

# VI-99: Invoice Customization Tips and Tricks

How to Make Your Invoice Exactly What You Need

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A photograph of the Nashville skyline featuring the Bicentennial Bridge over the Cumberland River. The city's modern skyscrapers, including the AT&T Building, are visible across the water.

Deltek INSIGHT > 2017

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# Agenda

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1. Software
2. Database
3. Files
4. Invoice Project
5. Main Invoice Structure
6. Invoice Customization Preparation
7. Invoice Customizations 1-4



# Agenda (con't)

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8. Report Loading
9. More Tips and Tricks
10. Questions & Contact



# 01

## Software

# Software

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- Visual Studio 2013 (for Vision 7.6, 7.5, 7.4)
- Microsoft SQL Server Data Tools Business Intelligence for Visual Studio 2013
  - aka BIDS for Visual Studio 2013
  - aka Business Intelligence for Visual Studio 2013
- Microsoft SQL Server Management Studio 20XX

# 02

## Database

# Database

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- Invoice tables: bill\*
  - billInvMaster: Main invoice table. Contains a record per WBS (Work Breakdown Structure) with data to display, including parent levels.
  - billFeeDetail: Invoice fee data
  - billLabDetail: Invoice labor data
  - billConDetail: Invoice consultant data
  - billExpDetail: Invoice expense data
  - billUnitDetail: Invoice unit data

# Database

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- Invoice tables (continued): bill\*
  - billAddDetail: Invoice add-on data
  - billLimDetail: Invoice limit data
  - billTaxDetail: Invoice tax data
  - billRetDetail: Invoice retainage data
  - billInvSums: Invoice summary data (watchout for arraytype)
  - billARDetail: Invoice AR detail

# Database

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- Invoice tables (continued): bill\*
  - billBTDDetail: Invoice billed-to-date detail

# Database

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- Keys:
  - MainWBS1
  - Invoice

# Database

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Examples:

```
SELECT * FROM billInvMaster WHERE MainWBS1 = '00000an.00' and  
Invoice = '<Draft>'
```

```
SELECT * FROM billLabDetail WHERE MainWBS1 = '00000an.00' and  
Invoice = '<Draft>'
```

```
SELECT * FROM billInvSums WHERE MainWBS1 = '00000an.00' and  
Invoice = '<Draft>' and ArrayType = 'I'
```

# 03

## Files

# Files

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- Create a folder on your local machine (development machine)
- Make copies of the standard invoice files from your Vision Web/Application into the folder of your development machine:

C:\Program Files\Deltek\Vision\Reports\Standard\Invoice

# Files

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- Make a copy of the DefaultDataSource.rds file into the folder of your development machine's same folder as where the standard invoice files are. The DefaultDataSource.rds file is one folder up from where the invoice files are:

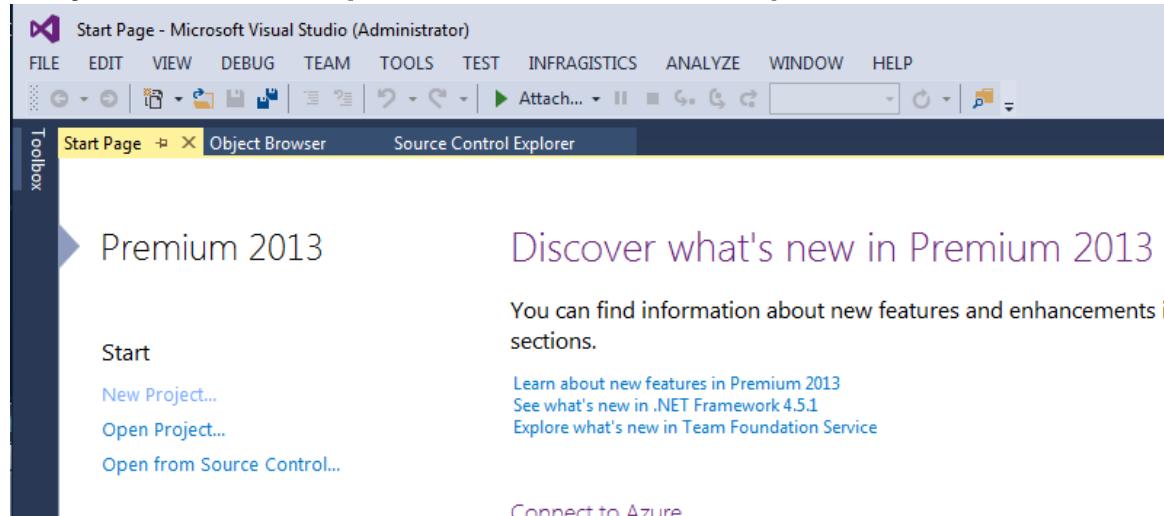
C:\Program Files\Deltek\Vision\Reports\Standard

# 04

## Invoice Project

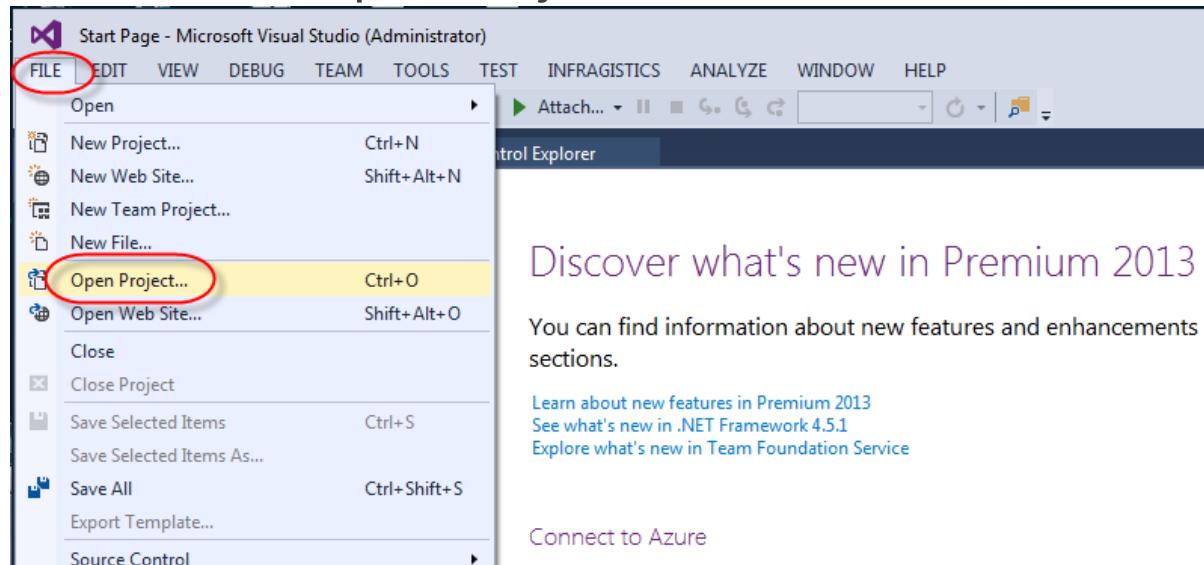
# Invoice Project

- In your development machine, open Visual Studio 2013



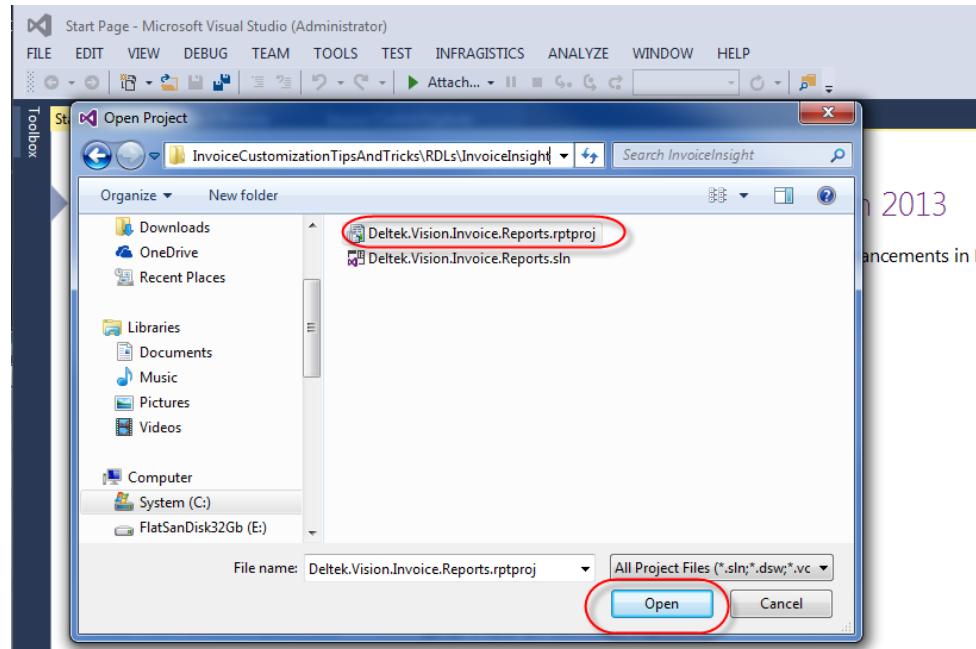
# Invoice Project

- Click on File/Open Project...



