if we wanted to create a spreadsheet using BI Publisher, the fastest way was to use an RTF template with a table and force the output to Excel through the report definition. However, this is more of a "Work Around" than a solution and left a few concepts to be desired.

Now using the Excel templates, we can work directly in Excel to define the report which provides many of the features and tools that the users are requesting.

This document will introduce the basics of using Excel Templates with BI Publisher.

# What and Why Excel Templates

Excel templates allow us to generate Excel spreadsheets in BI Publisher using Excel.

Excel templates are not new to BI Publisher. They are just new to PeopleTools' implementation of BI Publisher. Luckily, there is plentiful documentation, demonstrations, and examples of Excel Templates available. We just need leverage these within our PeopleTools environment.

Just like we used MS Word to create RTF templates, we use Excel to create XLS templates with the same desktop helper (Template Builder).

Now we can create multiple page spreadsheets natively formatted in Excel and delivered through the PeopleTools framework where and when they are needed.

This is a link to the Oracle Excel Template Documentation: docs.oracle.com/html/E22254\_03/create\_excel\_tmpl.htm



# BI Publisher Excel Template Basics

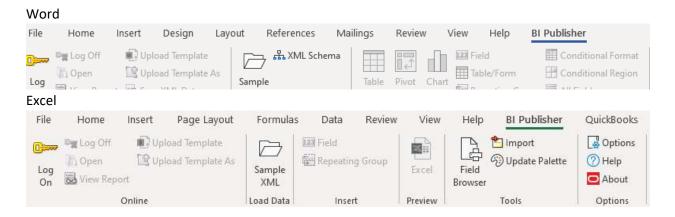
## Installing the Template Builder

Download the latest version of BI Publisher Desktop Template Builder as per your version of PeopleTools. The easiest way is through your PeopleSoft Application

Home > Reporting Tools > BI Publisher > Setup > Design Helper

Make sure you install the correct 32/64-bit version as per your version of MS Office. Installing the wrong version will create problems. If this does happen, completely uninstall before re-installing the correct version.

If you installed the Desktop helper for MS Word, then you have already installed the Desktop Helper for Excel. Just look for the BI Publisher heading on your ribbon in Excel just an in Word.



## Notes on the Excel Template Builder

#### XLS, Not XLSX

BI Publisher uses the .xls spreadsheets (1997-2003 Workbook), not the modern .xlsx spreadsheets. When coding spreadsheets, you can only use capabilities and functions available to this version. Advanced formatting and functions from the current version will not work.

## Hidden XDO\_METADATA Sheet

The Template Builder will create a hidden sheet to the Excel workbook when the first field is added. BI Publisher uses this hidden sheet for mapping between the data and the spreadsheet. You might have to edit some of these references and formulas.

To unhide the sheet

- Right click on the
- Select UnHide
- Select XDO\_MEDATA





The top section (rows 1-8) are basic identification information needed for the template.

Our work is done in the "Data Constraints" section starting with row 10.

Best practice is to re-hide the XDO\_METADATA sheet after development of the report.

	А	В
1	Version	
2	ARU-dbdrv	
3	Extractor Version	
4	Template Code	
5	Template Type	TYPE_EXCEL_TEMPLATE
6	Preprocess XSLT File	
7	Last Modified Date	
8	Last Modified By	
9		
10	Data Constraints:	
11	XDO_?XDOFIELD1?	fld_STATE_DESCR?

#### Not all Excel Functions, formatting and formulas will work in the template

The template and report are Excel 2003 objects (.xls). Formatting and features are limited to that Excel version's capabilities. An example of this Excel 2003 allows only three conditional formatting rules per cell where the current version allows more.

Additionally, some features such as data filtering will not flow through to the final report.

If incorporating images in a multi-sheet report, the images will only appear on the first sheet. Not subsequent sheets.

The Template Builder for Excel provides basic design capability. More advanced designs will require manual XSL coding.

## Creating a basic Template

For the purposes of all our examples, we are creating a spreadsheet listing all taxes for a specific payroll. This spreadsheet will be a basic, one-page spreadsheet listing all the taxes with a total at the bottom.

#### Create a sample XML file

Create a sample XML File using PeopleTools through PSQuery or another method such as RowSets or XMLDoc objects. Creating the XML file is beyond the scope of this document.

The sample XML file must contain the exact same data structure and tag names as the file produced by the production system for this report.

Generally, I choose to create all the PeopleTools objects needed to support the report (components, pages, PeopleCode, PSQueries, etc.) before creating the report and have those objects generate the example XML file. This guarantees the sample file is an exact representation of the report data.

