# Print Layout Designer

Instructional Guide

# Topics

- An overview of PLD
- Creating a query print layout
- Customizing an existing print layout
- Advanced areas of PLD
  - Hidden Fields, Formulas, and Linked Fields
  - Table linkages

# An Overview of PLD

- PLD is the SAP report writing tool
- Reports are created by using the following:
  - A page grid representing the printed form
  - Objects placed on the form
    - Organizational objects including headers, footers, repetitive areas, etc.
    - Data objects made up of fields linked to the SAP database, other fields, system forms, and user-specified or formula driven values

# An Overview of PLD

- Objects in the system have properties which govern their behavior and content

- PLD is a WYSIWYG editor (what you see is what you get).  However, there are variations.
  - The PLD display does not fully take into account properties that may alter the display of your report.
    - Automatic height adjustment, borders, margins, etc.
  - Repetitive text areas are shown with a single sample line

# Some Limitations of PLD

- Substantial customization is needed of default reports
- Steep learning curve
- Logical operations are complex
- Precision is difficult to obtain
- Limited documentation

Despite these, advanced report writing can be a reality.

# A Sample Advanced Report

One of the SAP enhancement pack reports should be placed on this slide.

# PLD Functionality

- PLD has two main functions:
  - Creating new reports based upon queries in the system
  - Customizing an existing report in SBO
- PLD functions entirely within SBO
- As an alternative to PLD, you can use an external reporting tool
  - XL Reporter
  - A Crystal Reports product

# Creating a Query Print Layout

Steps:
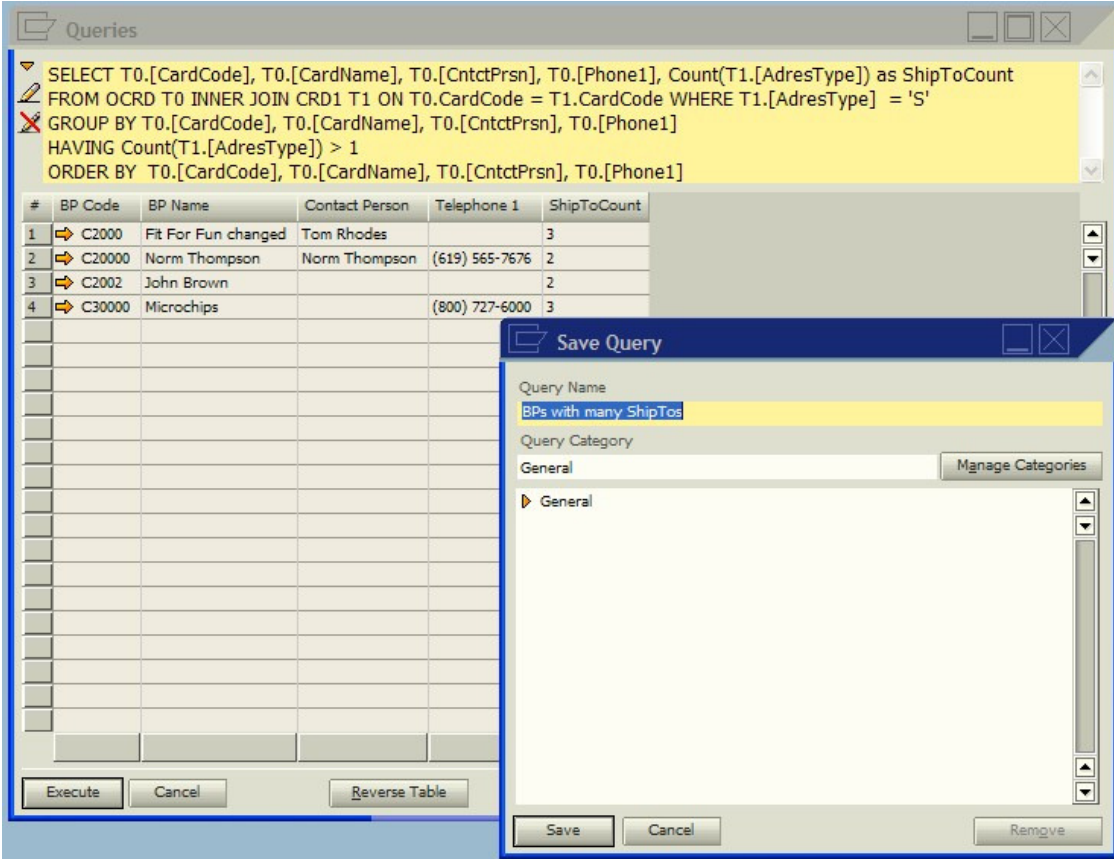
- Create a query to generate a dataset
  - Query may be parameterized
- Save the query
- Create the report from a base print layout template