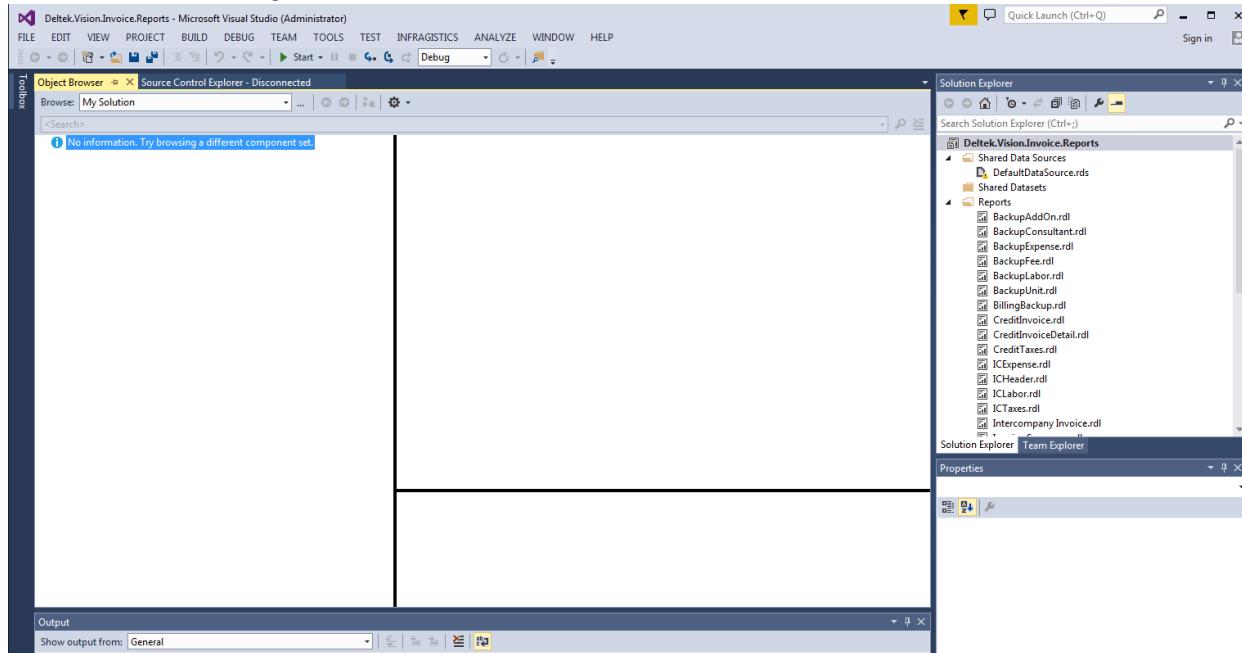
# Invoice Project

- Browse to the folder where the invoice files are and click Open



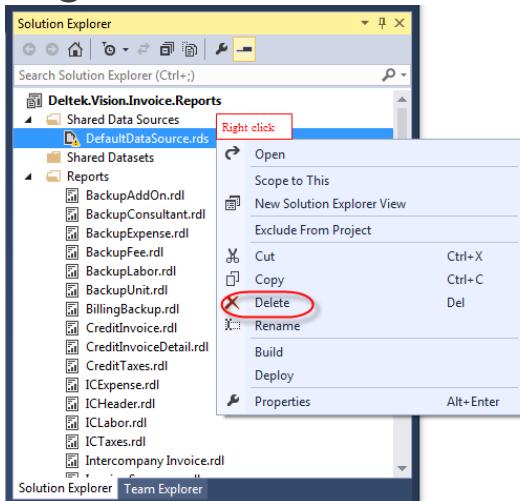
# Invoice Project

- Invoice Project



# Invoice Project

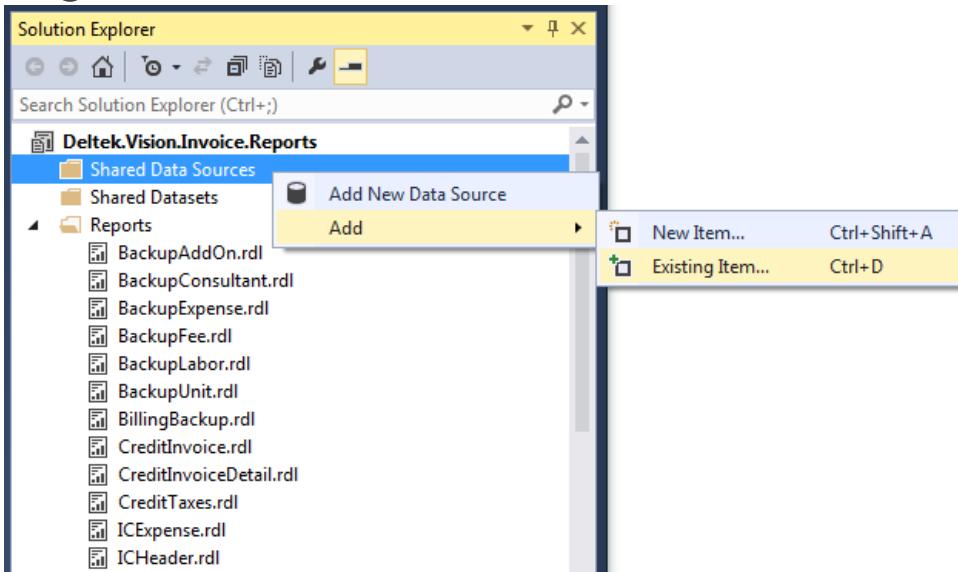
- Relink data source
  - Right click on DefaultDataSource.rds and select “Delete”



- Confirm DefaultDataSource.rds file deletion.

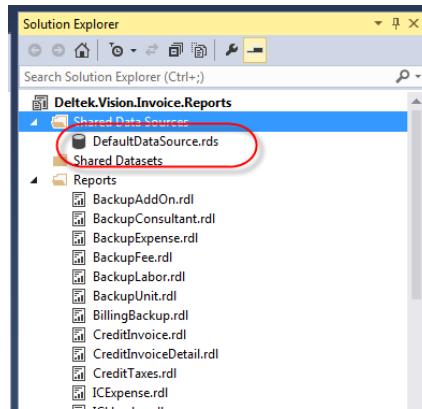
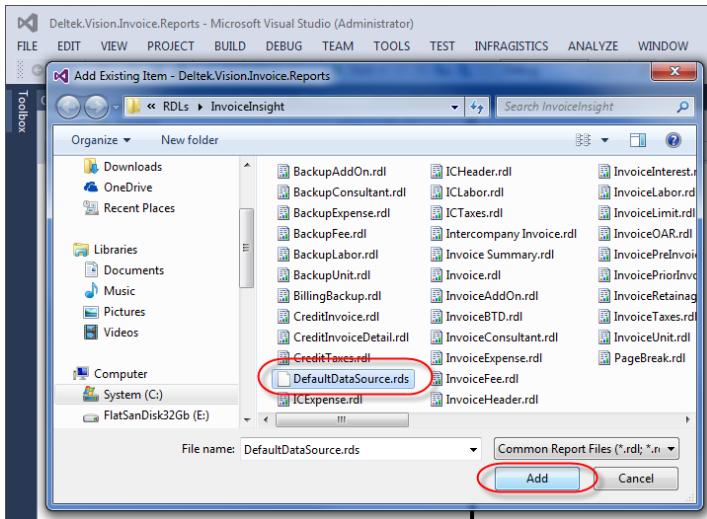
# Invoice Project

- Relink data source (continued)
- Right click on “Shared Data Sources” folder and select Add\Existing



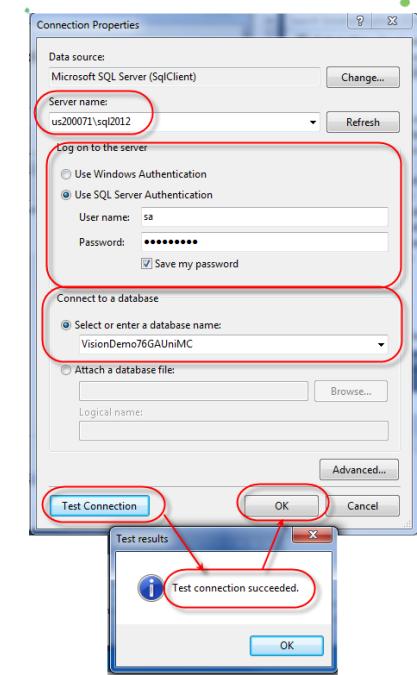
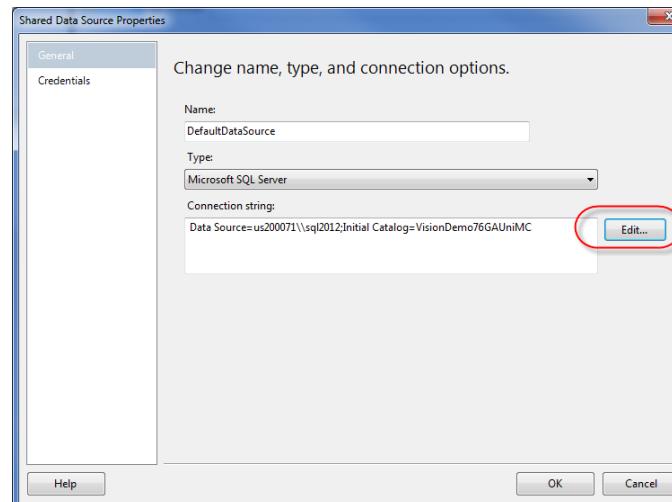
# Invoice Project

- Relink data source (continued)
  - Browse\Select DefaultDataSource.rds from the folder where the invoice files are and click Add



# Invoice Project

- Relink data source (continued)
  - Open DefaultDataSource.rds and setup your connection string accordingly



# 05

## Main Invoice Structure

# Main Invoice Structure

- Main Invoice = Invoice.rdl, open Invoice.rdl

The screenshot shows the Microsoft Visual Studio Designer interface for an RDL (Report Definition Language) file named "Invoice.rdl". The main area displays a hierarchical report structure with three stacked header sections and a single row of data below them. The first header section contains fields like @wbs1HeaderLat, BillWBS1, BillName, LongName, Description, and Expr. The second section contains @wbs2HeaderLat, BillWBS2, BillWBS2Name, WBS2LongName, and Description. The third section contains @wbs3HeaderLat, BillWBS3, BillWBS3Name, WBS3LongName, and Description. Below these headers is a single data row containing fields like InvoiceFee, InvoiceLabor, InvoiceConsultant, InvoiceExpense, InvoiceUnit, and InvoiceAddOn. At the bottom of the designer, there are two tabs: "Row Groups" and "Column Groups". The "Row Groups" tab lists five groups: (MainInvoiceTable\_Invoice), (MainInvoiceTable\_WBS1), (MainInvoiceTable\_WBS2), (MainInvoiceTable\_WBS3), and (MainInvoiceTable\_Details\_Group). The "Column Groups" tab is currently selected.

# Main Invoice Structure

- Invoice main groupings: Invoice, billWBS1, billWBS2, billWBS3

The screenshot displays the SSMS Design view for the 'Invoice.rdl' file. The main area shows a table structure with three main rows corresponding to billWBS1, billWBS2, and billWBS3. The 'Row Groups' pane at the bottom is highlighted with a red box, showing four groups: (MainInvoiceTable\_Invoice), (MainInvoiceTable\_WBS1), (MainInvoiceTable\_WBS2), and (MainInvoiceTable\_WBS3).

# Main Invoice Structure

- Highlight grouping or follow grouping brackets to identify groupings within the design

The screenshot shows the SSRS Design view for a report named 'Invoice.rdl'. The main area displays the 'InvoiceHeader' section. A red box highlights a grouping bracket around the first three rows of data, which are grouped under 'BillWBS1'. Below this, another grouping bracket highlights the next three rows under 'BillWBS2', and a third grouping bracket highlights the last three rows under 'BillWBS3'. The 'Row Groups' pane at the bottom shows the corresponding grouping structure:

- [MainInvoiceTable\_Invoice]
- I (MainInvoiceTable\_WBS1)
- I (MainInvoiceTable\_WBS2) **Highlighted grouping**
- I (MainInvoiceTable\_WBS3)
- = (MainInvoiceTable\_Details\_Group)

The screenshot shows the SSRS Data View for the same report. It displays the grouped data from the 'InvoiceHeader' section. The grouped data is shown in three distinct sections, each starting with a header row and followed by two data rows. The grouping structure is indicated by vertical lines on the left side of the data rows.

Group 1	Group 2	Group 3
@wbs1HeaderLat [BillWBS1]		
BillWBS1]		
BillName]		
LongName]		
Description]		
x#"		
@wbs2HeaderLat [BillWBS2]		
BillWBS2]		
BillWBS2Name]		
WBS2LongName]		
Description]		
@wbs3HeaderLat [BillWBS3]		
BillWBS3]		
BillWBS3Name]		
WBS3LongName]		
Description]		

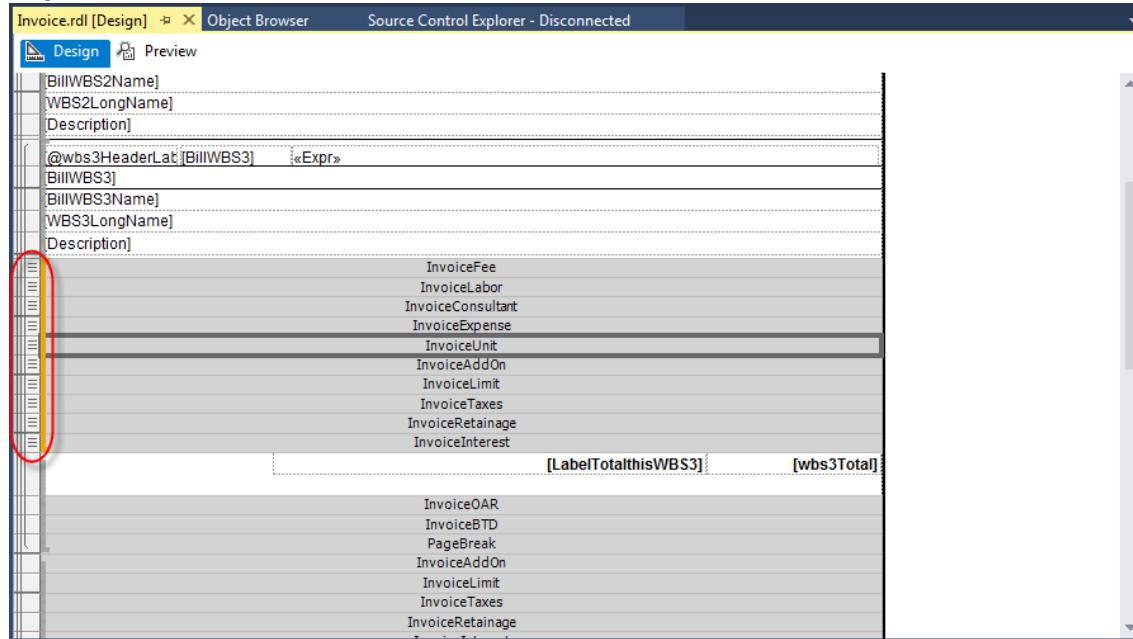
# Main Invoice Structure

- Invoice headers

InvoiceHeader	
@wbs1HeaderLat [BillWBS1]	«Expr»
BillWBS1	
BillName	
LongName	
Description	
«Expr»	
@wbs2HeaderLat [BillWBS2]	«Expr»
BillWBS2	
BillWBS2Name	
WBS2LongName	
Description	
@wbs3HeaderLat [BillWBS3]	«Expr»
BillWBS3	
BillWBS3Name	
WBS3LongName	
Description	
InvoiceFee	
InvoiceLabor	
InvoiceConsultant	
InvoiceExpense	
InvoiceUnit	
InvoiceAddOn	
InvoiceLimit	
InvoiceTaxes	
InvoiceRetainage	
InvoiceInterest	