Sort and enrich the data as needed before creating the XML file. The data manipulation tools in the Excel template are limited.



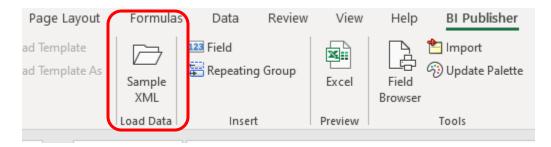
#### The Excel Spreadsheet

Open a new Excel spreadsheet and save it as an .xls file (Excel 97-2003 Workbook).

SampleBIPubExcelTemplate	
Excel 97-2003 Workbook (*.xls)	
More options	

This will avoid later issues using formatting or functions not available to this version of Excel.

On the BI Publisher section of the ribbon, upload your sample XML file using the "Sample XML" icon in the Load Data group.



## Add fields and titles to the spreadsheet

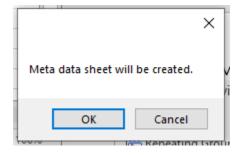
Use the "Field" tool to add fields from the XML File to your spreadsheet.

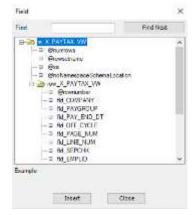
ad Template ad Template As Sample XML Load Data Insert Preview Tools	Page Layout	Formulas	5 Data	Review	View	Help	BI Publisher
	1	XML	🚝 Repeatin		Excel	Field	(i) Update Palette

This will open a dialog box showing the data structure and fields of the sample XML File.

The first time clicking this control, you will receive a popup warning from Excel:" Meta data sheet will be created"

We will cover the meta data sheet later in this paper.







#### Add fields and titles to your spreadsheet.

	Α	В	C	D	E	F	G
1	State	Locality	Tax Class	EE/ER	Current Tax	Emplid	Name
2	Federal	LEXINGTON-FAYETTE	OASDI/Disability - EE	E	162.21	KU0087	Lopez, Wilma
3							

Template Builder will show data from your example XML file in the cells rather than the XML Tag names for those fields. It will not add titles to the columns for those fields.

Add titles and Do your basic field/column formatting such column width, alignment, and number formatting.

#### Add repeating groups

Select the cells in the row that will contain the repeating data (i.e. data rows of your XML file). Then click on the "Repeating Group" tool on the ribbon to bring up the Properties box.

File	e Home	Insert	Page Layout	Formulas	Data	Review	View	Help B	Publisher
Lo Oi	Den 19	NDPI	oad Template oad Template As		Repeating C		Excel		nport pdate Palette
G2			• : ×	$\checkmark$ $f_x$	Lopez,Wilm	na			
4	Α		В		С	D	E	F	
1 5	itate	Locality		Tax Class		EE/ER	Current Tax	c Emplid	Name
2 F	ederal	LEXINGTO	DN-FAYETTE	OASDI/Dis	ability - EE	E	162.21	L KU0087	Lopez,Wilma
3 4 5 7 3 9 0 1 2 3 4 5 6 7				Publisher Prop roperties Loop For Each Group By On Groupi	row_X_PAY		ОК	> ~ Cancel	

#### Choose the Row of the repeating data from the XML data structure options:

#### Test the template

Page Layout	Formulas	Data	Review	View	Help	BI Publisher
ad Template ad Template As	Sample XML Load Data	123 Field		Excel Preview		▶ Import ⑦ Update Palette Tools

Click on the Excel tool on the ribbon. A new spreadsheet should generate with the data from the sample XML file neatly formatted in columns.

	А	В	С	D	E	F	(
1	State	Locality	Tax Class	EE/ER	<b>Current Tax</b>	Emplid	Name
2	Federal		OASDI/Disability - EE	E	162.21	KU0087	Lopez,Wilma
3	Federal		OASDI/Disability - ER	R	162.21	KU0087	Lopez,Wilma
4	Federal		FICA Med Hospital Ins / R	E	37.94	KU0087	Lopez,Wilma
5	Federal		Withholding	E	351.69	KU0087	Lopez,Wilma
6	Federal		FICA Med Hospital Ins / R	R	37.94	KU0087	Lopez,Wilma
7	Federal		Unemployment ER	R	0.00	KU0087	Lopez,Wilma
8	Utah		FUTA Credit Reduction	E	0.00	KU0087	Lopez,Wilma
9	Utah		Withholding	E	126.44	KU0087	Lopez,Wilma
10	Utah		Unemployment ER	R	176.60	KU0087	Lopez,Wilma
11	California		FUTA Credit Reduction	E	14.31	KU0058	Votava, Teresa
12	California		OASDI/Disability - EE	E	11.92	KU0058	Votava, Teresa
13	California		Withholding	F	18 10	K110058	Votava Teresa

#### Add analytic / aggregate functions

For a simple, single page spreadsheet without data groupings, we can sum the Tax column by just putting a SUM() function in a cell.

