



CRYSTAL REPORTS

For SAP Business One

Crystal Reports for SAP Business One

Version 8.8 family, 9.0 family, and beyond

Carl Britton Lewis – Chief SAP Business One Ambassador

Section 1



CRYSTAL REPORTS

For SAP Business One

Introductions and Course Overview

Introduction

■ Carl Lewis

- Vision33 Chief SAP Business One Ambassador
 - General Manager Vision33 TOTAL Care – (6 years)
 - 15+ years experience with SAP Business One
 - Founding Chairperson - SAP Business One Partner Advisory Committee (PAC)
 - Founding Chairperson – ASUG SAP Business One Special Interest Group (SIG)
 - 30 + years experience in non-profit, charitable organizations, and industry professions
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Session Objectives & Assumptions

■ Course Objective

- An introductory course in building and modifying Crystal reports in the SAP Business One environment. This instructor led course will provide you with the core skills, tools and examples to start building your own SAP Business One reports and layouts within SAP Business One.

■ Assumptions

- You are an experienced SAP Business One user
- You have a basic understanding of the SAP Business One database
- You are comfortable and may have used other report writing tools against a database
- You are not an expert but are open to learning more about it
- You want to
 - Write your own reports
 - Customize existing reports to meet your specific needs

Course Agenda

- **Section 1** - Introductions and Course Overview
- **Section 2** - Your Training Environment
- **Section 3** - Overview of Crystal Reports in Business One 8.8
- **Section 4** - Report Administration
- **Section 5** - Understanding the Business One Data Model & Data Source
- **Section 6** - Overview of the Reports Designer
- **Section 7** - Using Formulas
- **Section 8** - Filtering Report Data
- **Section 9** - Grouping & Totaling Data
- **Section 10** - Formatting your Report
- **Section 11** - Using Parameters
- **Section 12** - Sub Reports
- **Section 13** – Editing Marketing Document Layouts
- **Appendix B** – Crystal Reports - Cross Tabs & Charts
- **Appendix E** – Crystal Reports – Resources

Section 2



CRYSTAL REPORTS

For SAP Business One

Your Crystal Reports Designer Environment (basics)

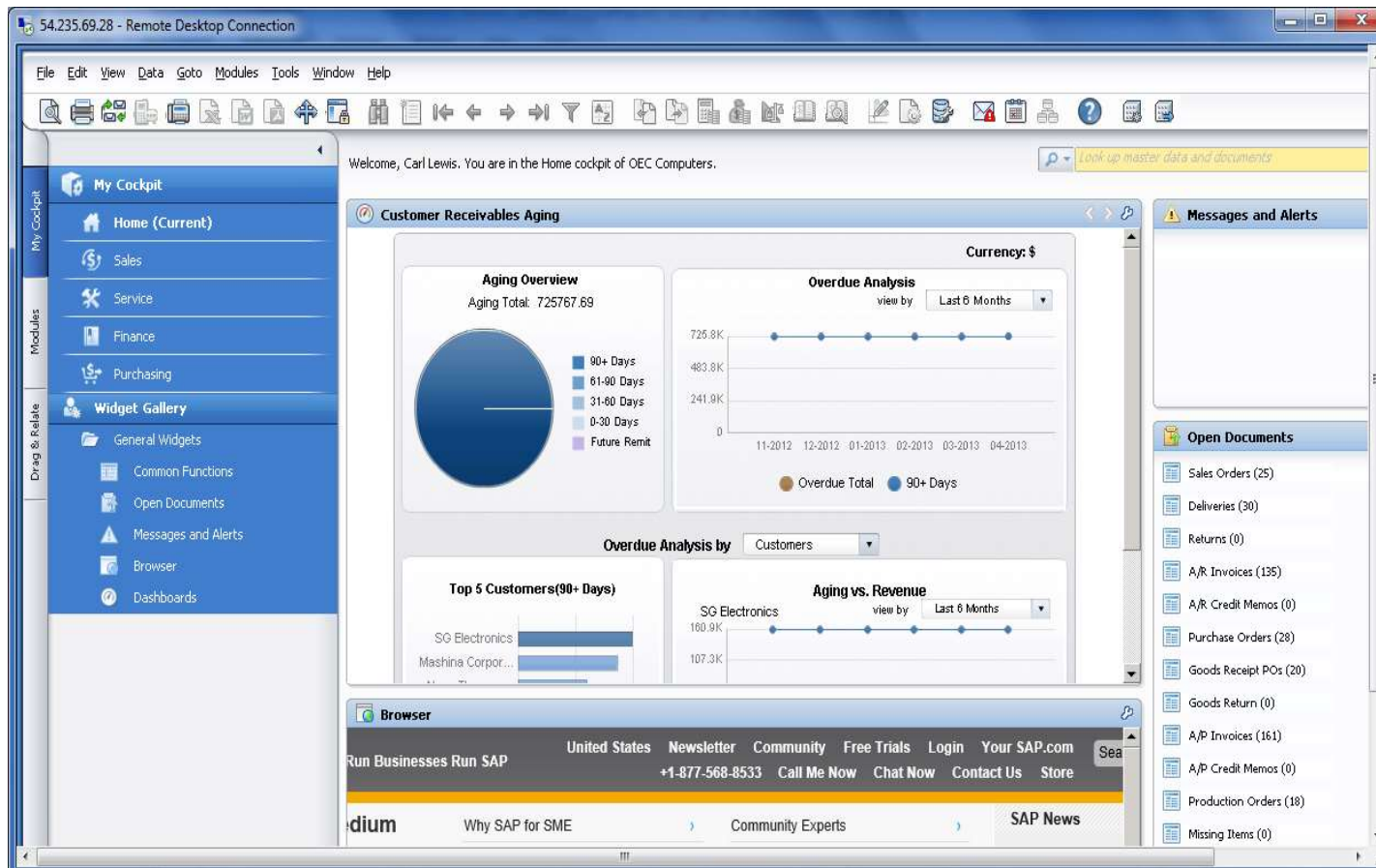
Basic Installation and Setup of Crystal Reports Designer

It is typical for Crystal Reports Designer to be installed and operationally validated by your implementation and consulting team. However, if you do not have Crystal Reports Designer installed the following are the basic steps. It is my recommendation that certified SAP Business One consultant perform these tasks. Procedures and processes change from time to time. Certified SAP Business One professionals are best equipped and informed to perform these tasks.

1. Validate that SAP Business One is operational.
2. Crystal Reports Designer is a separate installation (it has it's own exe file for install purposes) and is not part of the SAP Business One Wizard. Locate this Crystal Reports Designer exe.
3. Execute the install exe file. It is recommended that this been done on your Remote Desktop Server in Administrative mode.
4. The program will check for these pre-requisites. If one or more are not found the install will fail. Please be certain all pre-requisites have been installed and repeat the installation process.
5. Install Crustal Reports Designer
6. Install the SAP Business One CR Addin (this is found in the packages folder of the expanded SAP Business One rar file (compression software).
7. Install the B1 Integration Component. (also found in the packages folder).
8. Make certain that the SAP Business One 32 bit DIAPI has been installed also.
9. Testing the install –
 1. Open Crystal Reports Designer
 2. Obtain ab SAP Business One Connection
 3. Validate that the CR Addin is operational

Success! Ready To Go!