# A Demonstration

- Create a query print layout for the following:
  - Returns all business partners that are customers with multiple ship-to addresses
- Customize it to display:
  - BP Code
  - BP Name
  - Contact Name
  - Phone Number
  - Number of ship-to addresses
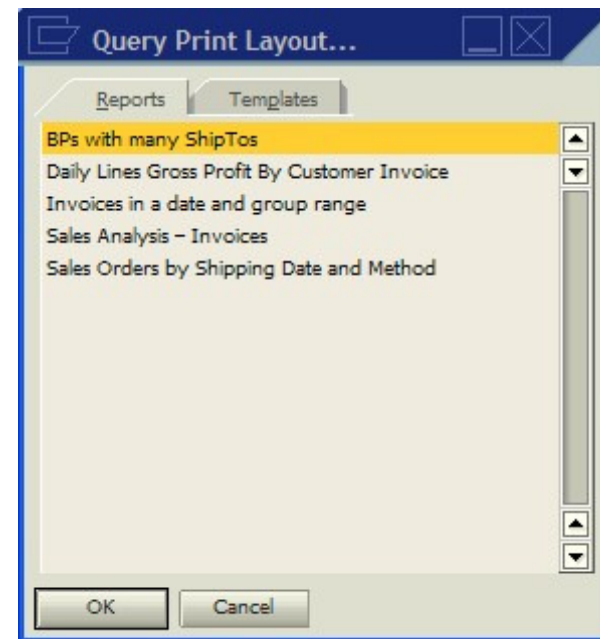
# Creating the Query

1. Write Query
2. Save Query

# Create Query Print Layout

- Tools -> Queries -> Query Manager
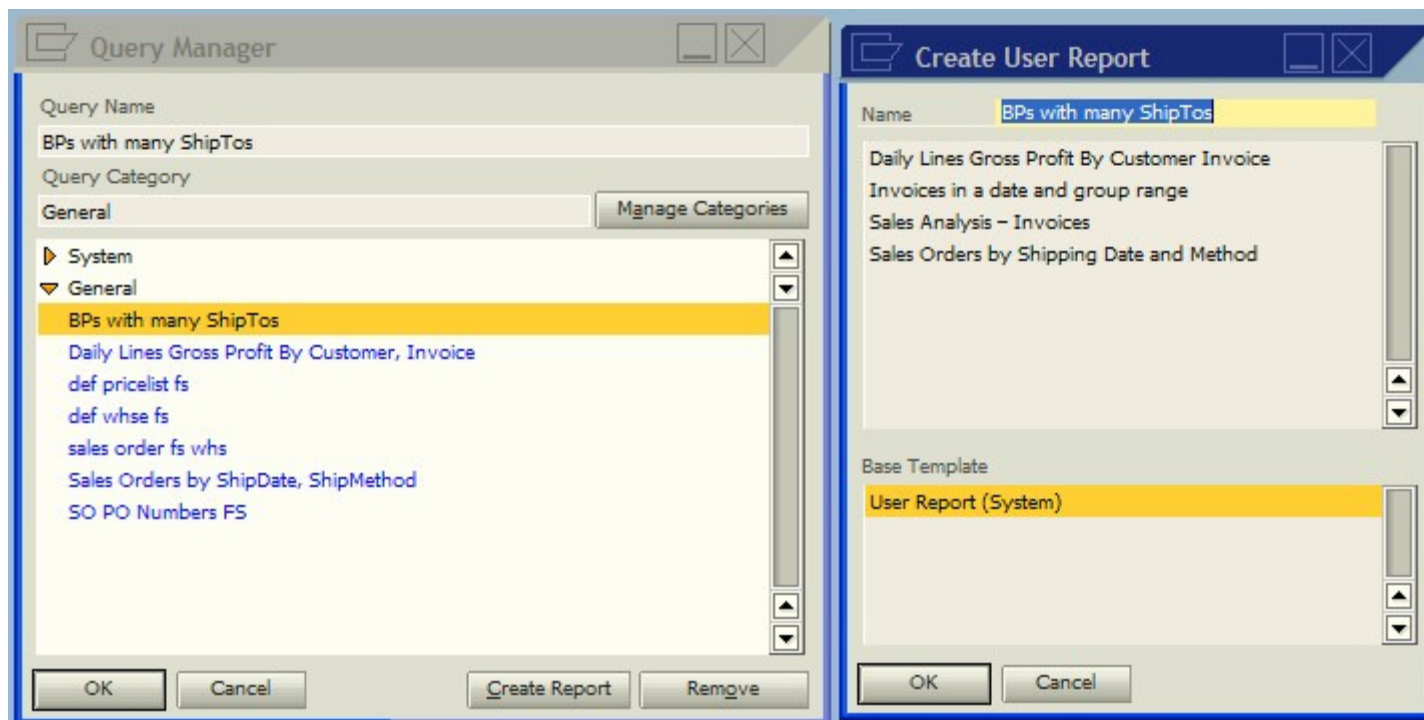
# Open and Edit