С	D	E	F			
Tax Class	EE/ER	Current Tax	Emplid	I		
OASDI/Disability - EE	E	162.21	KU0087	l		
=SUM(XDO_?XDOFIELD5?) SUM(number1, [number2],)						

Notice the range for the SUM function contains only the one cell

in the repeating row. Excel translates the cell address to "XDO\_?XDOFIELD5?". This address is Named Space Template Builder uses to map data to the spreadsheet.

"=SUM(XDO\_?XDOFIELD5?) " will sum all the values of this field when the spreadsheet is created.

Names Spaces are viewed and controlled by the Names Manager on the "Formulas" Ribbon.



	А	В	С	D	E	F	G
1	State	Locality	Tax Class	EE/ER	Current Tax	Emplid	Name
2	Federal		OASDI/Disability - EE	E	162.21	KU0087	Lopez,Wilma
3	Federal		OASDI/Disability - ER	R	162.21	KU0087	Lopez,Wilma
4	Federal		FICA Med Hospital Ins / E	E	37.94	KU0087	Lopez,Wilma
5	Fodoral		Withholding	F	251.69	KI 10087	Lonez Wilma
156	New York		Unemployment ER	R	0.00	KU0005	Aliverdi,Reza K
157	New York	NEW YORK	Withholding	E	192.07	KU0005	Aliverdi,Reza K
158	New York	MTA PAYROLL TAX (MCTMT	Local ER	R	18.03	KU0005	Aliverdi,Reza K
159							
160					11,526.64		
161							

#### Click on the Preview icon to see if your formula worked correctly.

# Adding a sum using the XDO\_METADATA Sheet

A spreadsheet summing function can also be added on the XDO\_METADATA spreadsheet using XSL commands

Log On	View Report		Sample XML	III Field	iroup	Excel	Field Browser		FindRd_PAY_END_DT	Find Next
XDO	?XDOFIELD8?	* I ×	Load Data	Intert		Preview		To	HI_OFF_CYCLE HI_PAGE_NUM HI_LINE_NUM HI_SEPCHK	
Sugar		0	1	c	D	8	F		- W Rd_EMPLID	
1 St	ate L	ocality	Tax Class	5	EE/ER	Current	Tax Empli	d	- CI fid_NAME	
2 Fe	ederal Li	EXINGTON-FAYETTE	OASDI/0	isability - EE	E	16	2.21 KU008	87	Hd_STATE	
4						16	2.21		- II RELOCALITY	
5									Hd_TAX_CLASS	
6									- G fid_PY_DESCR30	
7									- II Hd_EE_ER_TAX_TYPE	
								-	- I HI_TAX_CUR	v
8								_	Example 162.21	
9										
9 10										
11									Topert.	Doze
40.									AUG-BID.	

#### In cell below the repeating row, add the field to be summed

Notice the formula field name "XDO\_?XDOFIELD8?" in the Name Box.

Switch to the "XDO_METADATA"	Data Constraints:	1999 No. 199	
	XDO_7XDOFIELD17	fld_STATE_DESCR?	
sheet (unhide it if necessary) and	2 XDO_?XDOFIELD2?	fld_LOCALITY_NAME?	
find the field mapping for that	XDO_7XDOFIELD3?	fld_PY_DESCR30?	
	4 XDO_?XDOFIELD4?	fld_EE_ER_TAX_TYPE?	
named cell.	5 XDO_?XDOFIELD5?	fid_TAX_CUR?	
1	5 XDO_?XDOFIELD6?	fld_EMPLID?	
1	7 XDO_?XDOFIELD7?	fld_NAME?	
Change the field reference to a sum.	8 XDO_GROUP ?XDOG1?	<xsl:for-each select=".//row_X_PAYTAX_VW"></xsl:for-each>	
	XDO_?XDOFIELD8?	fld_TAX_CUR?	
For example, in this case it will be	2	A - 61 - 61 S	
sum(fld TAX CUR)?	1		
2	2		
3.		UDG ANTADATA	
	5heet1	XDO_METADATA (+)	

XDO_GROUP_?XDOG1?	
-------------------	--



Test the template again using the Excel control and see that the sum field is working correctly.