Vision33⁺
TOTAL CARE⁺



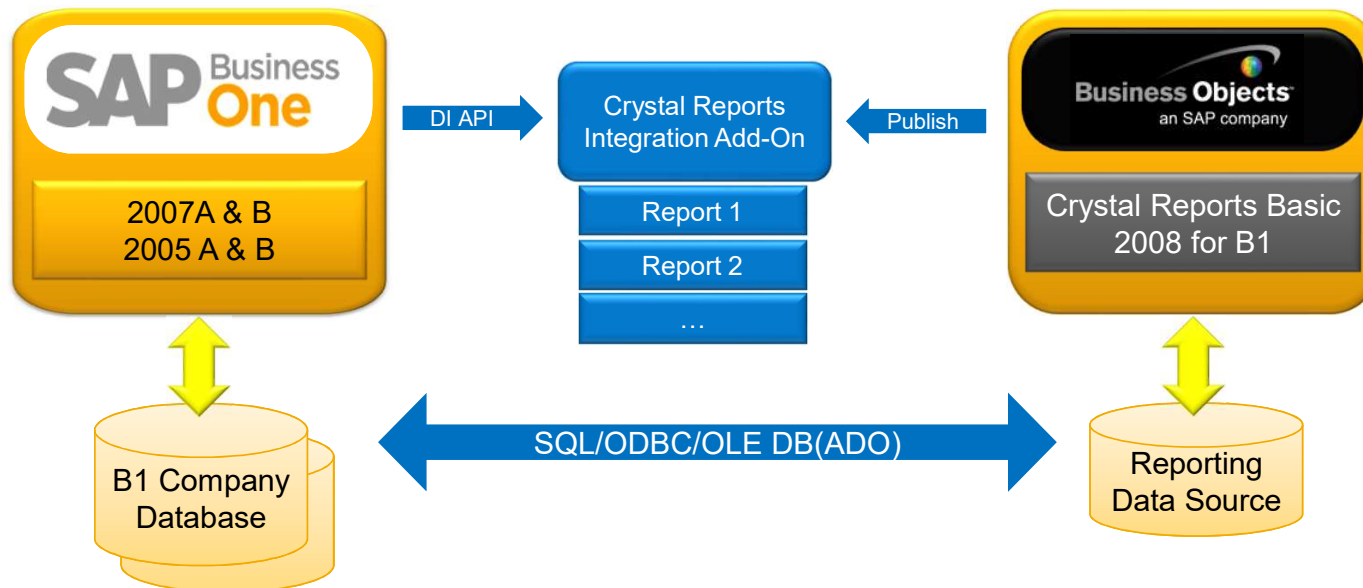
Section 3



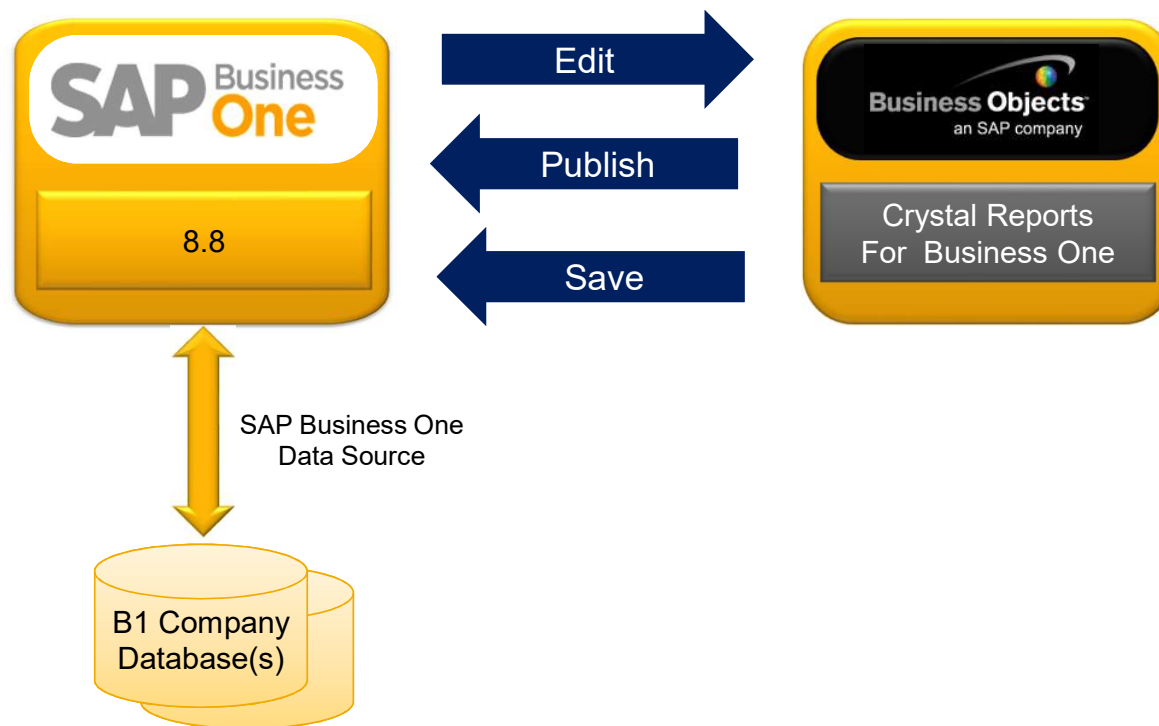
CRYSTAL REPORTS For SAP Business One

Overview of Crystal Reports in Business One
Along with some history...