- Tools -> Queries… -> Query Print Layout
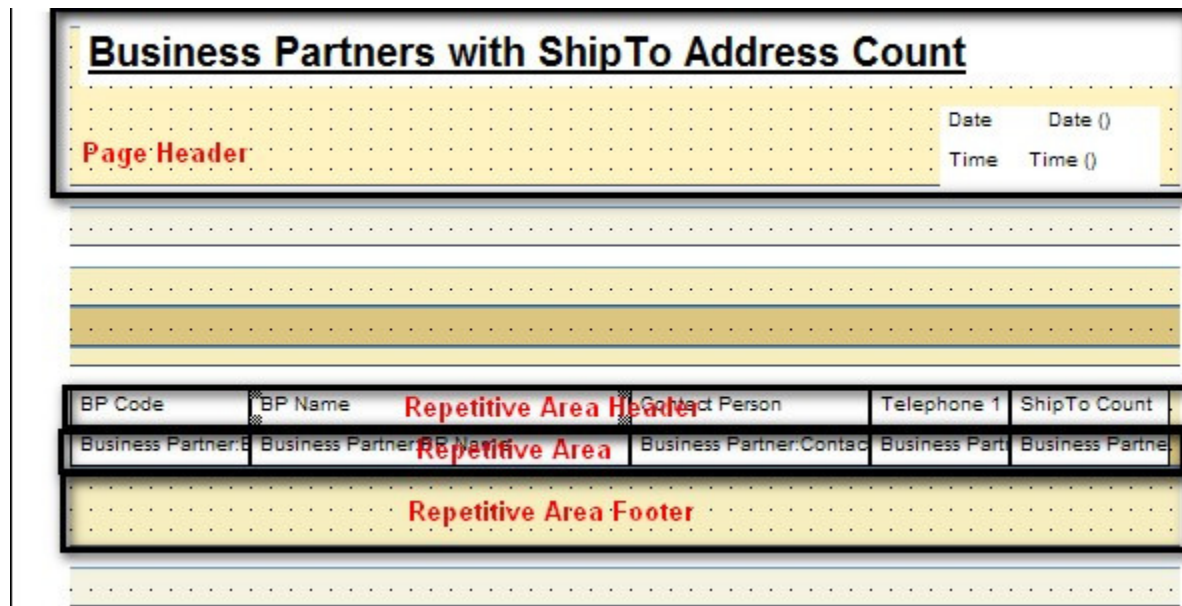- Double-click layout to edit

# Editing Techniques

- Align Fields via:
  - Mouse left-click drag
  - Main toolbar

- Rename fields
  - For readability
  - Rename to context-sensitive values: (i.e. BPName for field displaying Business Partners: Name)