	А	В	С	D	E	F	G
1	State	Locality	Tax Class	EE/ER	Current Tax	Emplid	Name
55	New York		Family Leave Insurance -	E	14.43	KU0005	Aliverdi,Reza K
56	New York		Unemployment ER	R	0.00	KU0005	Aliverdi,Reza K
57	New York	NEW YORK	Withholding	E	192.07	KU0005	Aliverdi,Reza K
58	New York	MTA PAYROLL TAX (MCTM1	Local ER	R	18.03	KU0005	Aliverdi,Reza K
59							
50			Total		11,526.64		

Re-hide the XDO\_METADATA sheet before publishing.

At this point the spreadsheet is ready for loading into PeopleSoft as a BI Publisher Template.

# Create a Grouped Data Template

#### Notes on Grouping in Excel Templates

The data manipulation tools within the BI Publisher Excel template are not robust nor extensive. The basic functionality will take a flat XML file and group the data. However, the ability for meaningful analysis with Excel features such as aggregate functions is limited.

For this example, we are using the same payroll tax data, but this time we want to group and sum the report by taxing state.

To create grouped data with aggregate functions, the XML data must be in a hierarchical structure within those State groups. Using the same data, we created a new XML file with a parent-child relationship.

X\_PAYTAX\_ST\_VW X\_PAYTAX\_ST\_DVW

X\_PAYTAX\_ST\_VW contains a row for each unique state X\_PAYTAX\_ST\_DVW contains all tax detail information for that state



## Grouping Setup

Create a new spreadsheet	Α		В	C				espaceSch	emal ocatio
and load your XML sample 1	tate	e ∣v	Vyoming				row_X_P.		
file into the BI Publisher 2							🗆 @row		
Template Builder. 3							□ fld_C □ fld P		т
4							fld_S		/ <b>·</b>
Add the state field to the 5							🗉 📊		CR
6						6	🖹 🔁 rs_X_	PAYTAX_S	ST_DVW
top.						1			
Highlight a block of cells high		А	В	С	D	E	F	G	Н
enough for the structure of	-	State	Wyoming	BI	Publisher P	roperties			
each group.	2			Pro	perties				
	4			-	Loop				
	5				For Each	row_X	_PAYTAX_ST_	VW	~
Choose the "Repeating Group"	6					Ab	solute Path		
control from the BI Publisher	7				Group By				~
Ribbon Menu and choose the	9				On Gro	uping			
Parent Row Structure in the	10								
"For Each" box. Since the data	11								
	12 13						[	ОК	Cancel
is already grouped in the data	15								

structure, we do not click the "On Grouping" checkbox or complete the "Group By" option.

Test out this much by clicking on the Excel icon before continuing.



## Group Detail Setup

Add in the fields from the detail/child row of the XML data structure. Add column headings and formatting for numbers and dates.

	10_7XD		5 A	ignment	6	11LA	ber G	Consetname     Consetname     Constant State     Constant     Constant     Constant State     Constant State     Constant
4		8	c	D	0.0		a	G St_COMPANY G St_PAY_END_DT
1	State	Wyoming						
£.		Тах	Locality	EE/ER	Current Tax	Emplid	Name	- 4d_OFF_CYCLE
5	1 1	FUTA Credit Reduction	WORKERS COMP	Ē	0.00	KU0061	Wynne,Elbert	- #d_PAGE_NUM
1					19 - 19	8		- 4d_LINE_NUM - 4d_SEPCHK
5	-							4 Md_EMPLID
٤								- Md_NAME
								- U M_LOCALITY - U M_LOCALITY_NAME
5								H M_TAK_CLASS
9							_	H Md_PY_DESOR30
0	-							U MALEE_ER_TAX_TY



Create a repeating row for the detail/child row. Select just the data fields on the spreadsheet from the child row and then click on the "Repeating Group" control. Ensure that the Child Row data structure is selected.

State	Wyoming						
	Тах	Locality		EE/ER	Current Tax	Emplid	Name
	FUTA Credit Reduction	WORKERS COMP		E	0.00	KU0061	Wynne,Elbert
			BI Pub	lisher Pr	operties		×
			Propert	ties			
			For	Each	· · · · · · · · · · · · · · · · · · ·	AYTAX_ST_	DWW
			Gro	oup By	Absolu	ite Path	~
				On Grou	ping		-

Test out the detail report by clicking on the Excel icon before continuing.