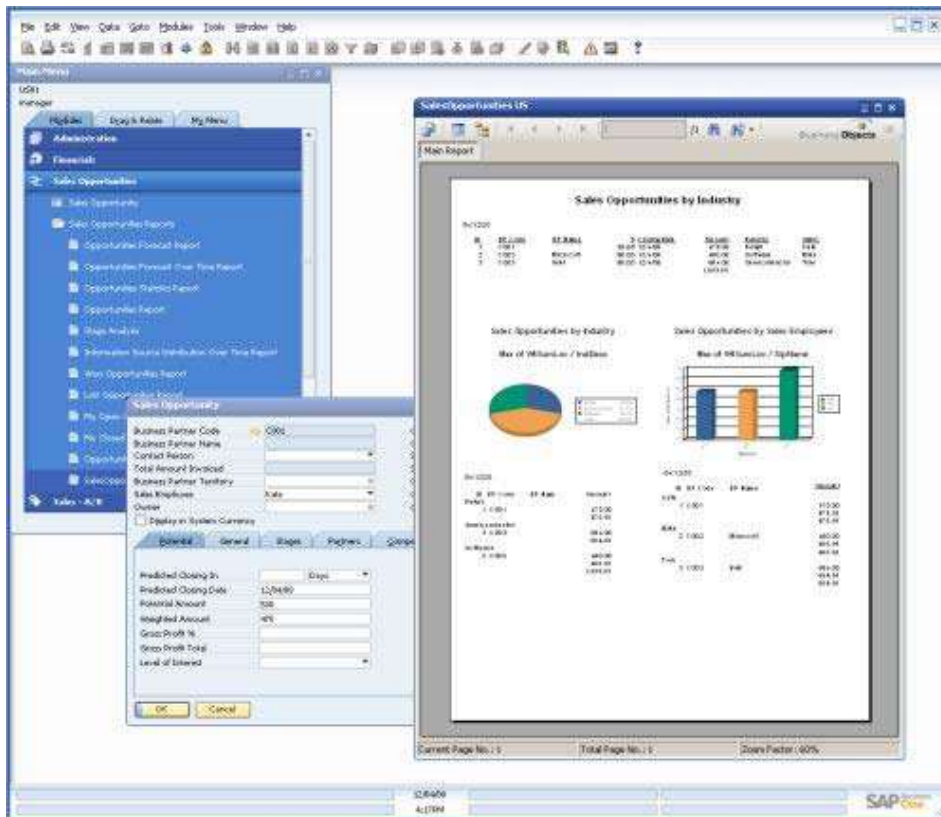
Crystal Reports Integration in SAP Business One 2005 or 2007 (the early years)



Crystal Reports Integration in SAP Business One 8.8 and all versions thereafter



Enhanced Integration with Crystal Reports

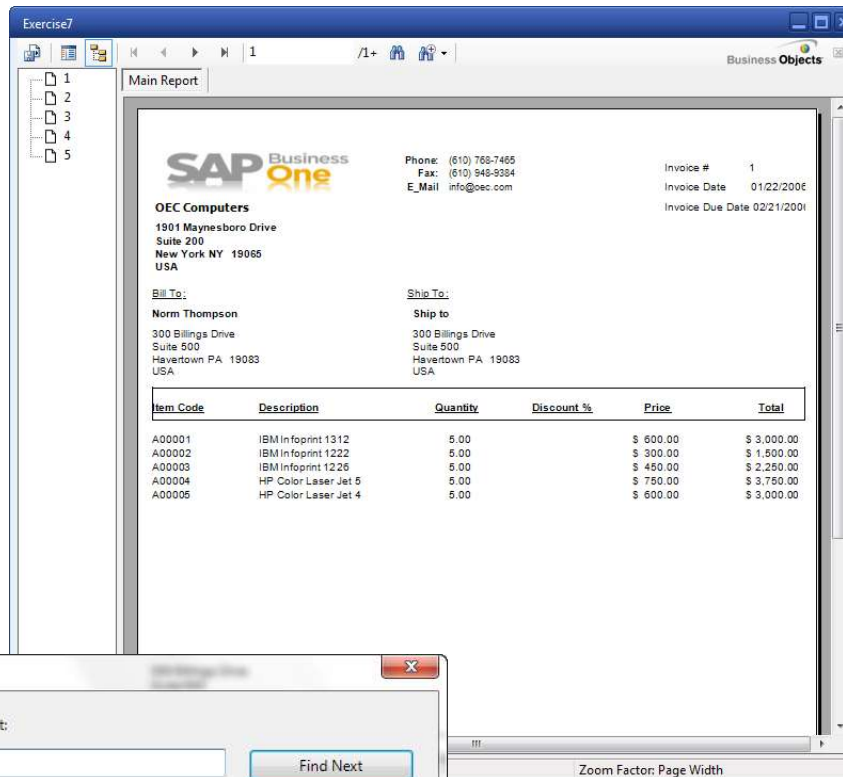
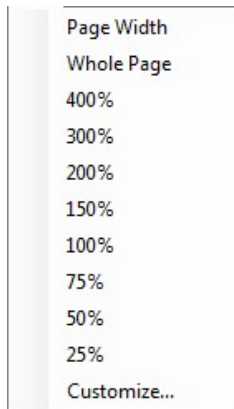


Enhancements:

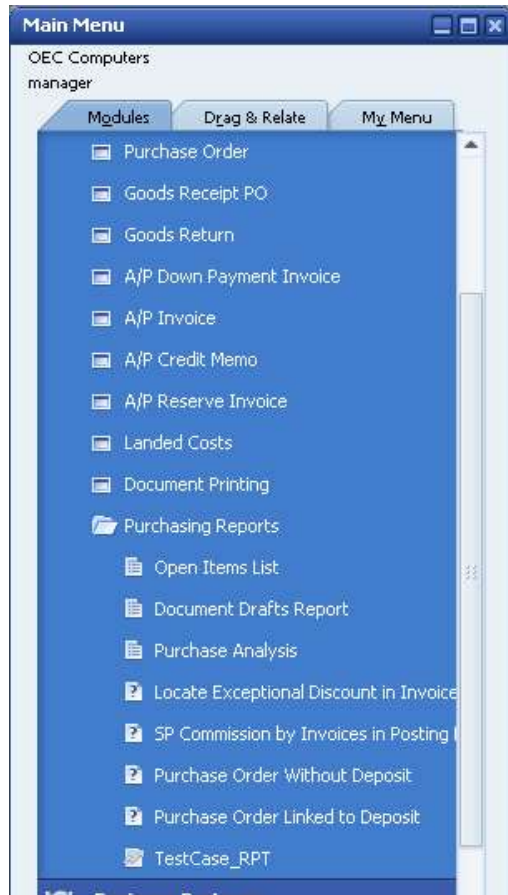
- Fully integrated in core application (No Add-on administration)
- Support marketing document print layouts
- SAP PLD is still compatible so migration to Crystal Reports is at your pace
- Report and Layout Management combined in one place
- Business One specific data source for Crystal Reports Designer (SAP Business One)
- Familiar selection criteria for users
- Drill down from reports to Business One data/transactions

Integrated Crystal Reports Viewer

- Crystal Reports viewer will be loaded if a Crystal Reports designed layout is used
- Sorting, grouping, filtering and drill-down reporting
- Page navigation, text searching, zoom-in/zoom-out, exporting functions



Menus & Report Parameter Selection



The 'Report Selection Criteria' dialog box contains various fields for selecting report parameters. The 'Date' section has 'From' and 'To' fields with dropdowns for 'Posting Date' and values '04/01/2006' and '06/08/2009'. The 'General' section includes fields for Money, DateTime, Int, String, Country (US), and State. The 'Business Partner' section has fields for Single BP and Multi Customer. The 'Items' section has fields for Single Item, Multi Items, Item Range List (From and To), and Multi Warehouse. The 'Accounts' section has fields for G/L Accounts (From and To), Multi Account, Sales(A/R), and Enter MYList. The dialog includes 'OK' and 'Cancel' buttons at the bottom.