# Main Invoice Structure

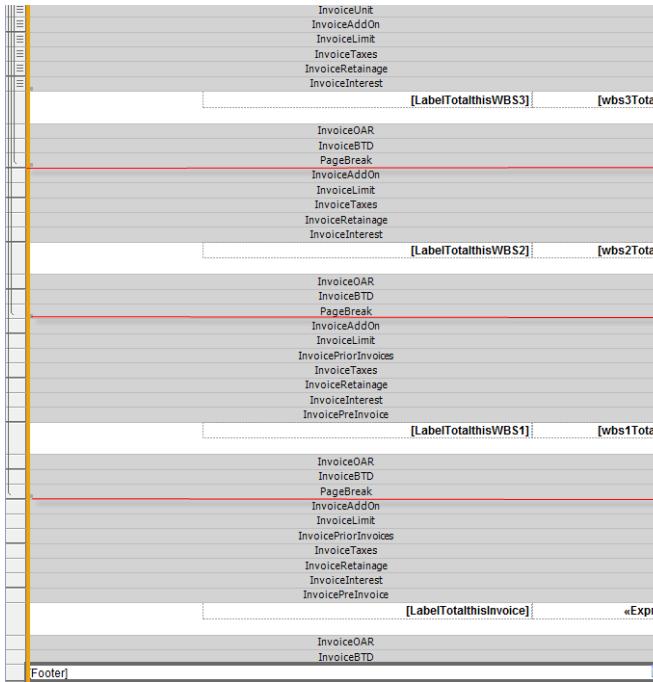
- Special detail icon  for detail section



The screenshot shows the 'Invoice.rdl [Design]' view in Microsoft Visual Studio. The top menu bar includes 'Object Browser' and 'Source Control Explorer - Disconnected'. The left sidebar shows a tree structure of report items. A red oval highlights the first item under 'BillWBS2Name', which is a detail section. The tree includes various sections like WBS2LongName, Description, and multiple levels of WBS3 sections. Labels for totals like 'LabelTotalthisWBS3' and 'wbs3Total' are visible at the bottom of some sections.

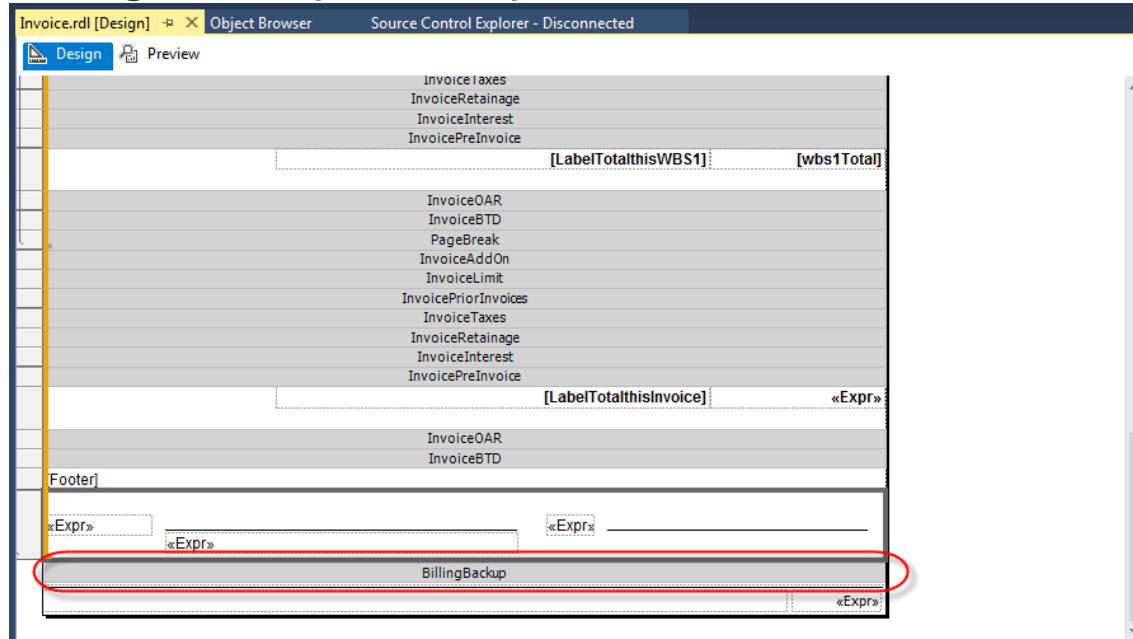
# Main Invoice Structure

- Invoice footers



# Main Invoice Structure

- Billing Backup sub-report location



# 06

## Invoice Customization Preparation

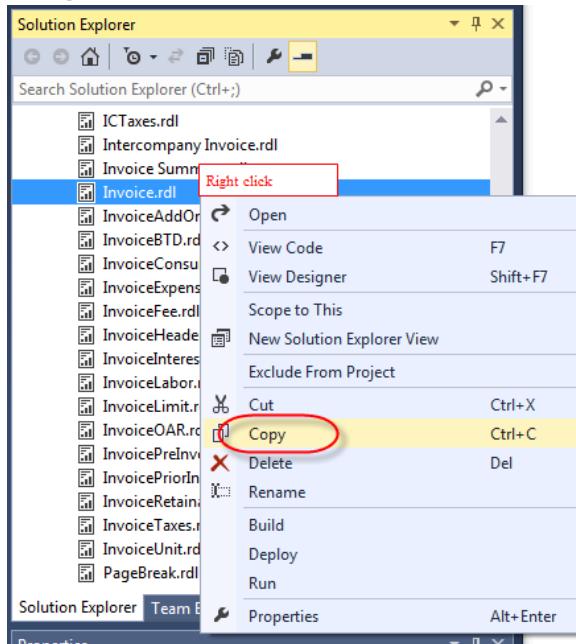
# Invoice Customization Preparation

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- Make a copy of Invoice.rdl
- Rename copy of Invoice.rdl to InvoiceInsight.rdl

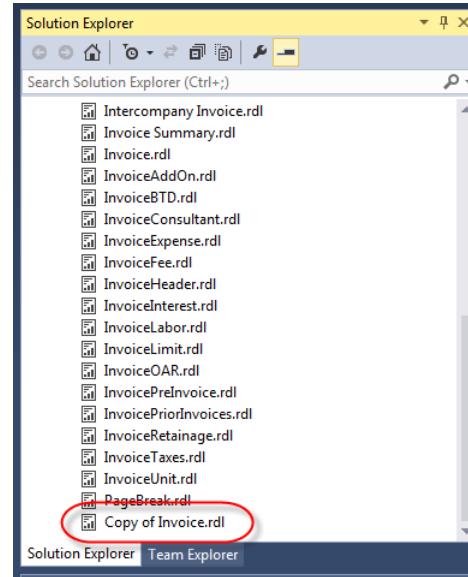
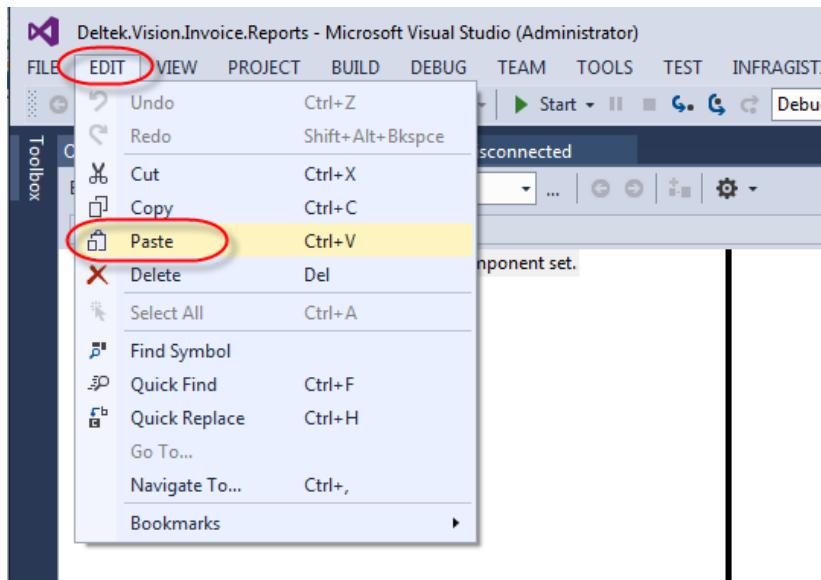
# Invoice Customization Preparation

- Right click Invoice.rdl and select Copy



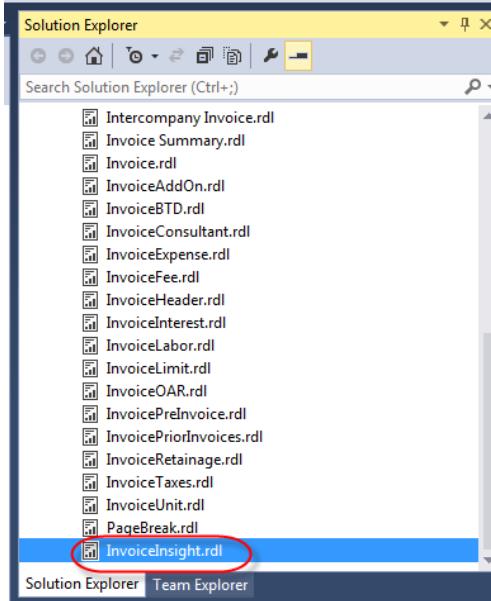
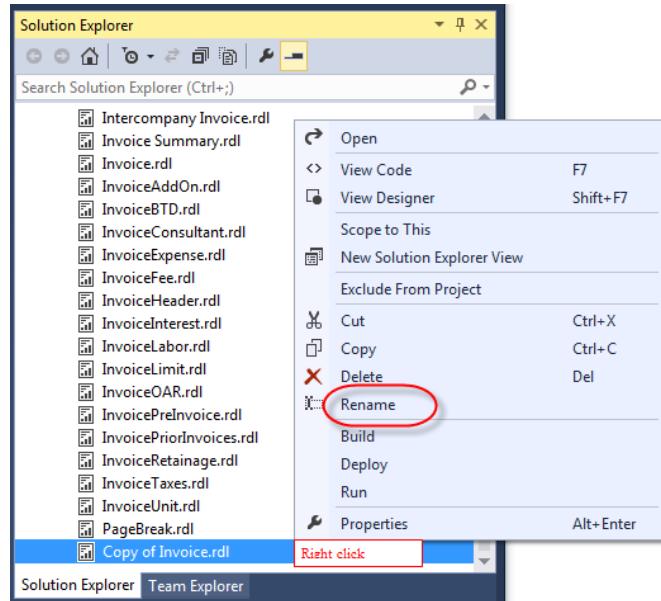
# Invoice Customization Preparation

- Click on EDIT/Paste



# Invoice Customization Preparation

- Right click/Rename



# Invoice Customization Preparation

- InvoiceInsight.rdl

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Design View:** The main area displays the `InvoiceInsight.rdl [Design]`. It features a header section labeled "InvoiceHeader" containing fields like `[@wbs1HeaderLat]`, `[BillWBS1]`, and `[@Expr]`. Below this are three stacked sections for "WBS1", "WBS2", and "WBS3", each with similar header and detail row structures.
- Solution Explorer:** On the right side, the "Solution Explorer" window lists various RDL files, including `Intercompany Invoice.rdl`, `Invoice Summary.rdl`, and `InvoiceInsight.rdl` (which is highlighted).
- Status Bar:** At the bottom, the status bar shows "Properties" and other standard development tools.