	A	В	C	D	E	F	G
1	State	Wyoming					
2		Тах	Locality	EE/ER	Current Tax	Emplid	Name
3		FUTA Credit Reduction		E	0.00	KU0061	Wynne,Elbert
4		Unemployment ER		R	190.65	KU0061	Wynne,Elbert
5							
6							
7							
8							
9							
10	State	Utah					
11		Тах	Locality	EE/ER	Current Tax	Emplid	Name
12		FUTA Credit Reduction		E	0.00	KU0087	Lopez,Wilma
13		Unemployment ER		R	176.60	KU0087	Lopez,Wilma
14		Withholding		E	126.44	KU0087	Lopez,Wilma
15							



#### Group Totals

We need to add the total field to sum within the group instead of sum for then entire data. This is done using the XDO\_METADATA sheet.

Add the field to be summed below your detail data using the field control. Note the Name Box in the left-hand corner for the Template Mapping name (XDO\_?XDOFIELD8?).

	os Int	og Off 🔹 Upfoad Tier Open 🔅 Upfoad Tier New Report	glote Act Sa 3	mple (ML	E Re	peating	E	cel	Fiel	ld	Field	- u Rd_PAY_END_DT	Find Next
х	00_?xD0	Online OFIELD8? •	X V	d Data J.	0	insert	1.01	NIFW.				- B Hd_PAYGROUP - B Hd_OFF_CYCLE - B Hd_PAGE_NUM	
A	A	8	1	c		D	E		F			- D Rd_UNE_NUM - D Rd_SEPCHK	
1	State	Wyoming										- II RILEMPLID	
2		Тах	Locality			EE/ER	Current Ta	x Em	nplid	N		- II Rd_NAME	
3		FUTA Credit Reduction	WORKERS C	OMP		Ε	0.0	O KU	0061	W		- U Rd_LOCALITY - U Rd_LOCALITY_NAME	
4												- U fid_TAX_CLASS	
5			Total				0.0	0				- B fid_PY_DESCR30	
6								1				THAT AN OUT	
7											-	- II RI_TAX_CUR	0
8										1	Example	0	
9	-							_					
10								-				Insert Close	
11													-

Select the XDO\_METADATA sheet (unhide if necessary) to edit the field mapping of XDO\_?XDOFIELD8?.

Change the mapping field to <?sum(.//fld\_TAX\_CUR)?>. Notice the ".//" in front of the fieldname. This forces the template to sum only within that group instead for the entire data set.

B2	20	-	1	$\times$	$\checkmark$	$f_{\mathcal{K}}$	sum(.//fld_TAX_CUF</th <th>&lt;)?&gt;</th>	<)?>
	А					В		с
13	XDO_?XDOFIELD2?	fld</td <th>_PY_</th> <td>DESCR</td> <td>30?&gt;</td> <td></td> <td></td> <td></td>	_PY_	DESCR	30?>			
14	XDO_?XDOFIELD3?	fld</td <th></th> <td>ALITY</td> <td></td> <td>E?&gt;</td> <td></td> <td></td>		ALITY		E?>		
15	XDO_?XDOFIELD4?	fld</td <th>_EE_</th> <td>ER_TA</td> <td>X_TYP</td> <td>'E?&gt;</td> <td></td> <td></td>	_EE_	ER_TA	X_TYP	'E?>		
16	XDO_?XDOFIELD5?	fld</td <th></th> <td>_CUR</td> <td>?&gt;</td> <td></td> <td></td> <td></td>		_CUR	?>			
17	XDO_?XDOFIELD6?	fld</td <th>_EM</th> <td>PLID?&gt;</td> <td>&gt;</td> <td></td> <td></td> <td></td>	_EM	PLID?>	>			
18	XDO_?XDOFIELD7?	fld</td <th>_NA</th> <td>ME?&gt;</td> <td></td> <td></td> <td></td> <td></td>	_NA	ME?>				
19	XDO_GROUP_?XDOG2?	<xsl:< td=""><th>for-e</th><td>ach se</td><td>lect="</td><td>.//row</td><td>_X_PAYTAX_ST_DVW"&gt;</td><td></td></xsl:<>	for-e	ach se	lect="	.//row	_X_PAYTAX_ST_DVW">	
20	XDO_?XDOFIELD8?	su</td <th>m(.//</th> <td>fld_T</td> <td>AX_CU</td> <td>R)?&gt;</td> <td></td> <td></td>	m(.//	fld_T	AX_CU	R)?>		
24								