Interactive Drill Down Reporting

- Link-to Arrows let users jump directly from reports to Business One records

The screenshot displays the SAP Item Master Data window for item A00001 (IBM Infoprint 1312) and an overlaid 'Invoice_Stock_USA_link_button' report. The report lists items with 'Link-to' arrows (yellow arrows with a right-pointing arrow) in the first column, indicating drill-down capability to Business One records.

Item Master Data - General Tab:

- Item Number: A00001
- Description: IBM Infoprint 1312
- Item Type: Items
- Item Group: IBM Printers
- Price List: Base Price
- Unit Price: 400.00 \$

Inventory Data Tab:

Set G/L Accounts By: Warehouse | Inventory Level

Inventory UoM: | Valuation Method: Moving Average

#	Whse ...	Whse Name	Locked	In Stock	Committed	Ordered	Available	Min. Inventory	Max. Inventory	Req. Inv. Level	Item Cost
1	01	General Warehouse	<input type="checkbox"/>	798	38	190	950				304.34
2	02	West Cost Warehouse	<input type="checkbox"/>	64			64				388.46
3	03	Dropship Warehouse	<input type="checkbox"/>								
4	04	Consignment Warehouse	<input type="checkbox"/>		300		-300				
5			<input type="checkbox"/>								
				862	338	190	714				

Buttons: OK, Cancel, Set Default Whse

Invoice_Stock_USA_link_button

Main Report

ITEM NO .	Description	QTY ORDER	Backorder	QTY ship
➡ A00001	IBM Infoprint 1312	1,00	0,00	1,00
➡ A00002	IBM Infoprint 1222	1,00	0,00	1,00
➡ A00003	IBM Infoprint 1226	1,00	0,00	1,00
➡ A00004	HP Color Laser Jet 5	1,00	0,00	1,00
➡ A00005	HP Color Laser Jet 4	1,00	0,00	1,00
➡ A00006	HP 600 Series Inc	1,00	0,00	1,00

Current Page No.: 1 | Total Page No.: 1

Report and Layout Management Combined

■ Administration → Setup → General → Report and Layout Management

Report and Layout Manager

Layouts Printing Seqs

#	Layout ID	Layout Name	Type
1	RDR20001	Sales Order Preprinted USA (System)	PLD
2	RDR20002	A/R Sales Order (Item) - CR (US) (System)	Crystal Reports
3	RDR20003	Order Confirmation (System)	PLD
4	RDR20004	A/R Sales Order (Item) - CR (US) (DAN)	Crystal Reports
5	RDR20005	Sales Order Blank Stock_USA (System)	PLD

ID: RDR20004
Name: A/R Sales Order (Item) -
Layout Type: Crystal Reports
Last Updated: 10/07/2010
Author: manager
Status: Active
B1 Version:
Crystal Reports:

Description:
Printer: Default
1st Page Printer: None
No. of Copies: 1
Localization:
Language: English

Export Edit Delete Import

OK Cancel Refresh

Report Authorization Centralized

■ Administration >System Initialization >Authorizations >General Authorization

The image shows two SAP windows. The 'Report and Layout Management' window is in the background, displaying details for report 'RCRI0004' (Item Sales Analysis). The 'Authorizations' window is in the foreground, showing a list of users and a table of subjects with their authorization levels. A red arrow points from the 'Set Authorization' button in the first window to the 'Item Sales Analysis' row in the second window.

Report and Layout Management

ID: RCRI0004
Name: Item Sales Analysis
Last Updated: 06/08/2009
Author: manager
Status: Active
Printer: Default
1st page printer: None
No. of Copies: 1
Menu Location: Inventory >

Authorizations

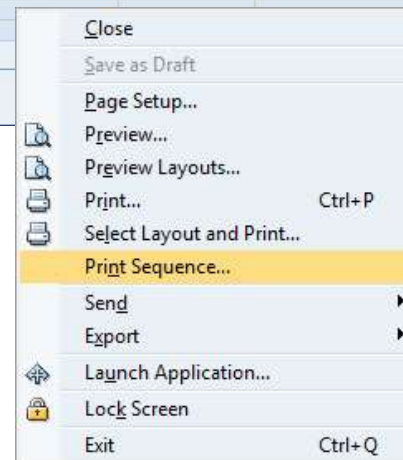
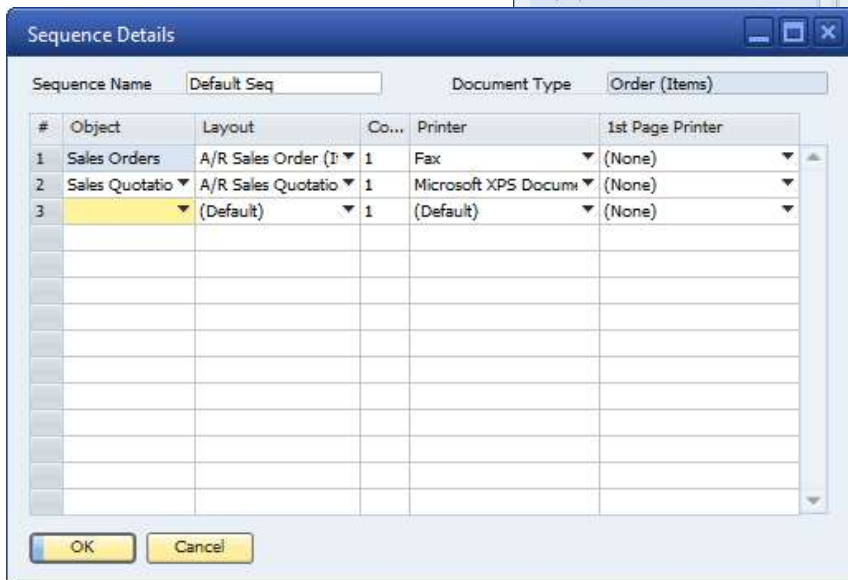
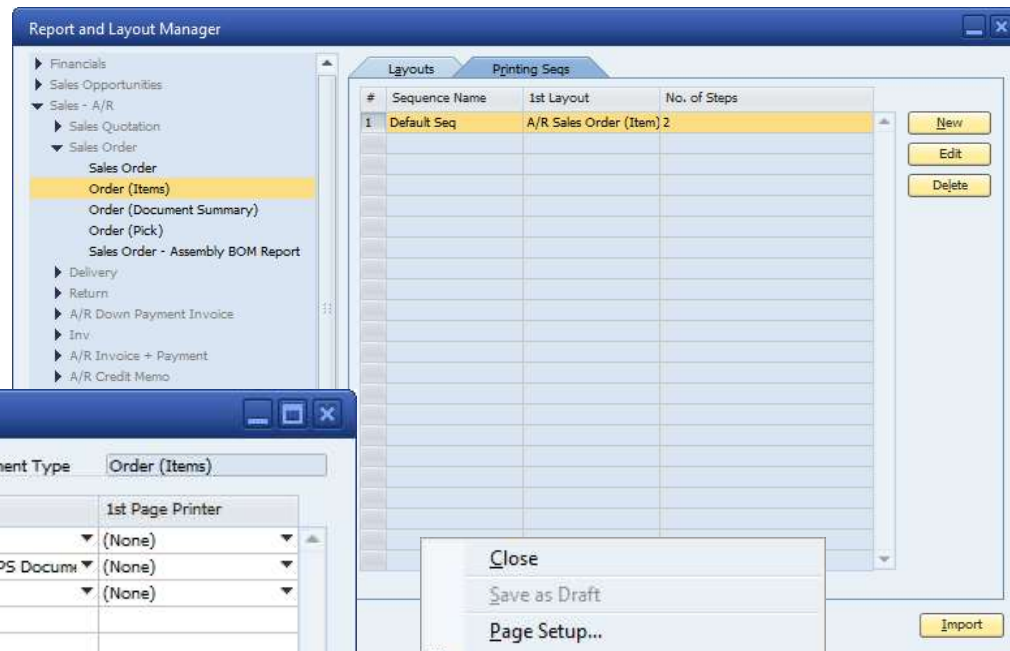
Find	Subject	Authorization
	Item Master Data	
	Item Management	
	Inventory Transactions	
	Price Lists	
	Pick and Pack	
	Inventory Reports	
	Item Sales Analysis	
	Production	
	MRP	
	Service	
	Human Resources	
	Reports	
	User Authorization	