- Resize fields:
  - Mouse left-click
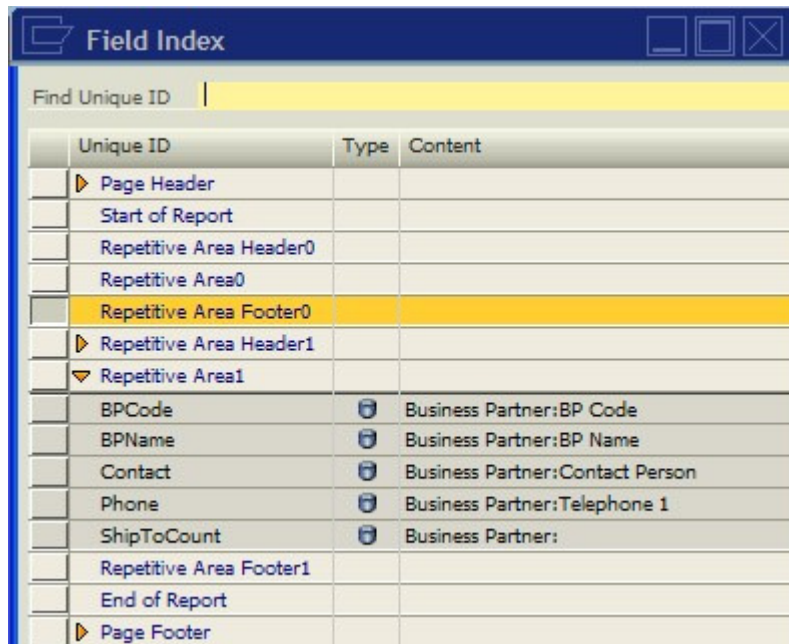  - Properties window: General tab