# 07a

## Invoice Customization 1

# Invoice Customization 1

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- Project No./Name modification
  - Hide Project No. (WBS1)
  - Show Project Name in navy blue font color

# Invoice Customization 1

- Locate WBS1 grouping, select BillWBS1 textbox and hide it

The screenshot shows the SSRS Designer and Solution Explorer interface.

**SSRS Designer:** The main window displays the report structure. A red circle highlights the 'BillWBS1' text box located within the 'groupHeader\_WBS1Number' text box. Below the main window, the 'Row Groups' and 'Column Groups' sections are visible, showing the grouping structure: MainInvoiceTable\_Invoice, MainInvoiceTable\_WBS1, MainInvoiceTable\_WBS2, and MainInvoiceTable\_WBS3.

**Solution Explorer:** The right-hand pane lists various RDL files. The 'InvoiceInsight.rdl' file is selected, highlighted with a red circle. The 'Properties' window at the bottom shows the 'Format' section with the 'Hidden' property set to 'True', also highlighted with a red circle.

# Invoice Customization 1

- Tip: change background color to Red (or any color of your preference)

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Solution Explorer:** Lists various RDL files including IntercityInvoice.rdl, InvoiceSummary.rdl, Invoice.rdl, and InvoiceInsight.rdl.
- Properties Panel:** Shows the properties for the "groupHeader\_WBS1Number" Text Box.
  - Action: None
  - BackgroundColor: Red
  - BackgroundImage: None
- Design View:** Displays the report structure with three main sections: WBS1, WBS2, and WBS3. Each section contains fields such as BillWBS1Name, BillWBS2Name, and BillWBS3Name. The WBS1 section is highlighted with a red background.
- Toolbars:** Standard Visual Studio toolbars for Design and Preview.

# Invoice Customization 1

- Select and change each possible field that displays the Project Name and change font color to Navy

The screenshot shows the Deltek Insight RDL Designer interface. The main window displays the design of the 'InvoiceInsight.rdl' file. On the left, a tree view shows various report components like 'MainInvoiceTable\_Invoice', 'MainInvoiceTable\_WBS1', etc. The main pane shows a table structure with several rows and columns. A specific row header, 'groupHeader\_WBS1LongName', is highlighted with a red circle. On the right, the 'Solution Explorer' pane lists numerous RDL files, and the 'Properties' pane shows the properties for the selected text box, with the 'Color' property set to 'Navy'.

# 07b

## Invoice Customization 2

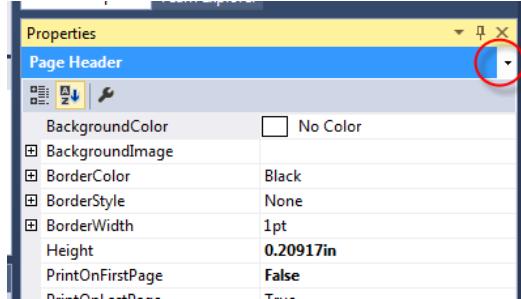
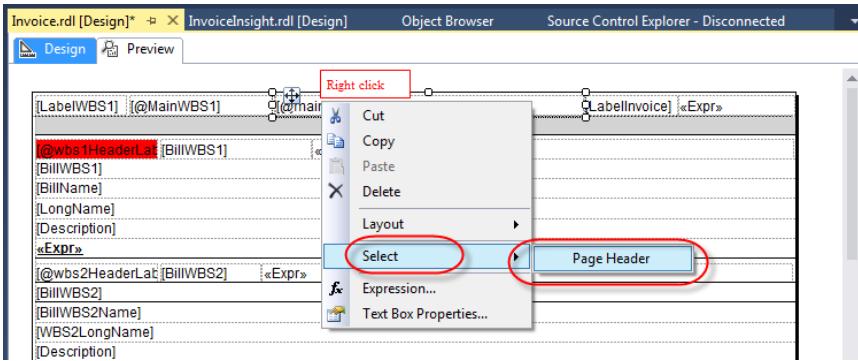
# Invoice Customization 2

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- Page header modification
  - Move Invoice Number below Project Number
  - Add Invoice Date below the moved Invoice Number

# Invoice Customization 2

- Select Page Header via Right Click>Select/Page Header or Properties



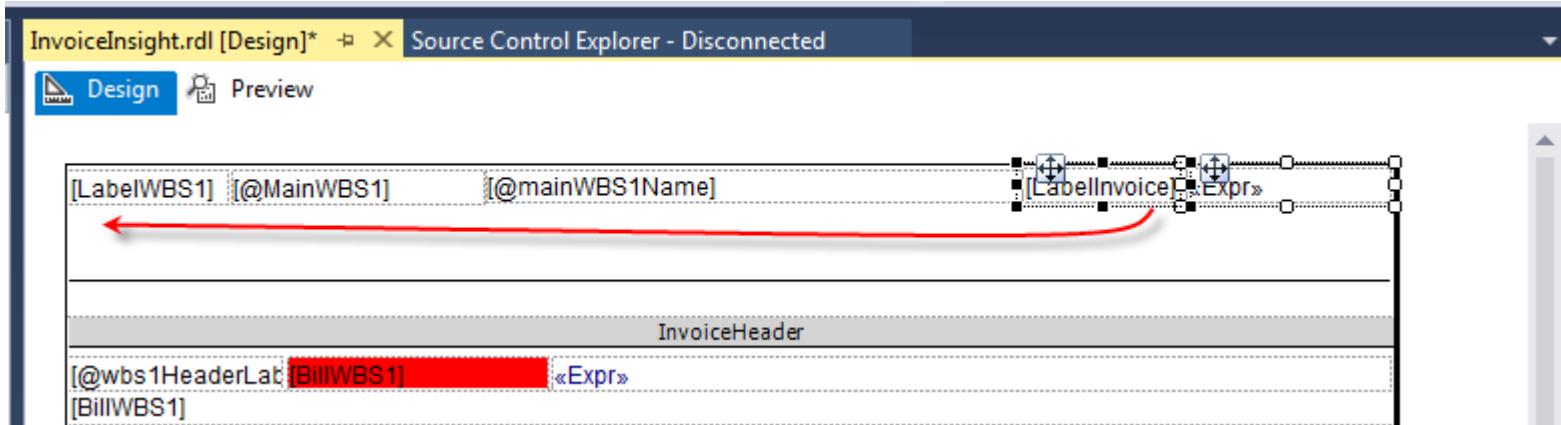
# Invoice Customization 2

- Change Height property to 1 inch, to give yourself room to work

The screenshot shows the Deltek Insight RDL Designer interface. The main area displays the 'Invoice.rdl [Design]' view, which contains a table structure for an invoice. A red box highlights the 'InvoiceHeader' section at the top of the table. Below it, there are three rows labeled 'BillWBS1', 'BillWBS2', and 'BillWBS3'. The bottom row is labeled 'InvoiceFee'. The 'Properties' window on the right is open, showing the 'Page Header' properties. The 'Height' property is set to '1in' and is circled in red.

# Invoice Customization 2

- Move Page Header Bottom Line down to make room and move both Invoice related textboxes down

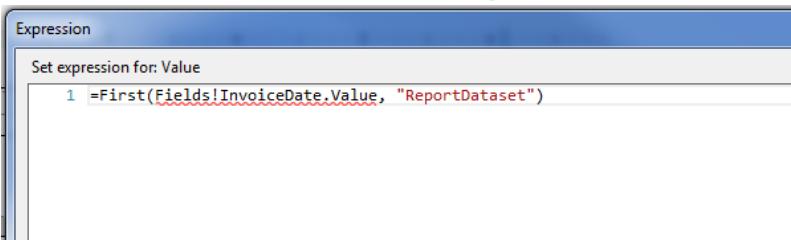


# Invoice Customization 2

- Add two new Textboxes below Invoice to display the Invoice Date and re-adjust Page Header Bottom Line

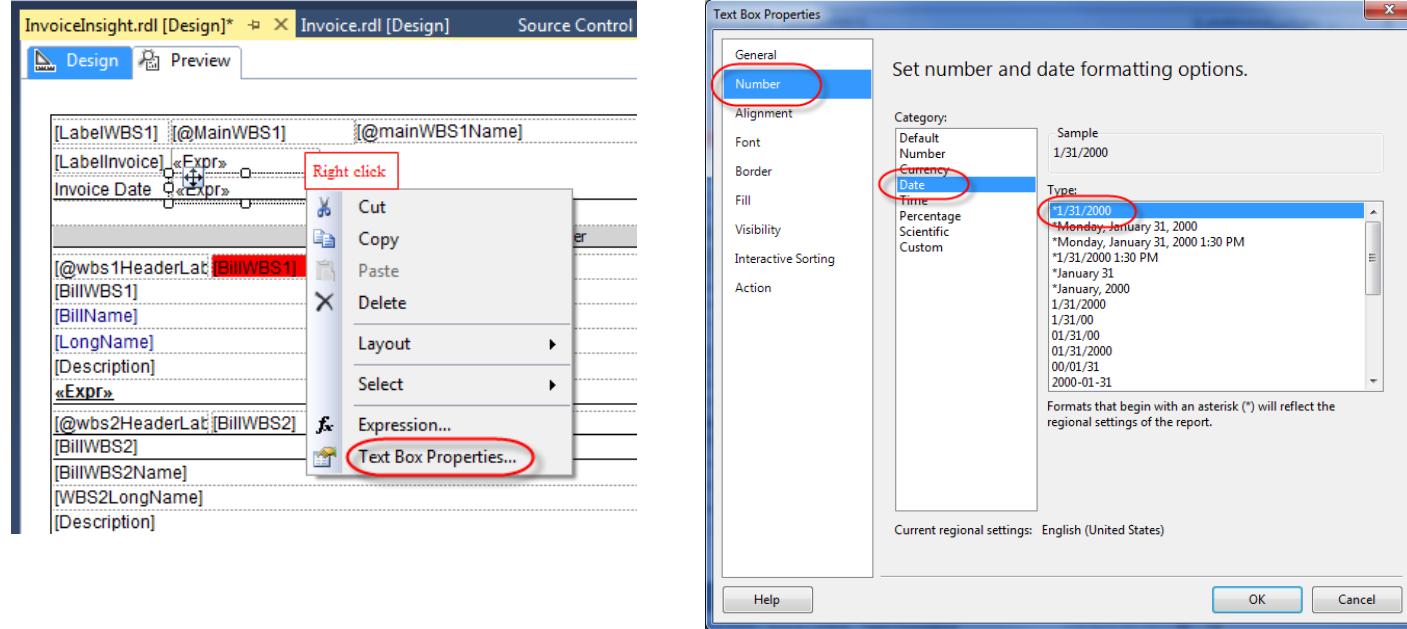


- Invoice Date field expression



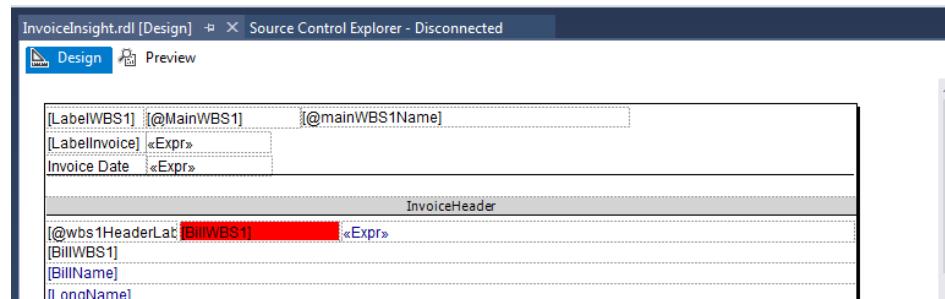
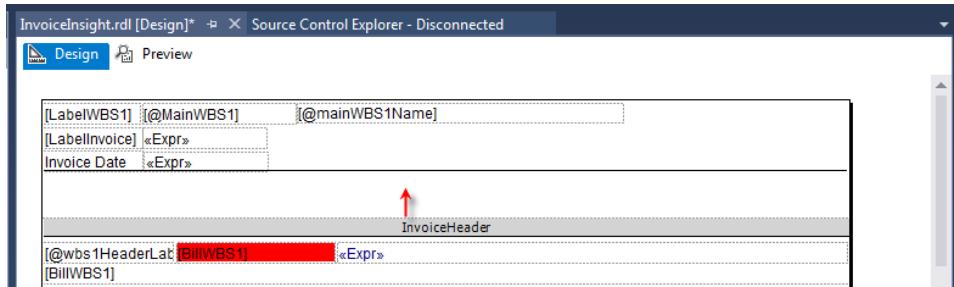
# Invoice Customization 2