Max. Discount: 0.000
☐ Max. Cash Total

Buttons: OK, Cancel, Expand, Collapse, Full Authorization, Read Only, No Authorization

Print Sequences

- Enables a user to print a set of related documents (layouts) when a specific marketing document is printed.
- Multiple sequences can be defined



Override Default Layout for Print or Preview

The screenshot illustrates the process of overriding the default layout for a Packing List in SAP Business One. The main window displays a Packing List for 'OEC Computers' with document number 258, dated 10/11/2010. The list includes details for 'Microchips' and a table for packages.

Two context menus are shown, demonstrating the navigation path to override the layout:

- Menu 1 (Left):** Close, Save as Draft, Page Setup..., Preview..., **Preview Layouts...** (highlighted), Print..., Select Layout and Print..., Print Sequence..., Send, Export, Launch Application..., Lock Screen, Exit.
- Menu 2 (Right):** Close, Save as Draft, Page Setup..., Preview..., Preview Layouts..., Print..., **Select Layout and Print...** (highlighted), Print Sequence..., Send, Export, Launch Application..., Lock Screen, Exit.

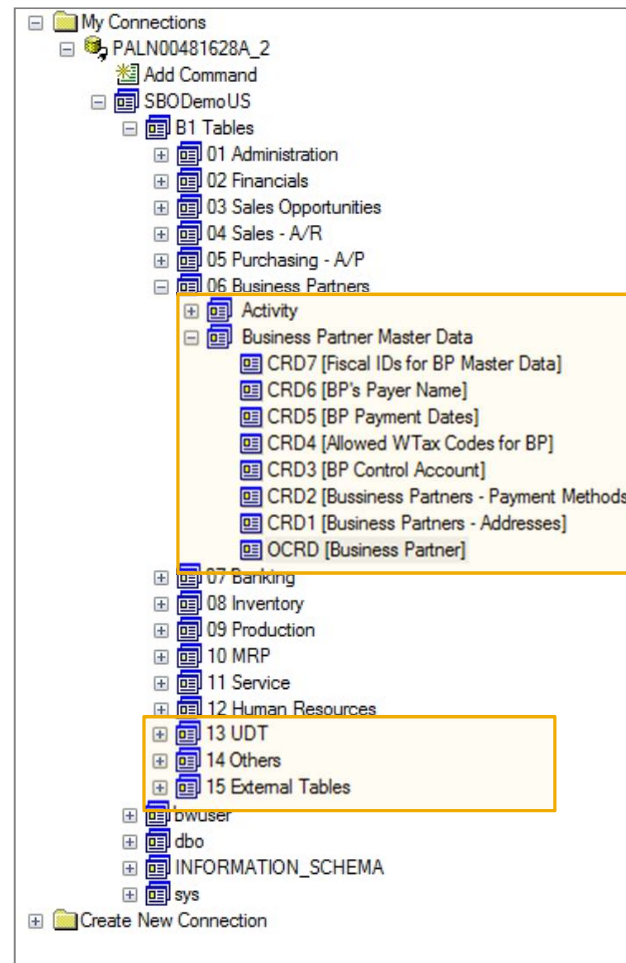
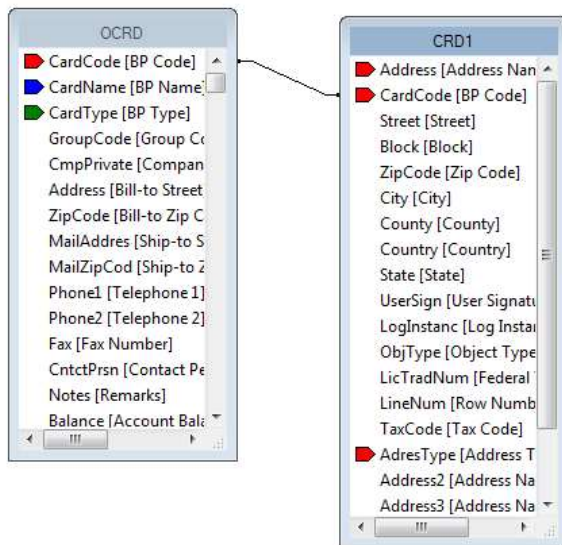
The 'Choose Layout' dialog box is open, showing a list of available layouts. The 'Packing List - CR (US)' layout is selected.