.1	A	B	c	D	E	F	
29	State	Oregon					
30		Tax	Locality	EE/ER	Current Tax	Emplid	Name
31		FUTA Credit Reduction		E	0.00	KU0022	Giles, Fred
32		Local - Employer and Em	WORKER'S COMP	E	0.95	KU0022	Giles, Fred
33		Local ER	LANE COUNTY	R	15.59	KU0022	Giles, Fred
34		Statewide Transit Tax		E	2.07	KU0022	Giles, Fred
35		Unemployment ER		R	135.18	KU0022	Giles,Fred
36		Withholding		E	132.95	KU0022	Giles, Fred
37		2020000000000			111/23223		
38			Total		286.74		
39						_	
40							
41							
42	State	Oklahoma					
43		Tax	Locality	EE/ER	Current Tax	Emplid	Name
44		FUTA Credit Reduction	193120000	E	0.00	KU0021	Bir,Salish
45		Unemployment ER		R	133.71	KU0021	Bir,Salish
46		Withholding		E	83.00	KU0021	Bir,Salish
47		19				-	
48			Total		216.71	1	

Test detail report by clicking on the Excel icon before continuing.

# Grouping on Separate worksheets in the workbook

A feature of the Excel template is to split groups into multiple worksheets: one group per sheet.

An important point here is that the group/spilt is not handled through the "Repeating Group" control on the ribbon as the previous example, but through the XDO\_METADATA sheet with an XDO mappings.

XDO_SHEET_?	Defines which record/row to split the data into sheets
XDO_SHEET_NAME_?	Defines what to name the sheet

Both XDO commands are required to make the split on the group work.

Using the previous taxes grouped by state example:

- We will split the data into a different sheet for each state
- The sheet name will be the State

First, remove the high-level STATE grouping from the previous example. The only repeating group control will be on the tax detail lines for each State

To remove the grouping:

• Click on the "Field Browser" control on the BI Publisher Ribbon

Formula	s Data	Review	View	неір	BI Publisher
Sample XML	123 Field 🚟 Repeatir	ng Group	<b>K</b> iii Excel		📩 Import 🔊 Update Palette



• Highlight the state grouping

A			C D	E F	6	8 1		J.
State	Wyoming							
			Field Browser					×
	Tax	Locality				C		
	FUTA Credit Reduction	WORKER			Find	<ul> <li>Find Next</li> </ul>	Delet	e
		Total	Nane	Value	Refers To	Code	Code 2	2
			KDO_GROUP_7KDOG17		-Sheet 1131 50	cash for waich select + 7 / Apr	100million	- 21
is.			XD0_1XD0FIELD17 XD0_GR0UF_1XD0G27 XD0_1XD0FIELD27	Wyoming FUTA Credit Reduction	Sheet 115B\$1     Sheet 115B\$4 \$G\$4     Sheet 115B\$4	kd_STATE_DESCR? costforeach select=".//m kd_PY_DESCR30?	chalfor	

- Click the delete button (Upper right corner)
- Close the field browser

Open the XDO\_METADATA sheet, navigate to the "Constraints" section and add the following rows

Column A	Column B
XDO_SHEET_?	.//row_X_PAYTAX_ST_VW?
XDO_SHEET_NAME_?	.//fld_STATE_DESCR?

"XDO\_SHEET\_?" controls which repeating ROW BI Publisher will split into different sheets. Not the grouping field. This will force the grouping, which is why we don't want to have a "Repeating Group" control at this level.

"XDO\_SHEET\_NAME\_?" determines the unique name for each split sheet of the group. You can use XLT functions here such as "concat()" and aggregate functions on fields for a meaningful sheet name.

The detail data row still requires the "Repeating Field" control to show each data row of the group.

	Α	В	С	D	E	F	G		
1	State	Georgia							
2									
3		Тах	Locality	EE/ER	Tax Current	Emplid	Name		
4		FUTA Credit Reduction		E	0.00	KU0107	Doyle,Emma		
5		Withholding		E	79.34	KU0107	Doyle,Emma		
6		Unemployment ER		R	42.32	KU0107	Doyle,Emma		
7									
8			Total		121.66				
9									
10									
🔹 🕨 🛛 Federal 🛛 California 🖉 Delaware 🔤 Georgia 🛛 Illinois 🖉 Indiana 👋 Kentucky 🖉 Mir 🔶									

Test detail report by clicking on the Excel icon before continuing.

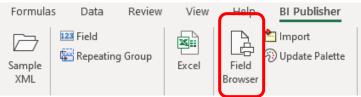
# Advanced Ideas

XDO Functions for Excel Templates

Advanced Excel Template Functions

This Oracle document lists many of the XDO functions available for Excel templates.