- Invoice Date format setting:



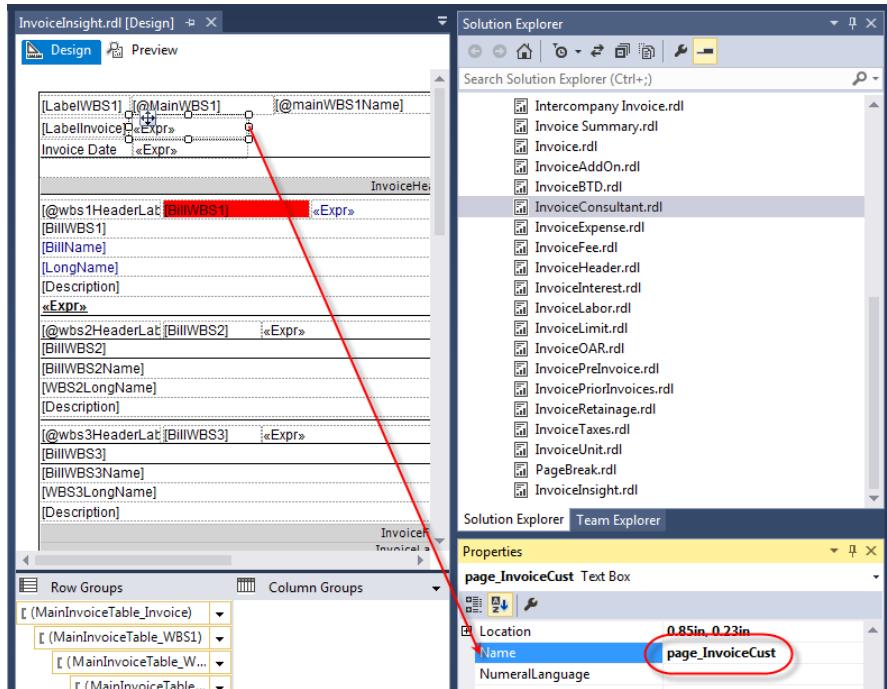
# Invoice Customization 2

- Resize Page Header back using cursor



# Invoice Customization 2

- Trick:
  - Rename `page_lbllnvoice` to `page_lbllnvoiceCust` and `page_Invoice` to `page_InvoiceCust`
  - Why? These fields are moved by Vision Report Architecture on the fly.



# 07c

## Invoice Customization 3

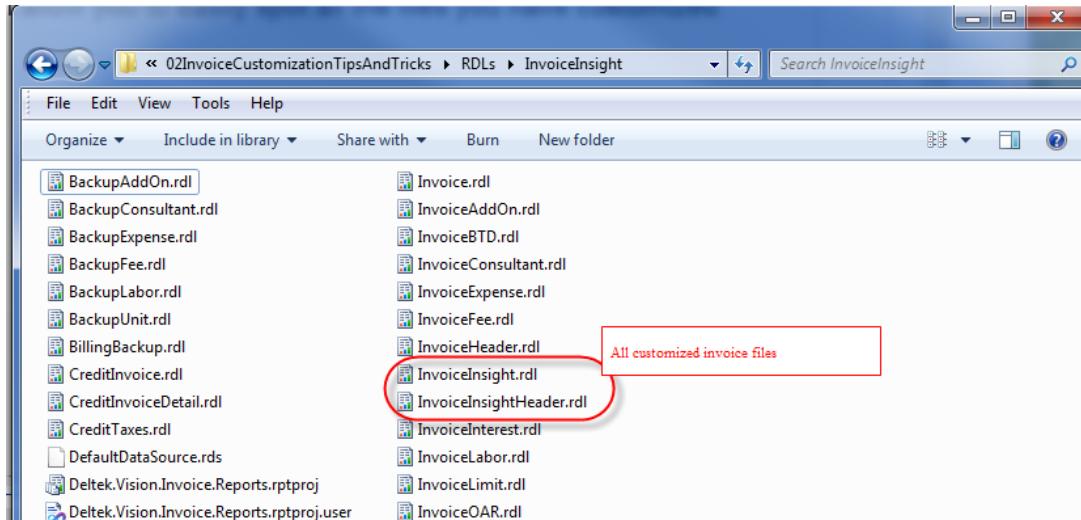
# Invoice Customization 3

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- Invoice header modification
  - Add a textbox in the header that shows the Total Compensation amount
  - Change its font size to 12 pts. and bold it

# Invoice Customization 3

- Copy/rename InvoiceHeader.rdl to InvoiceInsightHeader.rdl



Tip: use naming convention that will allow you to easily spot all the files you have customized

# Invoice Customization 3

- Open InvoiceInsightHeader.rdl add two textboxes from the Toolbox window to display Total Compensation, adjust font and display format accordingly

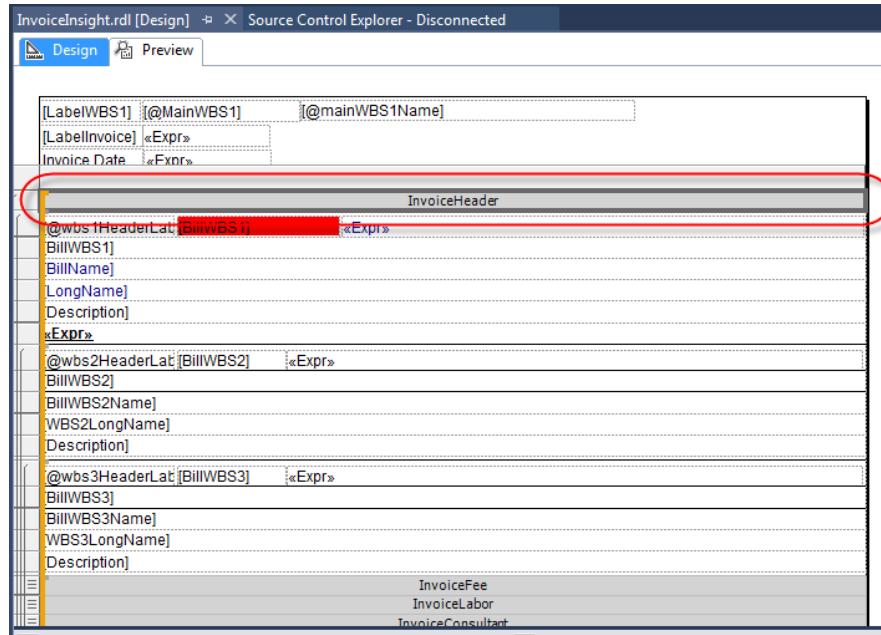
The screenshot shows the Microsoft Report Designer interface with the following details:

- Toolbox:** On the left, the "Report Items" section is expanded, showing various controls like Pointer, Text Box, Line, Table, Matrix, Rectangle, List, Image, Subreport, Chart, Gauge, Map, Data Bar, Sparkline, and Indicator.
- Design View:** The main area displays a report structure with several placeholder fields:
  - A large text box labeled **[LabelInvoi]** containing multiple expression fields (`<Expr>`).
  - A list box labeled **[Addressee]** containing ten address items from `[Address1]` to `[Address10]`.
  - A grid labeled **[MainWBS1]** with columns for **[LabelProject]**, **[LabelInvoiceNo]**, **[LabelStatement]**, and **[LabelDueDate]**.
  - A text box labeled **Compensation** followed by an expression field (`<Expr>`).
- Expression Editor:** A floating window titled "Expression" shows the expression for the "Compensation" field:

```
Set expression for: Value  
1 =Sum(Fields!TotalComp.Value, "ReportDataset")
```

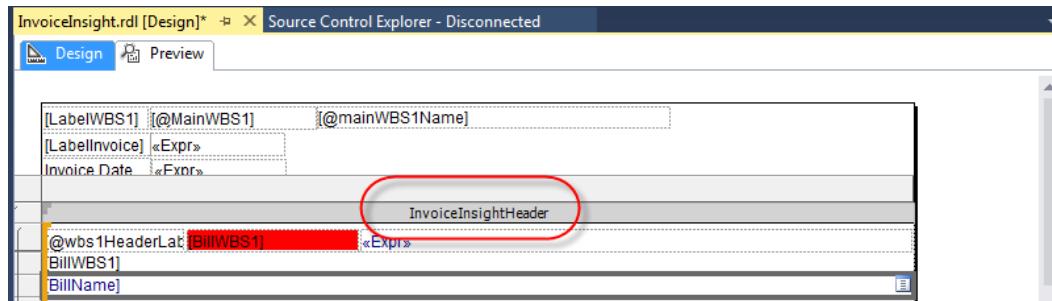
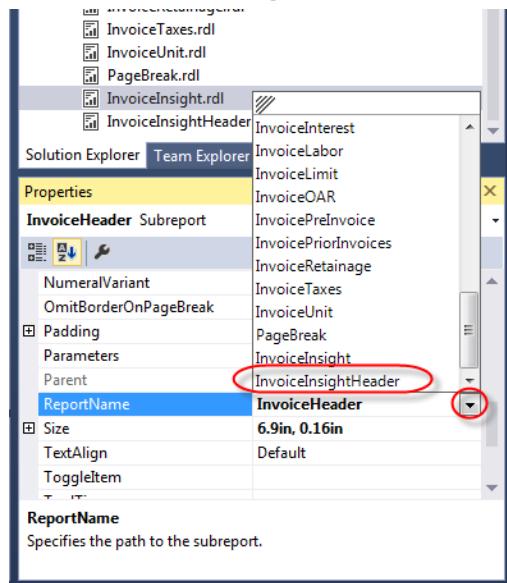
# Invoice Customization 3

- Open back InvoiceInsight.rdl and highlight the InvoiceHeader subreport



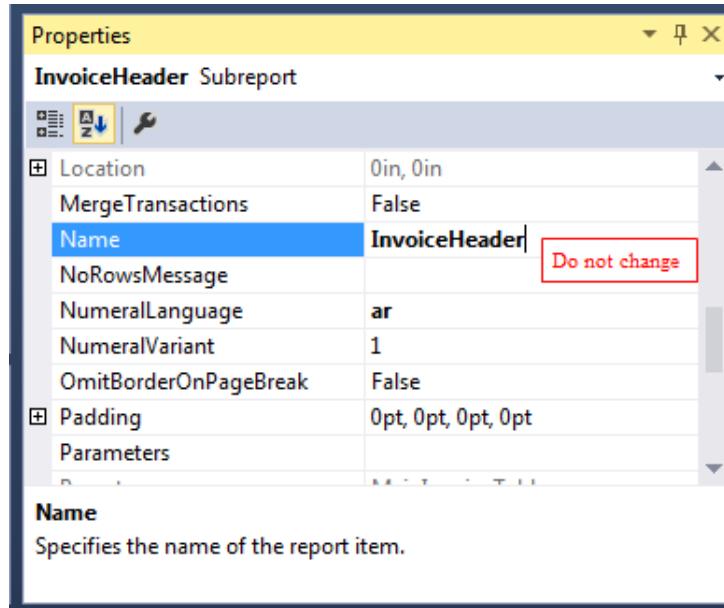
# Invoice Customization 3

- Under its Properties, change the ReportName to point to your customized InvoiceInsightHeader.rdl