Package Number	Package Type	Total Weight
Total kg		

Current Page No.: 1 Total Page No.: 1 Zoom Factor: Page W

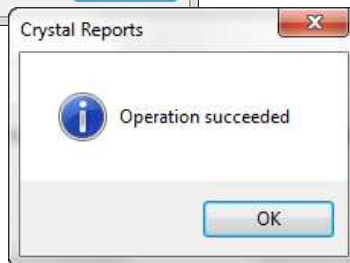
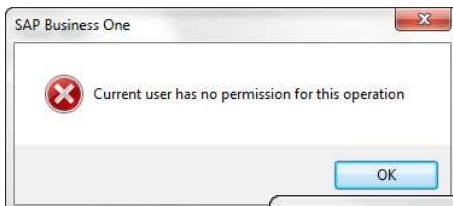
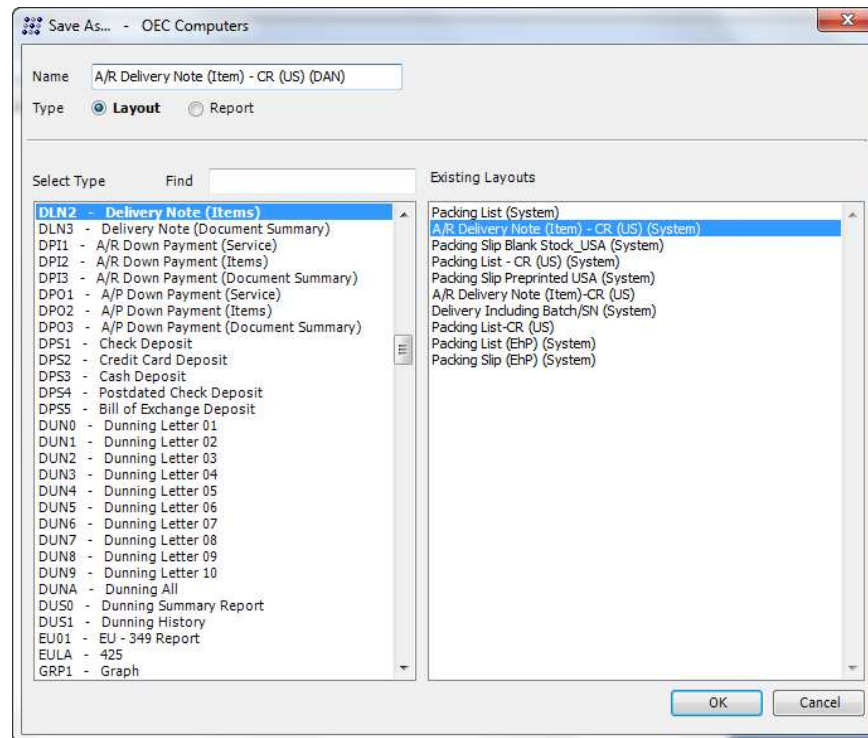
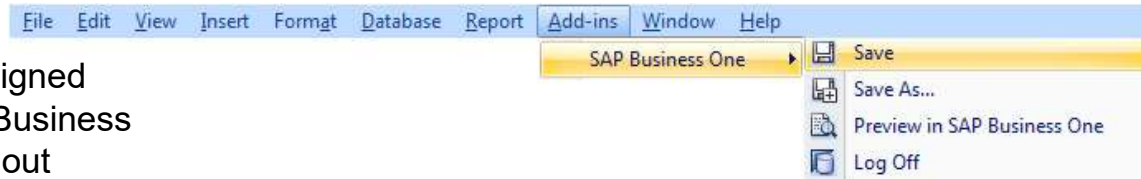
More Friendly Reporting Data Source = (SAP Business One)

- Tables display in a hierarchy tree sorted like Business One modules
- Table described in native language
- Default join between tables selected are automatic
- UDT/UDF and Add-on tables are now included in the data source (category 13, 14 & 15)



Crystal Designer & Business One Integrated (CR Addin)

- Save currently designed reports/layouts to Business One database without accessing client application
- Reports are stored in your company database
- Invoke an ad-hoc preview in client application without publishing it



Section 4



CRYSTAL REPORTS

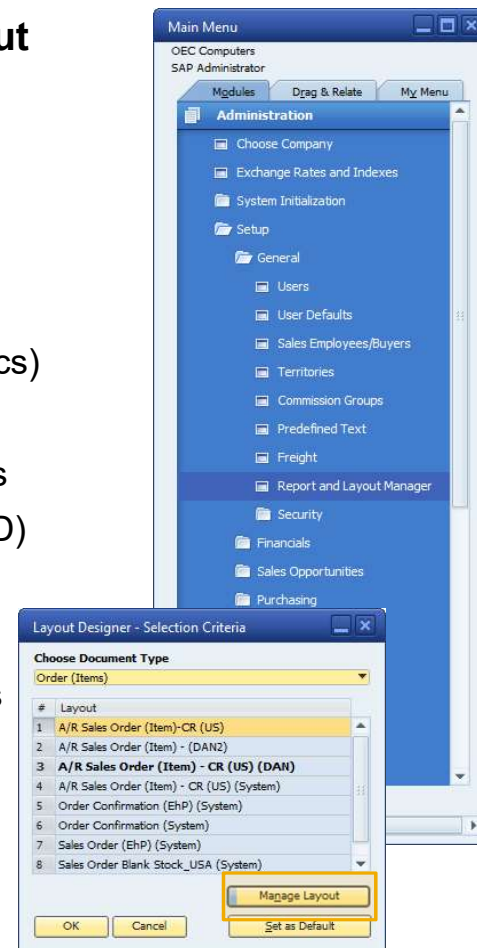
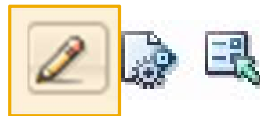
For SAP Business One

Report Administration

Report & Layout Manager Functions

■ Administration>Setup>General>Report and Layout Manager

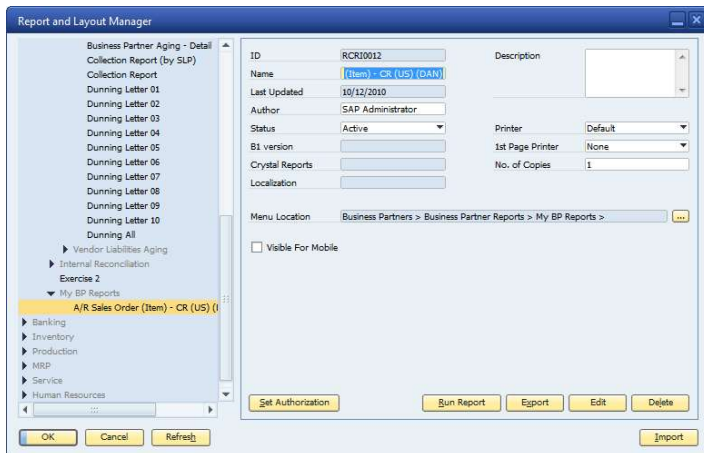
- Run Crystal reports
- Import Crystal reports and Crystal layouts
- Export Crystal reports and Crystal layouts
- Create report folders in the Business One Main Menu
- Create and manage report printing sequences (*Mktg Docs)
- Set user authorizations for running Crystal reports
- Set printing options for Crystal reports and Crystal layouts
- View print settings for “standard” reports and layouts (PLD)
- Delete Crystal reports and layouts *
- Launch the Crystal designer to create and edit reports
- Launch the Print Layout Designer to edit standard reports