# Page Layout Grid

- Header, Footer, and Repetitive Area graphical display

# Field Index Window
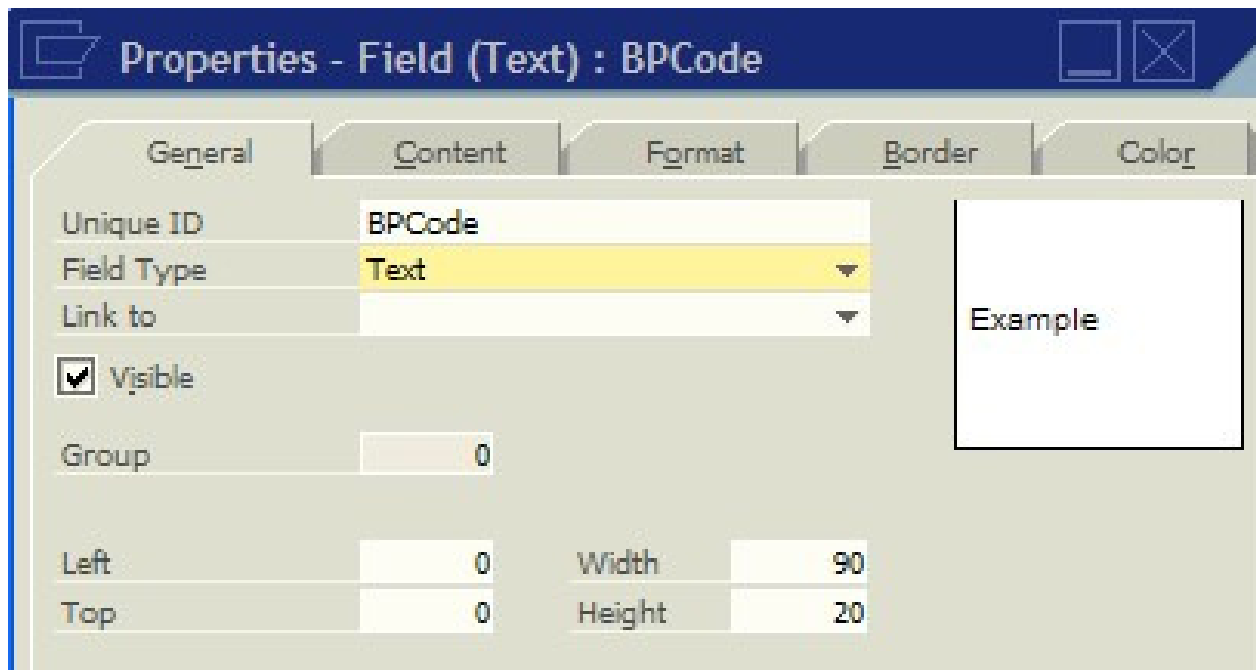
- Select fields or areas (repetitive, header, footer)

# Properties Window

- View and Edit various Field Properties

# Print the report

- Tools -> Queries… -> Query Print Layout…
- Select layout to print
- Print Preview or Print

  (main toolbar or

   File menu)

# Print Preview...

# Customizing an Existing Print Layout

- Customizations are made to the default SBO print layouts
- Layouts exist primarily for:
    - Any document that would be sent to a 3rd party (marketing documents, checks, etc.)
    - All system financial reports (P&L, GL, etc.)
    - Most internal documents (production orders, reconciliations, etc.)

# Customizing an Existing Print Layout

Steps:

- Open the document that you want to customize
- Click the pencil icon
- Select the base report or the default template
- Perform the customizations
- Save the report
  - It is not possible to overwrite the system reports
- Set it as the default
  - Set by user or for specific BPs

# A Demonstration

- Problem:
  - Deliveries are consolidated into a single A/R Invoice
  - The line item items on the Invoice need to be grouped by delivery (Delivery 1, 2, 3, total)
- Solution:
  - Customize Invoice Print Layout to display Invoice broken down by delivery
  - Display Invoice sub-total by delivery
  - Display Invoice total after all delivery Invoices listed

# Advanced Skills investigated

- Adding an Additional Repetitive Area
- Sorting and Grouping Repetitive Areas
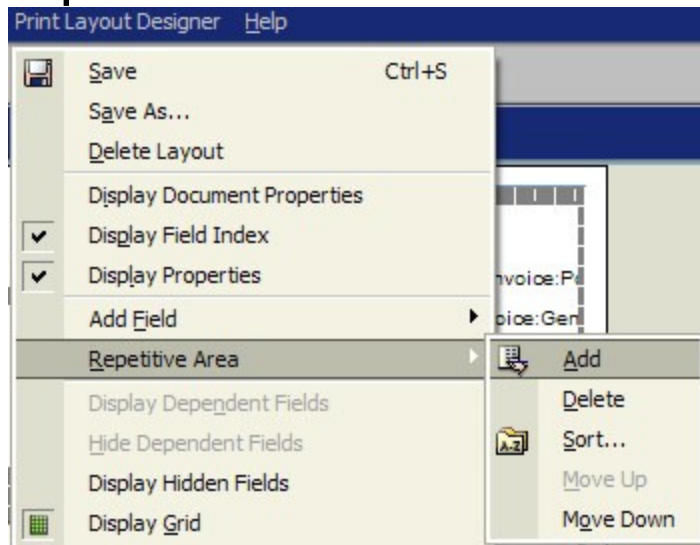- Linking Tables
- Sub-totals on Groups

# Select the Layout to Customize

- Open A/R Invoice Document Form
- Click the Pencil Icon
- Double-click the Print Layout to customize
- This opens the Print Layout Designer
- Immediately save the layout to a different name
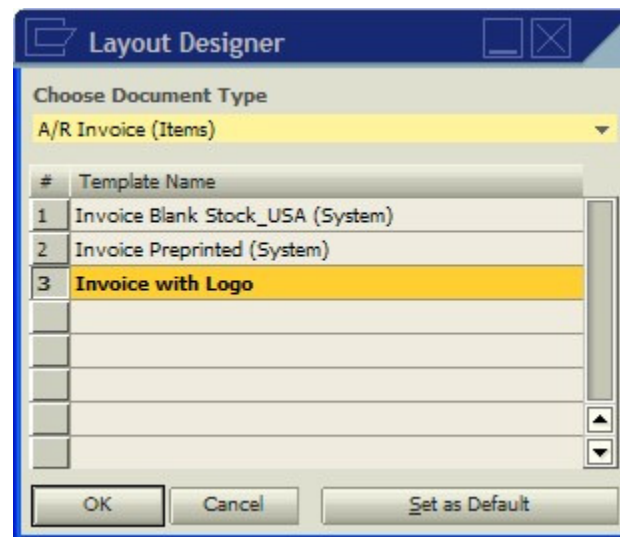
# Add a Repetitive Area