# Invoice Customization 3

- Tip: you should not be changing the Name property of any subreport



# 07d

## Invoice Customization 4

# Invoice Customization 4

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- Invoice labor modification
  - Change employee to display as firstname lastname rather than lastname, firstname

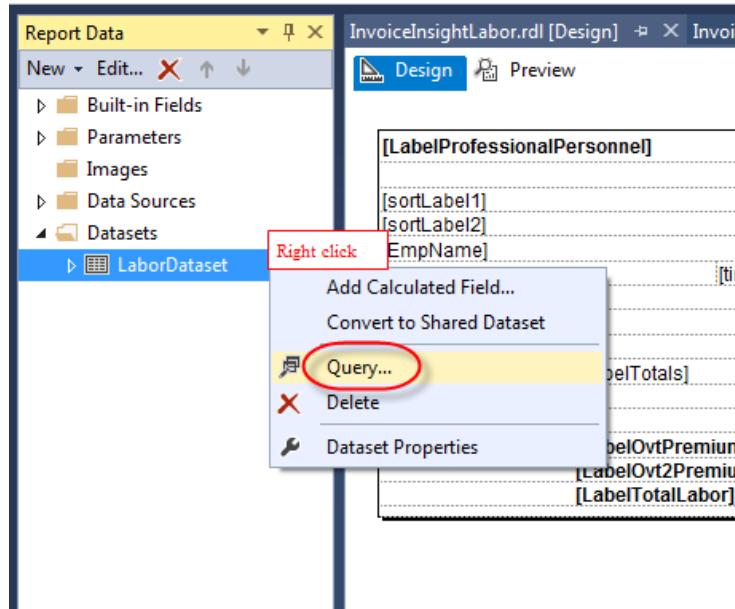
# Invoice Customization 4

- Copy/rename InvoiceLabor.rdl to InvoiceInsightLabor.rdl and open it

The screenshot shows the Microsoft Visual Studio Designer window for the report file `InvoiceInsightLabor.rdl`. The title bar indicates the current file is `InvoiceInsight.rdl [Design]`. The main area displays a table structure with several columns and rows. The table includes sections labeled `[LabelProfessionalPersonnel]`, `[LabelHours]`, `[LabelRate]`, `[LabelAmount]`, and `[LabelTotals]`. Data cells contain expressions such as `Sum(hours)`, `[rate]`, `[SectionTotal]`, and `Expr`. The interface also features a toolbar with icons for Save, Undo, Redo, and Print, along with tabs for `Design` and `Preview`.

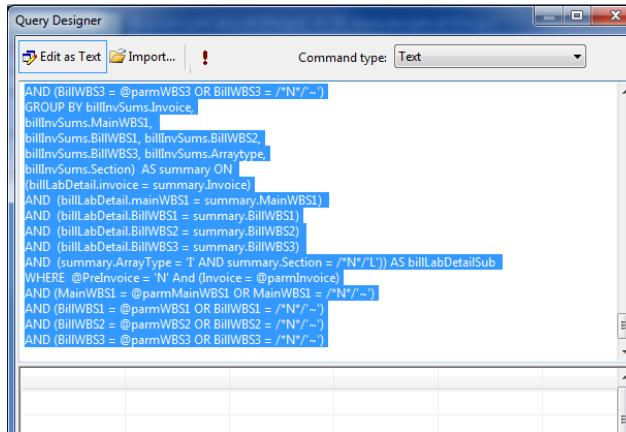
# Invoice Customization 4

- From the Report Data window, expand Datasets, right click on LaborDataset



# Invoice Customization 4

- Tip: use SQL Management Studio to modify the query. Select and copy the whole SQL script from the Query Designer window and paste it into SQL Management Studio



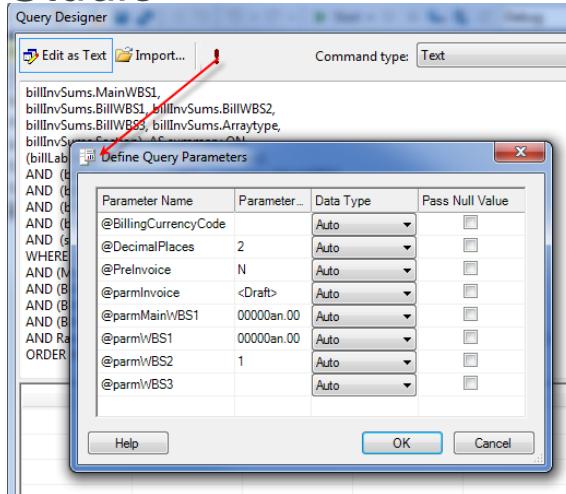
The screenshot shows the Microsoft SQL Server Management Studio (SSMS) interface. A new query window titled 'Query1.sql (KCOM\AlecNg 54)' is open, displaying the same SQL code as the Query Designer. The code is a complex query involving multiple tables and joins, primarily dealing with invoice details and summaries. It includes conditions like `AND (BillWBS1 = @parmWBS1 OR BillWBS1 = '/N' ~')` and various groupings and summaries. The interface has tabs for 'Edit', 'Execute', and 'Debug'. The title bar says 'Query1.sql (KCOM\AlecNg 54) - Microsoft SQL Server Management Studio'.

```
SELECT billInvSums.Invoice,
billInvSums.MainWBS1,
billInvSums.BillWBS1,
billInvSums.BillWBS3,
billInvSums.ArrayType,
billInvSums.Section AS summary ON
(billLabDetail.Invoice = summary.Invoice)
AND (billLabDetail.mainWBS1 = summary.MainWBS1),
AND (billLabDetail.BillWBS1 = summary.BillWBS1)
AND (billLabDetail.BillWBS2 = summary.BillWBS2)
AND (billLabDetail.BillWBS3 = summary.BillWBS3)
AND (summary.ArrayType = 'T' AND summary.Section = '/N'/'L')) AS billLabDetailSub
WHERE @preInvoice = 'N' And (Invoice = @parmInvoice)
AND (MainWBS1 = @parmMainWBS1 OR MainWBS1 = '/N' ~')
AND (BillWBS1 = @parmWBS1 OR BillWBS1 = '/N' ~')
AND (BillWBS2 = @parmWBS2 OR BillWBS2 = '/N' ~')
AND (BillWBS3 = @parmWBS3 OR BillWBS3 = '/N' ~')

SELECT billInvSums.Invoice,
billInvSums.MainWBS1,
billInvSums.BillWBS1,
billInvSums.BillWBS2,
billInvSums.BillWBS3,
billInvSums.ArrayType AS ArrayType,
billInvSums.Section AS [Section]
FROM billInvSums
WHERE @preInvoice = 'N' And billInvSums.PreInvoice = 'N' And (Invoice
AND (MainWBS1 = @parmMainWBS1 OR MainWBS1 = '/N' ~')
AND (BillWBS1 = @parmWBS1 OR BillWBS1 = '/N' ~')
AND (BillWBS2 = @parmWBS2 OR BillWBS2 = '/N' ~')
AND (BillWBS3 = @parmWBS3 OR BillWBS3 = '/N' ~'))
GROUP BY billInvSums.Invoice,
billInvSums.MainWBS1,
billInvSums.BillWBS1,
billInvSums.BillWBS2,
billInvSums.BillWBS3,
billInvSums.ArrayType,
billInvSums.Section AS summary ON
(billLabDetail.mainWBS1 = summary.MainWBS1)
AND (billLabDetail.BillWBS1 = summary.BillWBS1)
AND (billLabDetail.BillWBS2 = summary.BillWBS2)
AND (billLabDetail.BillWBS3 = summary.BillWBS3)
AND (summary.ArrayType = 'T' AND summary.Section = '/N'/'L')) AS bill'
```

# Invoice Customization 4

- The query will require parameters before it can run. To figure out which parameters are needed try to run the query from within Query Designer to help you add those to the query you just pasted in SQL Management Studio



```
DECLARE
    @BillingCurrencyCode varchar(10)= '',
    @DecimalPlaces int = 2,
    @PreInvoice varchar(1) = 'N',
    @parmInvoice varchar(30)= '<Draft>',
    @parmMainWBS1 varchar(30) = '00000an.00',
    @parmWBS1 varchar(30) = '00000an.00',
    @parmWBS2 varchar(30) = '001',
    @parmWBS3 varchar(30) = ''
```

```
SELECT sortKey1,
       sortLabel1,
       sortKey2,
       sortLabel2,
       employee,
       name,
       EmpName,
```

# Invoice Customization 4

- Modify the query in SQL Management Studio so that it returns an extra column with the employee name to display as desired

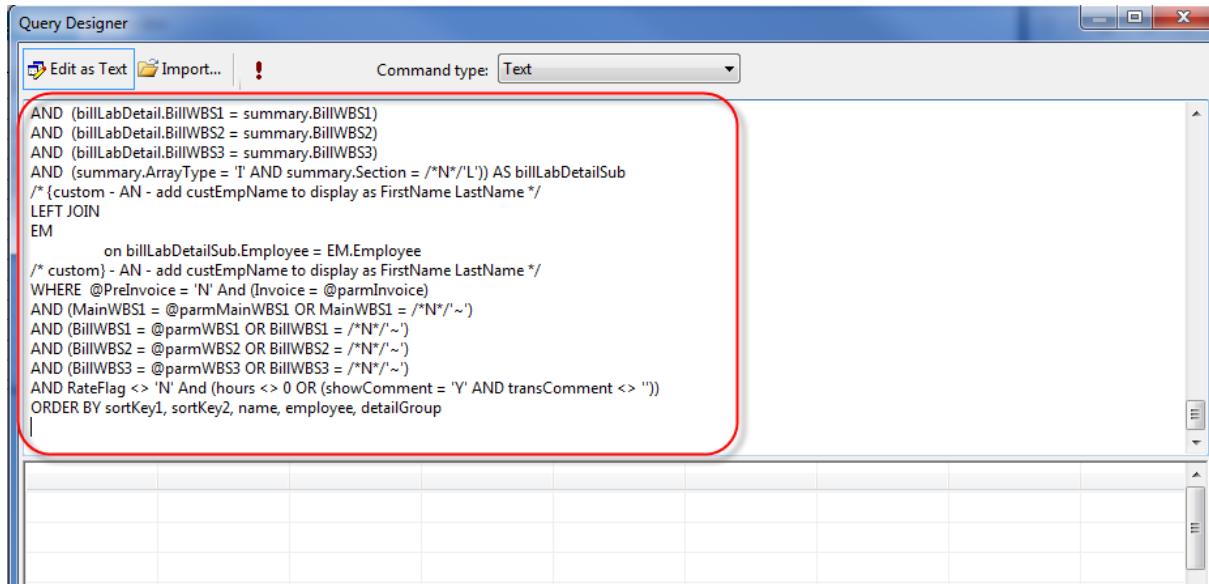
```
Query.sql - US200...EKCOM\AlexNg (55)      Query_billLabDetail...KCOM\AlexNg (54)* ×
SELECT sortKey1,
       sortLabel1,
       sortKey2,
       sortLabel2,
       /* {custom - AN - add custEmpName to display as FirstName LastName */+
       /* -- employee, */+
       billLabDetailSub.Employee,
       /* custom} - AN - after joining to EM, alias is needed for employee */
       name,
       EmpName,
       /* {custom - AN - add custEmpName to display as FirstName LastName */+
       custEmpName = ISNULL(EM.FirstName + ' ', '') + EM.LastName,
       /* custom} - AN - add custEmpName to display as FirstName LastName */
       overtimeFlag,
       rateFlag,
       timeSheetDate,
       hours,
       note
FROM billLabDetail
     LEFT JOIN MainWBS1 ON billLabDetail.mainWBS1 = MainWBS1
     AND (billLabDetail.mainWBS1 = summary.MainWBS1)
     AND (billLabDetail.BillWBS1 = summary.BillWBS1)
     AND (billLabDetail.BillWBS2 = summary.BillWBS2)
     AND (billLabDetail.BillWBS3 = summary.BillWBS3)
     AND (summary.ArrayType = 'T' AND summary.Section = /*N*/'1')) AS billLabDetailSub
/* {custom - AN - add custEmpName to display as FirstName LastName */+
LEFT JOIN
EM
    ON billLabDetailSub.Employee = EM.Employee
/* custom} - AN - add custEmpName to display as FirstName LastName */
WHERE @PreInvoice = 'N' And (Invoice = @parmInvoice)
AND (MainWBS1 = @parmMainWBS1 OR MainWBS1 = /*N*/'~')
AND (BillWBS1 = @parmBillWBS1 OR BillWBS1 = /*N*/'~')
AND (BillWBS2 = @parmBillWBS2 OR BillWBS2 = /*N*/'~')
AND (BillWBS3 = @parmBillWBS3 OR BillWBS3 = /*N*/'~')
AND RateFlag <> 'N' And (hours <> 0 OR (showComment = 'Y' AND transComment <> ''))
```

```
Query.sql - US200...EKCOM\AlexNg (55)      Query_billLabDetail...KCOM\AlexNg (54)* ×
SELECT sortKey1,
       sortLabel1,
       sortKey2,
       sortLabel2,
       /* {custom - AN - after joining to EM, alias is needed for employee */+
       /* -- employee, */+
       billLabDetailSub.Employee,
       /* custom} - AN - after joining to EM, alias is needed for employee */
       name,
       EmpName,
       /* {custom - AN - add custEmpName to display as FirstName LastName */+
       custEmpName = ISNULL(EM.FirstName + ' ', '') + EM.LastName,
       /* custom} - AN - add custEmpName to display as FirstName LastName */
       overtimeFlag,
       rateFlag,
       timeSheetDate,
       hours,
       note
FROM billLabDetail
     LEFT JOIN MainWBS1 ON billLabDetail.mainWBS1 = MainWBS1
     AND (billLabDetail.mainWBS1 = summary.MainWBS1)
     AND (billLabDetail.BillWBS1 = summary.BillWBS1)
     AND (billLabDetail.BillWBS2 = summary.BillWBS2)
     AND (billLabDetail.BillWBS3 = summary.BillWBS3)
     AND (summary.ArrayType = 'T' AND summary.Section = /*N*/'1')) AS billLabDetailSub
/* {custom - AN - add custEmpName to display as FirstName LastName */+
```