#### Field Browser



The "Field Browser" control on the BI Publisher ribbon displays all currently mapped fields and repeating groups in the current Excel Template.

	Online		Field Browser				
XDO_	?XDOFIELD1? *	1 28			Find	<ul> <li>Find Net</li> </ul>	Defeta
4	A E		Name	Value	Refers To	Code	Code 2 _
1 St	tate Wyoming		XDO_7XDOFIELD17	Wyoming	+Sheet 11\$8\$1	<re><re>id_state_descrap</re></re>	
2			XDO_GROUP_7XDOG27	A DATINE PORT OF THE STORE SHOWS	-Sheet115854:5G54	-oisifor-each select=" //io	<a>khilderes</a>
3	Tax	Locali		FUTA Credit Reduction	=Sheet11\$8\$4	Rd_PY_DESCR30?	
4	FUTA Credit Reduction	WORK	XD0_7XD0FIELD37 XD0_7XD0FIELD47	WORKERS COMP E	-Sheet11sD54 -Sheet11sD54	Hd_LOCALITY_NAME? Hd_EE_ER_TAX_TYPE?	- 1
5			XDO 7XDOFIELD5?	0	*5heet115E54	<71d_TAX_CUR7>	
6		Total	(	Contraction of Contra	A	m - manima	
7			And the second s				
8			Edit				
9			td_STATE_DESCR?				
10			1				
11			1				
12							
13			Update			1	Close
9 10 11 12 13 14			opeace				Liose
15							

Field mapping can be viewed and updated and deleted through this control.

As a note, this does not show all XDO functions such as the sheet spitting controls, which are available on the XDO\_METADATA sheet.



#### Name Manager

The Name Manager is available on the "Formulas" Ribbon menu. This shows the cell, or the cell range associated with a template mapping.

File         Home         Insert         Page Lay $\int X$ $\Sigma$ AutoSum         -			E Laniar E Maria	R Folierman e Dig t	V.FI	Help BI Publ e Name ~ Formula ~ e from Selection	isher QuickSook F <sub>20</sub> Frace Precedents F <sup>4</sup> 2 Frace Dependents F <sup>*</sup> <sub>2</sub> Remove Anows	Calculation Options -	
	Func	dion Liber	Name Manager						7 ×
E9			New	£08	Delete				Eliter*
4 A	8		Name		Value	Refers To	Scope	Comment	
State	ate Wyoming Tax Li FUTA Credit Reduction V Ti				Working         •Sheef1503           FUTA Credit Reduct         •Sheef15054           WORKERS COMP         •Sheef15054           E         •Sheef15054           0.00         •Sheef15054		Workback Workback Workback Workback Workback		2
			ADO_TXDOFII ADO_TXDOFII ADO_TXDOFII ADO_CROUP	1.D77 1.D8?	KU0061 Wynne,Elbert 0.00 ("FUTA Credit Redu	<ul> <li>Sheet1/SF54</li> <li>Sheet1/SG54</li> <li>Sheet1/SE56</li> <li>Sheet1/SE54/SG54</li> </ul>	Workbook Workbook Workbook		
2			Befers to:						
i l			× -Sheet	115851					±
8									Close

The "Field Browser" will show the mapping between the XML datafile and a Named Space, but editing and sometimes seeing the cell locations and ranges referenced by that Named Space must be done here.