- Print Layout Designer -> Repetitive Area -> Add
- Creates a new repetitive area following existing repetitive areas

# Add Fields to Display

- Use Toolbar to select Field Type to add:
    - Used in Demonstration
        - Text
        - Database
        - Formula
        - System Variable
    - Not used in demonstration
        - Picture
        - Barcode
        - External Data

# To add Fields

- Select the area to add fields to
- Select the field type
- Left-click drag to add the field

# Determine Fields to Add

- Delivery Document Number (at header)
- Item Code
- Item Name
- Price
- Quantity
- Total
- Sub-total for delivery

# Add fields

- Header
  - Column descriptions
  - Header Data Fields (do this after sort and group)
- Repetitive Area
  - Database fields

  **TRICK !!** - to avoid adding all fields and setting them, just select and copy the fields that are common from another repetitive area.  Make sure you select "show hidden fields" before you copy.  We will copy all fields, then delete the ones we don't want.  Be sure to reset the linked fields; those values are not copied.

# Fields are added... almost

Add reference

Fields to link

Delivery



Document in the repetitive area…. These fields are used to create the sorting and grouping.  Two more fields to add:

1. Invoice base document reference (for delivery)

2. Delivery document number

***Trick !!*** - to display tables in the "table" drop down other than those listed, hold down the "alt" key then click the "table" dropdown

# Hidden Fields Added

We've added the hidden fields to link the Delivery Document.

Now we will sort

The area by

The Delivery

Document Number.

**Sorting a repetitive area**

1. Select the repetitive area to sort
2. Select Print Layout Designer -> Repetitive Area -> Sort
3. Select the field to sort by (BaseDocNum)
4. Check "Summary"
5. Check "New page"
6. Click OK
7. Let's Test it

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| # | Field Name | Sort Type | Order | Summary | New Page |
|---|---|---|---|---|---|
| 1 | Delivery:Document Numl ▼ | Numeric ▼ | Asce ▼ | ☑ | ☑ |
| 2 | | ▼ | Alpha | Ascend | ☐ | ☐ |

Sort...

OK    Cancel

# Displaying the Grouping Header

- We have a sort and a group, but how do we display header information?

- The answer?  Groupings

- Each repetitive area sorted group is assigned a group number.  We need to select the group number to add fields to the group header.

Print Layout Designer -> Group -> <group number>

 - in this case we will choose group 1 as we are working with the first sort group.

# Sort Group Selection
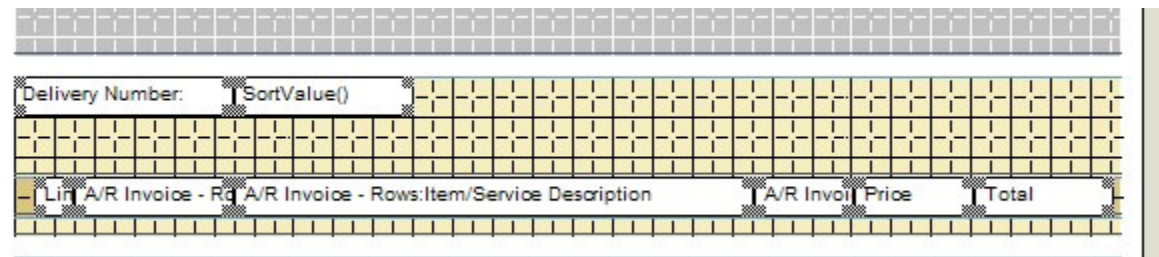
# Add header fields to Sub-Group

- Add a formula field and a text field to the repetitive area header (it is now blank after choosing the Group number)



- Set the formula field value to SortValue() via the Formula Editor
- Set the text field to the Field Name (in this case, we will set its value to "Delivery Number"