- Tip: tag every custom code you modify or add to your query with beginning and ending comments

# Invoice Customization 4

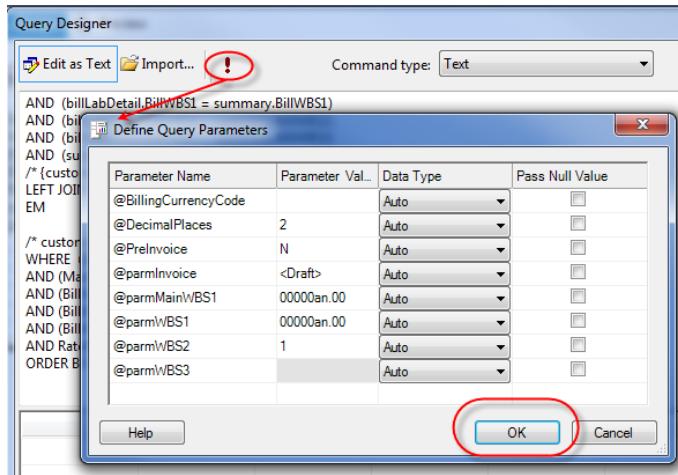
- Copy and paste the query back into the Query Designer window (do not include variables declaration)



```
Query Designer
Edit as Text Import... ! Command type: Text
AND (billLabDetail.BillWBS1 = summary.BillWBS1)
AND (billLabDetail.BillWBS2 = summary.BillWBS2)
AND (billLabDetail.BillWBS3 = summary.BillWBS3)
AND (summary.ArrayType = 'T' AND summary.Section = /*N*/'L')) AS billLabDetailSub
/* {custom - AN - add custEmpName to display as FirstName LastName *}
LEFT JOIN
EM
    on billLabDetailSub.Employee = EM.Employee
/* custom} - AN - add custEmpName to display as FirstName LastName */
WHERE @PreInvoice = 'N' And (Invoice = @parmInvoice)
AND (MainWBS1 = @parmMainWBS1 OR MainWBS1 = /*N*/'~')
AND (BillWBS1 = @parmWBS1 OR BillWBS1 = /*N*/'~')
AND (BillWBS2 = @parmWBS2 OR BillWBS2 = /*N*/'~')
AND (BillWBS3 = @parmWBS3 OR BillWBS3 = /*N*/'~')
AND RateFlag <> 'N' And (hours <> 0 OR (showComment = 'Y' AND transComment <> ''))
ORDER BY sortKey1, sortKey2, name, employee, detailGroup
```

# Invoice Customization 4

- Run the query and make sure you are getting the desired results



The screenshot shows the 'Query Designer' window displaying the results of the executed query. A red circle highlights the 'OK' button in the results grid. The results grid contains data from the query, including columns for sortKey1, sortLabel1, sortKey2, sortLabel2, Employee, name, EmpName, custEmpName, and overtimeFlag. The 'custEmpName' column shows values like 'William Apple' and 'OT1', while the 'overtimeFlag' column shows 'OT1'.

sortKey1	sortLabel1	sortKey2	sortLabel2	Employee	name	EmpName	custEmpName	overtimeFlag
00001	Principals			00001	Apple, William	Apple, William	William Apple	
00001	Principals			00001	Apple, William	Apple, William	William Apple	
00001	Principals			00001	Apple, William	Apple, William	William Apple	
00001	Principals			00001	Apple, William	Apple, William	William Apple	
00001	Principals			00001	Apple, William	Apple, William	William Apple	
00001	Principals			00001	Apple, William	Apple, William	William Apple	
00001	Principals			00001	Apple, William	Apple, William	William Apple	
00001	Principals			00001	Apple, William	Apple, William	William Apple	
00002	Project Manag...			00001	Apple, William	Apple, William	William Apple	
00002	Project Manag...			00001	Apple, William	Apple, William	William Apple	OT2

# Invoice Customization 4

- Back in the report designer, change the textboxes that display EmpName to custEmpName

The screenshot shows the 'Design' view of the Report Designer. It displays a subreport structure with several text boxes containing expressions. Two specific text boxes, both labeled [EmpName], are highlighted with a red circle.

[LabelProfessionalPersonnel]	[LabelHours]	[LabelRate]	[LabelAmount]	[SectionTotal]
[sortLabel1] [sortLabel2] [EmpName] [EmpName] [transComment]	<code>&lt;Exp&gt;Sum(hours)</code>	[rate]ag	<code>[Sum(extension)]</code>	
[sortLabel2] [sortLabel1]	<code>[timeSheetD]&lt;Exp&gt;Sum(hours)</code>	[rate]ag	<code>[Sum(extension)]</code>	
[LabelTotals]	<code>Sum(hours)</code>	[rate]	<code>[Sum(extension)]</code>	
	<code>Sum(hours)</code>	[rate]	<code>[Sum(extension)]</code>	
	<code>Sum(hours)</code>		<code>[Sum(extension)]</code>	
[LabelOvtPremium] [LabelOvt2Premium] [LabelTotalLabor]	<code>[multiplier2]ToMarkup]</code>	<code>&lt;Expr&gt;</code>	<code>&lt;Expr&gt;</code>	
	<code>[multiplier3]</code>	<code>&lt;Expr&gt;</code>	<code>&lt;Expr&gt;</code>	
	<code>[ovtMultiplier]iePremium]</code>	<code>&lt;Expr&gt;</code>	<code>&lt;Expr&gt;</code>	
	<code>cialOvtMultiplier]iePremium]</code>	<code>&lt;Expr&gt;</code>	<code>&lt;Expr&gt;</code>	
	<code>[multiplier2]bjectToMarkup]]</code>			[SectionTotal]

The screenshot shows the 'Design' view of the Report Designer after changes have been made. The two previously circled text boxes, [EmpName], have been replaced with [custEmpName].

[LabelProfessionalPersonnel]	[LabelHours]	[LabelRate]	[LabelAmount]	[SectionTotal]
[sortLabel1] [sortLabel2] [custEmpName] [custEmpName] [transComment]	<code>&lt;Exp&gt;Sum(hours)</code>	[rate]ag	<code>[Sum(extension)]</code>	
[sortLabel2] [sortLabel1]	<code>[timeSheetD]&lt;Exp&gt;Sum(hours)</code>	[rate]ag	<code>[Sum(extension)]</code>	
[LabelTotals]	<code>Sum(hours)</code>	[rate]	<code>[Sum(extension)]</code>	
	<code>Sum(hours)</code>	[rate]	<code>[Sum(extension)]</code>	
	<code>Sum(hours)</code>		<code>[Sum(extension)]</code>	
[LabelOvtPremium] [LabelOvt2Premium] [LabelTotalLabor]	<code>[multiplier2]ToMarkup]</code>	<code>&lt;Expr&gt;</code>	<code>&lt;Expr&gt;</code>	
	<code>[multiplier3]</code>	<code>&lt;Expr&gt;</code>	<code>&lt;Expr&gt;</code>	
	<code>[ovtMultiplier]iePremium]</code>	<code>&lt;Expr&gt;</code>	<code>&lt;Expr&gt;</code>	
	<code>cialOvtMultiplier]iePremium]</code>	<code>&lt;Expr&gt;</code>	<code>&lt;Expr&gt;</code>	
	<code>[multiplier2]bjectToMarkup]]</code>			[SectionTotal]

- Open back InvoiceInsight.rdl and update InvoiceLabor subreport's ReportName accordingly

# 08

## Report Loading

# Report Loading

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- Method 1: via Utilities\Report Administration\Load Reports tab
- Method 2: via Utilities\Report Administration\Custom Reports tab

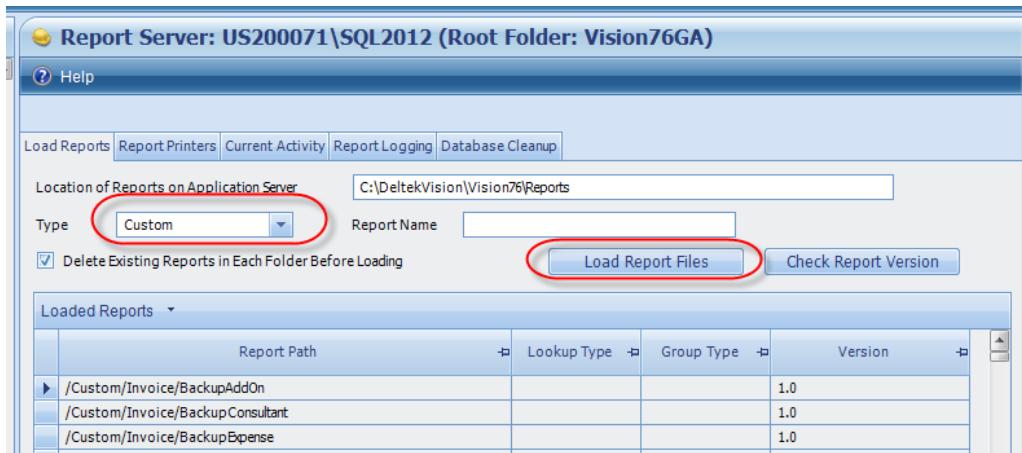
# Report Loading – Method 1

- Method 1: via Utilities\Report Administration\Load Reports tab
  - Copy all the \*.rdl files from your development machine to the Vision Web/Application server:

C:\Program Files\Deltek\Vision\Reports\Custom\Invoice

# Report Loading – Method 1

- In Vision, go to Utilities/Report Administration/Load Reports tab
- Change Type to “Custom” and click on “Load Report Files”