# Appendix A – Flat Tax XML File Example

#### \*Note: Data shortened to only two rows to show structure

```
<?xml version="1.0" encoding="UTF-8"?>
<rs X PAYTAX VW xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" numrows="3"
rowsetname="X PAYTAX VW" xsi:noNamespaceSchemaLocation="">
   <row_X_PAYTAX_VW rownumber="1">
      <fld COMPANY>GBI</fld COMPANY>
      <fld PAYGROUP>KU3</fld PAYGROUP>
      <fld PAY END DT>2020-03-15</fld PAY END DT>
      <fld OFF CYCLE>N</fld OFF CYCLE>
      <fld PAGE NUM>2</fld PAGE NUM>
      <fld LINE NUM>1</fld LINE NUM>
      <fld SEPCHK>0</fld SEPCHK>
      <fld STATE>GA</fld STATE>
      <fld EMPLID>KU0107</fld EMPLID>
      <fld NAME>Doyle, Emma</fld NAME>
      <fld STATE DESCR>Georgia</fld STATE DESCR>
      <fld LOCALITY />
      <fld_LOCALITY_NAME />
      <fld TAX CLASS>6</fld TAX CLASS>
      <fld PY DESCR30>FUTA Credit Reduction</fld PY DESCR30>
      <fld EE ER TAX TYPE>E</fld EE ER TAX TYPE>
      <fld TAX CUR>0</fld TAX CUR>
   </row X PAYTAX VW>
   <row_X_PAYTAX_VW rownumber="2">
      <fld COMPANY>GBI</fld COMPANY>
      <fld_PAYGROUP>KU3</fld_PAYGROUP>
      <fld PAY END DT>2020-03-15</fld PAY END DT>
      <fld OFF CYCLE>N</fld OFF CYCLE>
      <fld PAGE NUM>2</fld PAGE NUM>
      <fld_LINE_NUM>1</fld_LINE_NUM>
      <fld SEPCHK>0</fld SEPCHK>
      <fld STATE>GA</fld STATE>
      <fld EMPLID>KU0107</fld EMPLID>
      <fld NAME>Doyle, Emma</fld NAME>
      <fld_STATE_DESCR>Georgia</fld_STATE_DESCR>
      <fld_LOCALITY />
      <fld LOCALITY NAME />
      <fld TAX CLASS>U</fld TAX CLASS>
      <fld PY DESCR30>Unemployment ER</fld PY DESCR30>
      <fld_EE_ER_TAX_TYPE>R</fld_EE_ER_TAX_TYPE>
      <fld_TAX_CUR>42.32</fld_TAX_CUR>
   </row_X_PAYTAX_VW>
</rs X PAYTAX VW>
```



# Appendix B – Complex Tax XML File Example

#### \*Note: Data shortened to only two rows to show structure

```
<?xml version="1.0" encoding="UTF-8"?>
<rs X PAYTAX ST VW xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" numrows="1"
rowsetname="X PAYTAX ST VW" xsi:noNamespaceSchemaLocation="">
   <row_X_PAYTAX_ST_VW rownumber="1">
      <fld COMPANY>GBI</fld COMPANY>
      <fld PAY END DT>2020-03-15</fld PAY END DT>
      <fld STATE>GA</fld STATE>
      <fld STATE DESCR>Georgia</fld STATE DESCR>
      <rs X PAYTAX ST DVW numrows="3" rowsetname="X PAYTAX ST DVW">
         <row X PAYTAX ST DVW rownumber="1">
            <fld COMPANY>GBI</fld COMPANY>
            <fld PAY END DT>2020-03-15</fld PAY END DT>
            <fld STATE>GA</fld STATE>
            <fld PAYGROUP>KU3</fld PAYGROUP>
            <fld OFF CYCLE>N</fld OFF CYCLE>
            <fld PAGE NUM>2</fld PAGE NUM>
            <fld_LINE_NUM>1</fld_LINE_NUM>
            <fld SEPCHK>0</fld SEPCHK>
            <fld EMPLID>KU0107</fld EMPLID>
            <fld NAME>Doyle, Emma</fld NAME>
            <fld LOCALITY />
            <fld LOCALITY NAME />
            <fld_TAX_CLASS>6</fld_TAX_CLASS>
            <fld PY DESCR30>FUTA Credit Reduction</fld PY DESCR30>
            <fld_EE_ER_TAX_TYPE>E</fld_EE_ER_TAX_TYPE>
            <fld TAX CUR>0</fld TAX CUR>
         </row X PAYTAX ST DVW>
         <row X PAYTAX ST DVW rownumber="2">
            <fld_COMPANY>GBI</fld_COMPANY>
            <fld PAY END DT>2020-03-15</fld PAY END DT>
            <fld STATE>GA</fld STATE>
            <fld PAYGROUP>KU3</fld PAYGROUP>
            <fld OFF CYCLE>N</fld OFF CYCLE>
            <fld PAGE NUM>2</fld PAGE NUM>
            <fld_LINE_NUM>1</fld_LINE_NUM>
            <fld SEPCHK>0</fld SEPCHK>
            <fld EMPLID>KU0107</fld EMPLID>
            <fld NAME>Doyle, Emma</fld NAME>
            <fld LOCALITY />
            <fld LOCALITY NAME />
            <fld_TAX_CLASS>H</fld_TAX_CLASS>
            <fld PY DESCR30>Withholding</fld PY DESCR30>
            <fld EE ER TAX TYPE>E</fld EE ER TAX TYPE>
            <fld TAX CUR>79.34</fld TAX CUR>
         </row X PAYTAX ST DVW>
      </rs X PAYTAX ST DVW>
   </row_X_PAYTAX_ST_VW>
</rs X PAYTAX ST VW>
```