Reports vs. Layouts

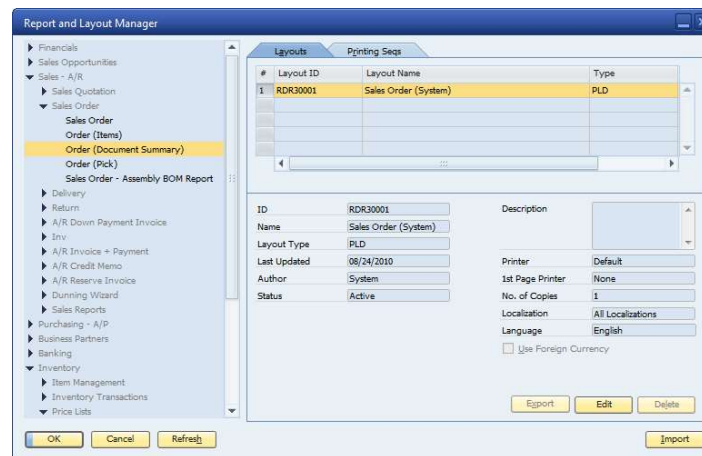
Report

- Must be a Crystal report
- Imported to Business One as a “report”
- Not “linked” to a Business One screen
- Can prompt for report parameters
- Cannot have a print sequence defined




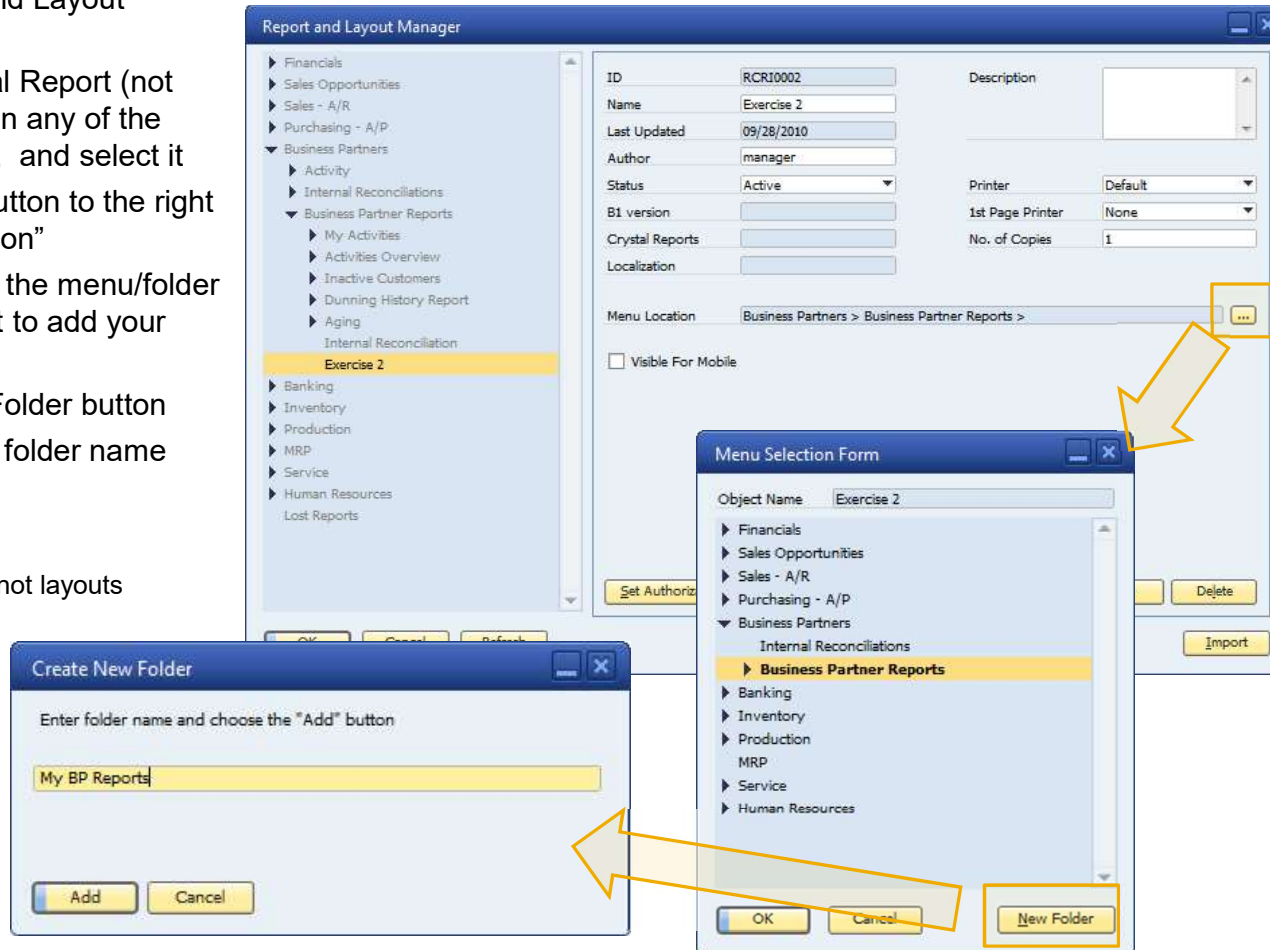
Layout

- Can be a Crystal or PLD report
- Imported into Business One as a “Layout”
- Must be assigned to a Business One document type (Menu Option)
- Get their primary source data from that Business One screen/document
- Before Crystal all reports were layouts



Creating New Report Folders

- Open Report and Layout Manager
- Find any Crystal Report (not PLD or layout) in any of the existing folders, and select it
- Click  the button to the right of "Menu Location"
- Find and select the menu/folder where you want to add your new folder
- Click the New Folder button
- Enter your new folder name
- Click Add
- * Only for reports not layouts



The screenshot illustrates the process of creating a new report folder. The main window is the 'Report and Layout Manager'. On the left, a tree view shows the hierarchy of folders, with 'Exercise 2' selected under 'Business Partner Reports'. The right pane shows details for 'Exercise 2', including its ID (RCRI0002), Name, Last Updated date, Author, Status, B1 version, Crystal Reports, and Localization. The 'Menu Location' is set to 'Business Partners > Business Partner Reports >'. A yellow box highlights the three dots button to the right of the 'Menu Location' field. An arrow points from this button to the 'Menu Selection Form' dialog box. In this dialog, the 'Object Name' is 'Exercise 2', and the same folder hierarchy is shown. A yellow box highlights the 'New Folder' button at the bottom right of the dialog. Another arrow points from the 'New Folder' button to the 'Create New Folder' dialog box. This dialog prompts the user to 'Enter folder name and choose the "Add" button'. The text 'My BP Reports' is entered in the text field. At the bottom, the 'Add' button is highlighted with a yellow box.