# Report Loading – Method 2

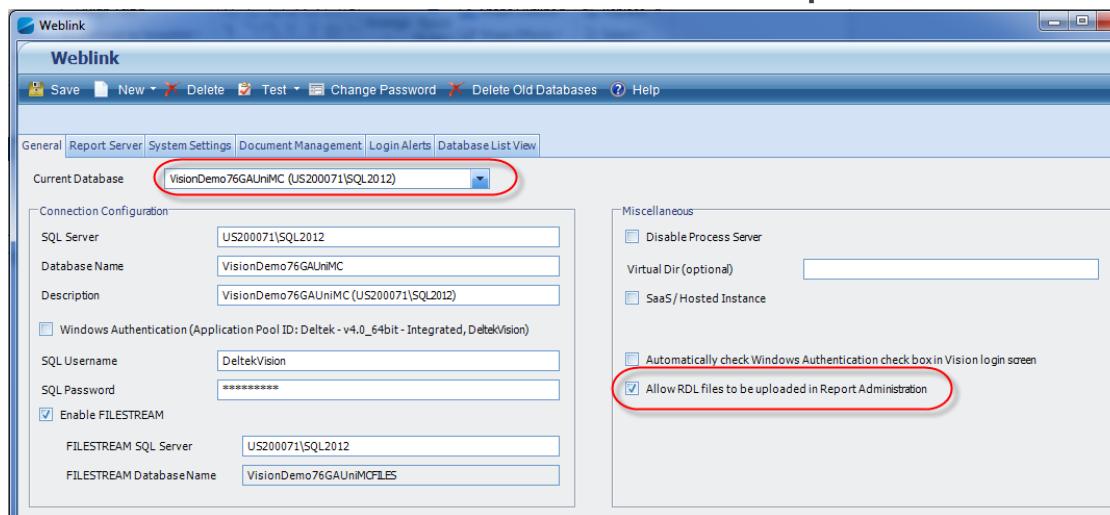
- Method 2: via Utilities/Report Administration/Custom Reports tab

The screenshot shows the Report Server interface for US200071\SQL2012. The title bar reads "Report Server: US200071\SQL2012 (Root Folder: Vision76GA)". The menu bar includes "Save" and "Help". The top navigation bar has tabs: Load Reports, Custom Reports, Report Printers, Current Activity, Report Logging, and Database Cleanup. The "Custom Reports" tab is highlighted with a red oval. Below the tabs is a section titled "Apply Schema Update to Custom Report File" with a "Folder" input field, a "Select Folder" button, and an "Apply" button. At the bottom is a toolbar with icons for Download, Synchronize, Upload, Delete, and Upgrade. A table below the toolbar lists reports with columns for Name, Filename, and Report Path.

Name	Filename	Report Path

# Report Loading – Method 2

- Tip: If you don't see this tab, you will need to enable it from Weblink
- In Weblink, select the database you want to enable this feature on and check the “Allow RDL files to be uploaded in Report Administration”



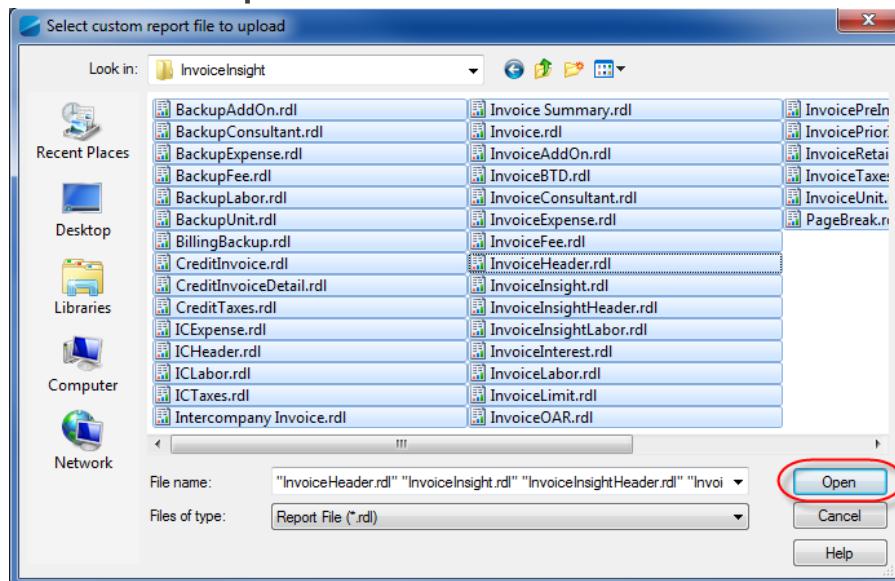
# Report Loading – Method 2

- To use method 2, In Vision, go to Utilities\Report Administration\Custom Reports tab.
- Click on Upload in the “Load Custom Reports” grid

The screenshot shows a software interface titled "Report Server: US200071\SQL2012 (Root Folder: Vision76GA)". The top navigation bar includes "Save" and "Help" buttons. Below the title, there are tabs: "Load Reports", "Custom Reports" (which is highlighted with a red circle), "Report Printers", "Current Activity", "Report Logging", and "Database Cleanup". A sub-header "Apply Schema Update to Custom Report File" is present. A "Folder" input field, a "Select Folder" button, and an "Apply" button are located below this header. At the bottom, there is a grid titled "Load Custom Reports". The grid has columns: Name, Filename, Report Path, Location, and Status. The "Report Path" column header is currently sorted. The "Upload" button in the toolbar above the grid is also highlighted with a red circle.

# Report Loading – Method 2

- Browse to folder where the invoice rdl files are, select all rdl files and click on Open



# Report Loading – Method 2

- Once they open they will all be listed in the grid with no Name, Location and Status
- Update all Location to “Invoice” and click Save

The screenshot shows the Report Server interface for US200071\SQL2012. The top menu bar includes 'Save' (circled in red), 'Help', 'Load Reports', 'Custom Reports', 'Report Printers', 'Current Activity', 'Report Logging', and 'Database Cleanup'. Below the menu is a toolbar with 'Apply Schema Update to Custom Report File', 'Folder' input, 'Select Folder', and 'Apply' buttons. The main area displays a grid of reports with columns: Name, Filename, Report Path, Location, and Status. The 'Location' and 'Status' columns are circled in red. The 'Name' column lists report files like BackupAddOn.rdl, BackupConsultant.rdl, etc. The 'Report Path' column shows their local paths. The 'Location' column is currently empty, and the 'Status' column shows various status icons.

Name	Filename	Report Path	Location	Status
BackupAddOn.rdl	C:\InvoiceInsight\BackupAddOn.rdl		Invoice	
BackupConsultant.rdl	C:\InvoiceInsight\BackupConsultant.rdl		Invoice	
BackupExpense.rdl	C:\InvoiceInsight\BackupExpense.rdl		Invoice	
BackupFee.rdl	C:\InvoiceInsight\BackupFee.rdl		Invoice	
BackupLabor.rdl	C:\InvoiceInsight\BackupLabor.rdl		Invoice	
BackupUnit.rdl	C:\InvoiceInsight\BackupUnit.rdl		Invoice	
BillingBackup.rdl	C:\InvoiceInsight\BillingBackup.rdl			
CreditInvoice.rdl	C:\InvoiceInsight\CreditInvoice.rdl			
CreditInvoiceDetail.rdl	C:\InvoiceInsight\CreditInvoiceDetail.rdl			
CreditTaxes.rdl	C:\InvoiceInsight\CreditTaxes.rdl			
CExpanse.rdl	C:\InvoiceInsight\CExpanse.rdl			
CHHeader.rdl	C:\InvoiceInsight\CHHeader.rdl			
CLabor.rdl	C:\InvoiceInsight\CLabor.rdl			
CTaxes.rdl	C:\InvoiceInsight\CTaxes.rdl			
Intercompany Invoice.rdl	C:\InvoiceInsight\Intercompany Invoice.rdl			

# Report Loading – Method 2

- Once Vision finishes saving, all uploaded reports will be saved to the database and synchronized with the report server

Report Server: US200071\SQL2012 (Root Folder: Vision76GA)

Save Help

Load Reports Custom Reports Report Printers Current Activity Report Logging Database Cleanup

Apply Schema Update to Custom Report File

Folder  Select Folder Apply

Load Custom Reports ▾ Download Synchronize Upload Delete Upgrade

Name	Filename	Report Path	Location	Status
SubReport	BackupAddOn.rdl	/Custom/Invoice/BackupAddOn	Invoice	Synchronized
SubReport	BackupConsultant.rdl	/Custom/Invoice/BackupConsultant	Invoice	Synchronized
SubReport	BackupExpense.rdl	/Custom/Invoice/BackupExpense	Invoice	Synchronized
SubReport	BackupFee.rdl	/Custom/Invoice/BackupFee	Invoice	Synchronized
SubReport	BackupLabor.rdl	/Custom/Invoice/BackupLabor	Invoice	Synchronized
SubReport	BackupUnit.rdl	/Custom/Invoice/BackupUnit	Invoice	Synchronized
SubReport	BillingBackup.rdl	/Custom/Invoice/BillingBackup	Invoice	Synchronized
Invoice	CreditInvoice.rdl	/Custom/Invoice/CreditInvoice	Invoice	Synchronized
Invoice	CreditInvoiceDetail.rdl	/Custom/Invoice/CreditInvoiceDetail	Invoice	Synchronized
SubReport	CreditTaxes.rdl	/Custom/Invoice/CreditTaxes	Invoice	Synchronized
SubReport	ICExpense.rdl	/Custom/Invoice/ICExpense	Invoice	Synchronized
SubReport	ICHeader.rdl	/Custom/Invoice/ICHeader	Invoice	Synchronized
SubReport	ILabor.rdl	/Custom/Invoice/ILabor	Invoice	Synchronized
SubReport	ICTaxes.rdl	/Custom/Invoice/ICTaxes	Invoice	Synchronized
Intercompany Invoice	Intercompany Invoice.rdl	/Custom/Invoice/Intercompany Invoice	Invoice	Synchronized

# 09

## More Tips and Tricks

# More Tips and Tricks

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- Do not make a bunch of changes in one shot and then publish the invoice to test. Publish each time a change is made and make sure it is working before tackling the next change
- Invoice Total should not deviate/change from what standard is showing.
- Check Vision Invoice Template Editor and Billing Terms to see if it can handle your requirement before customizing (since Vision 7.4 Invoice Template Editor has been greatly enhanced)

# More Tips and Tricks

- May need to re-apply the same customization from version to version (even between CUs). Drop yourself enough breadcrumbs to make sure that you can re-create the same custom invoice if you need to re-apply the same customization to a future Vision version
-  clients need to prefix all rdl files with 10 digit client no. (zero prefixed) followed by underscore

Ex.:

0000012345\_InvoiceInsight.rdl

0000012345\_InvoiceLabor.rdl

0000012345\_InvoiceInsightLabor.rdl

# More Tips and Tricks

- Use OriginalTable, OriginalPeriod, OriginalPostSeq and OriginalPKey columns (from billLabDetail, billConDetail, billExpDetail, billUnitDetail, etc.) to link back to original transaction table if further info is needed.

```
select * from billexpdetail where mainwbs1 = '00000AN.00' and invoice = '<draft>'
```

100 %

Invoice	MainWBS1	OriginalTable	OriginalPeriod	OriginalPostSeq	OriginalPKey	BillWBS1
<Draft>	00000AN.00	LedgerAP	200506	436	ADMIN275516840474	00000AN.00
<Draft>	00000AN.00	LedgerAP	200506	590	407961343601	00000AN.00
<Draft>	00000AN.00	LedgerAP	200506	609	454512017267	00000AN.00
<Draft>	00000AN.00	LedgerAP	200506	612	523978787148	00000AN.00
<Draft>	00000AN.00	LedgerAP	200802	6	539793008109	00000AN.00
<Draft>	00000AN.00	LedgerMisc	200802	9	545824654269	00000AN.00
<Draft>	00000AN.00	LedgerMisc	200802	9	545824654270	00000AN.00

(7 row(s) affected)

# Questions & Contact

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Thank you!

## Top 5 Reasons to Team with Deltek Consulting on Your Implementation Project



One provider  
for all things  
Deltek



Certified  
team of  
consultants



A well-planned  
and managed  
implementation with  
predictable success



Expertise  
across all  
Deltek  
software



A deeper level  
of project  
governance



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