# The Formula Editor

- Accessible for Formula fields on the Content page of the Properties window
- Many formulas available

- Next… Sub-totals!
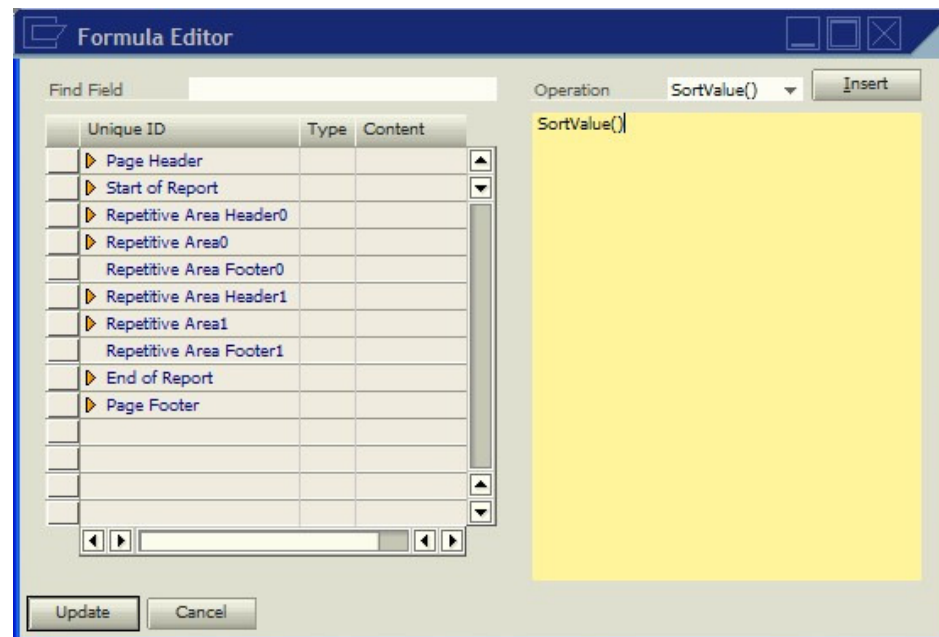
# Group Sub-totals

- Using sorting and grouping you can display sub-totals

- Adding a sub-total is very similar to adding the group header fields:

1. Select the repetitive area footer for the selecte group

2. Add a formula field.  Set the formula to ColSum(UniqueID asString).

3. Double click the field to sum on the left side list of fields in the formula editor

# Sub-totals on the layout grid



- You may also display averages in the footer area using the ColAvg(…) formula

# The Final Product

- Congratulations!! We have created a custom Invoice. Now we just have to assign it.
- A Document Print Layout may be set as the default print layout for:
  - The current user or all users
  - All Business Partners or a specific Business Partner

# Set as Default

To set the default template for a print layout:

1. Select the print layout
2. Click "Set as Default"
3. Select the options to use.
4. Confirm the selection

# Set as Default continued
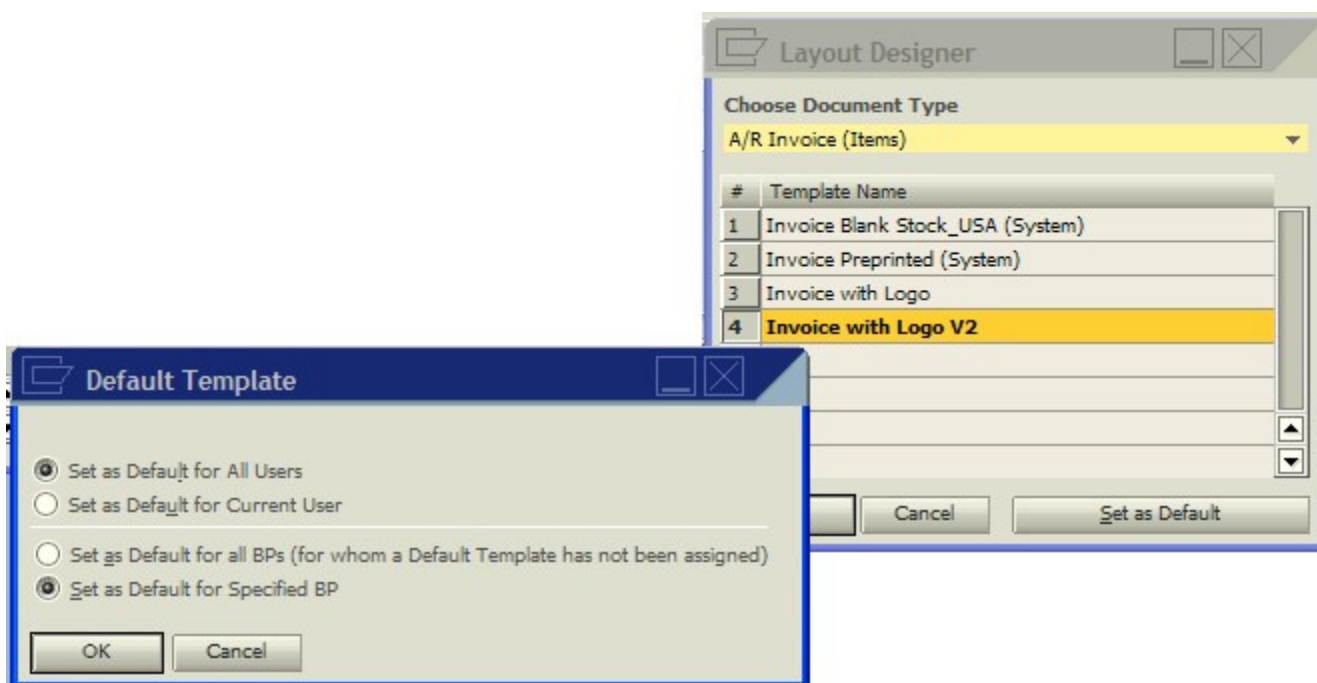
# What we've covered

- Query Print Layouts
  - Building the Query
  - Creating the layout
  - Modifying the layout
- Customizing Print Layouts
  - Adding a repetitive area
  - Copying and pasting fields between areas
  - Setting up sorting and grouping
  - Linking additional tables
  - Setting up sub-totals

# Advanced PLD Functionality

- Discussion of:
  - Hidden Fields and Formulas
  - Linking tables
- Advanced functionality takes practice and time, but can have great results

# Hidden Fields, Formulas and Linked Fields

- Formulas based on logical comparisons (=, <>, >, <) return a 0 or 1 value

- Other fields linked to these fields will be visible if the result of the formula is 1, otherwise it will not be visible

- Making fields dependant upon formula fields allows you to hide entire lines

- Fields can be linked to any field, not just Formula type fields.

# Hidden Fields, Formulas, and Linked Fields continued...

- A field linked to itself will be visible only when it has a value

- Using the linked fields allows you to display different types of repetitive line information in the same repetitive area

- Setting the "Area Height Adjustment" check box for a repetitive area will collapse the repetitive area to the sum of the total height visible for all fields in the repetitive area

- Let's look at the A/R Invoice to see what this means

# Linking Tables

- Linking tables allows you to pull information from seemingly inaccessible locations in Business One.

- Understanding of how the tables are linked together is essential

- i.e. using table linking you can display Business Partner Contacts from a marketing document, or display the freight charges to a line on a PO

- To get a list of all tables for a database field, select the field, hold down the Alt key, and click the table dropdown list.

# Linking Tables continued...

- An understanding of how the business one tables link together is absolutely necessary when linking tables.

- System Information (Ctrl+Shift+I) is a great tool for getting Business One table information without looking at the database.

- In general, Business One tables are linked through the primary keys of each table. For example, Business Partner Addresses (CRD1) is linked to Business Partners (OCRD) via the CardCode field – (OCRD.CardCode, CRD1.CardCode) to identify Addresses for a Business Partner

# Wrapping it up

- The Print Layout Designer takes practice and a good understanding of Business One data to create robust reports.

- Reports may be created from custom queries, called Query Print Layouts

- Built in reports may be customized to suit the needs of the company, from Inventory Posting Lists to Checks

## Contact Us

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