Importing Crystal Reports into Business One

Report & Layout Import Wizard

- Click on the Import button from Report and Layout Manager
- Select at File Location to import from (Local or Network)
- Select a Package or Report file
 - .b1p report package contains multiple .rpt files
 - .rpt Crystal reports definition file
- Select the report Content Type
 - Layout - Report linked to a Business One Document or Screen
 - Report - Standalone report
- For Reports select a Folder destination in Business One
- For Layouts select the document type
- If the report has already been imported you have the chance to overwrite or rename
- Import summary give final status and details of the import

Report and Layout Import Wizard

Select Import File

To specify a file for import, choose the "Browse" button.

File Location: C:\Users\812692\Desktop\CrystalReportsforBusinessOne Browse

Select a content type for the specified file, then choose the button to specify a destination:

Content Type

☐ Layout

☒ Report

Financials > Financial Reports > Class > ...

To continue, choose the "Finish" button.

Step 1

Cancel Back Next Finish

List of Document Types

Find: inv

#	Report Type	Type Name
162	INV1	A/R Invoice (Service)
163	INV2	A/R Invoice (Items)
164	INV3	A/R Invoice (Document Summary)
165	IPF1	Landed Costs
166	IPF2	Landed Costs Details
167	IQR2	Stock Posting
168	ITL1	Inventory Posting List (by Items)
169	ITL2	Inventory Posting List (by BP)
170	ITL3	Inventory Posting List (by Other)
171	ITM1	Items List

Choose Cancel

Menu Selection Form

Object Name: Exercise4

- Financial Reports
 - Accounting
 - Financial
 - Comparison
 - Budget Reports
 - Class
 - Sales Opportunities Reports
 - Sales Reports
 - Purchasing Reports
 - Business Partner Reports
 - Banking Reports
 - Inventory Reports
 - Production Reports
 - Service Reports
 - Human Resources Reports

OK Cancel New Folder

Exporting Crystal Reports from Business One

Report & Layout Export Wizard

- Select a Crystal report in the Report and Layout Manager
- Click the Export button
- Depending on what report was highlighted when you started, you either get the Layout Selection or the Report Selection screen next. *(Note: You can't export both types of reports (layouts & reports) in one wizard run)*
- Select one or more Crystal Layouts or Reports to export
- Click the Next button
- Enter a name for the Report Package you will be creating
- Select a folder location to save the Report Package.
- Click Finish
- The Export summary screen will give final status and details of the export

The screenshot displays two overlapping windows from the 'Report and Layout Export Wizard'. The top window, titled 'Report Selection', shows a table of reports with columns for Name, ID, Description, and Last Updated. The bottom window, titled 'Layout Selection', shows a tree view of layouts with checkboxes for selection. Both windows include 'Expand' and 'Collapse' buttons at the bottom right. The bottom window also has 'Cancel', 'Back', 'Next', and 'Finish' buttons at the bottom.

Report Selection Table:

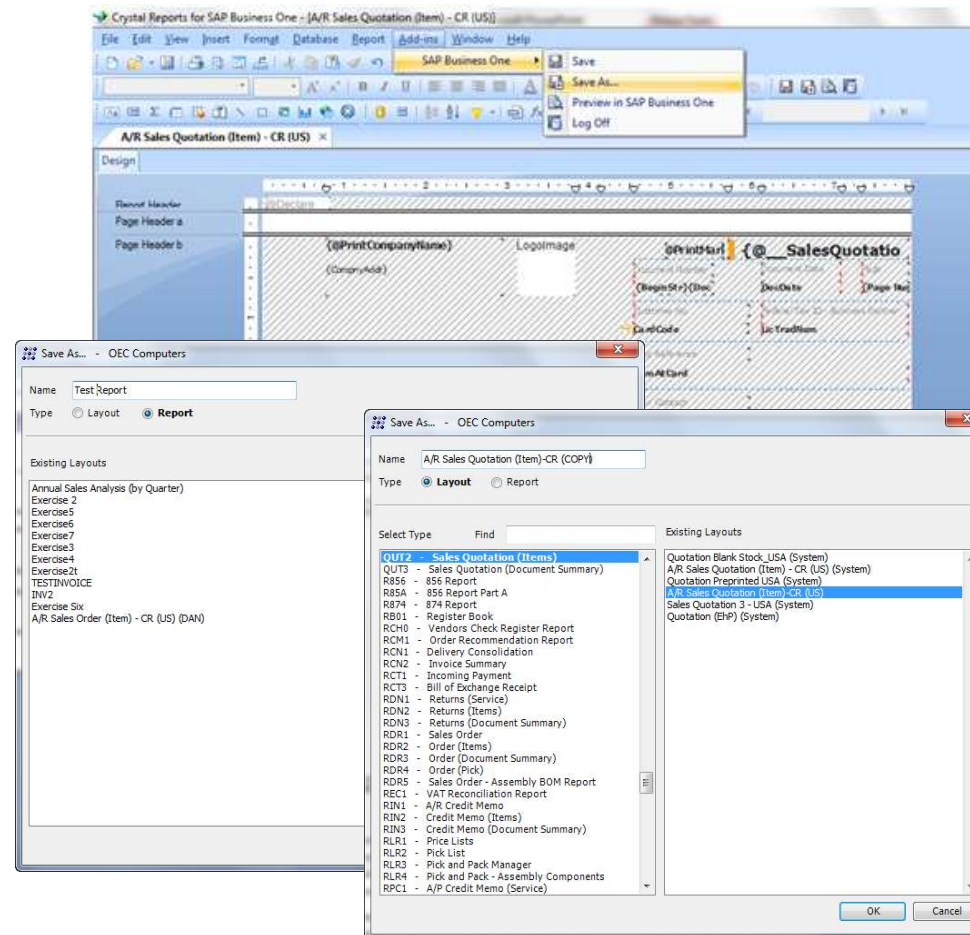
Name	ID	Description	Last Updated
Exercise5	RCR10003		10/06/2010
Exercise7	RCR10005		10/11/2010
Exercise3	RCR10006		10/06/2010
Exercise4	RCR10007		10/06/2010

Layout Selection Table:

Name	ID	Description	Last Updated
Financials			
Sales - A/R			
Sales Quotation			
Sales Order			
A/R Sales Order (Service)-CR (US)	RDR10004		05/21/2010
Order (Items)			
Delivery			
Delivery Note (Service)			
Delivery Note (Items)			
A/R Delivery Note (Item)-CR (US)	DLN20006		05/21/2010
Packing List-CR (US)	DLN20008		05/21/2010
A/R Delivery Note (Item) - CR (US) (DAN)	DLN20010		10/11/2010
A/R Packaging			
Return			
A/R Down Payment Invoice			
Inv			
A/R Invoice + Payment			
A/R Credit Memo			

“Copy” a Crystal Report?

- No “Copy” function or button
- Select the Crystal report or Crystal Layout you want to copy in the Report and Layout Manager
- Click the Edit button
- This will launch the Crystal Designer in a new window
- From the Add-Ins menu select SAP Business One>Save As
- Enter the new name in the name field and Hit OK
- The Type radio selector will be set based on the type of report (report or layout) you selected to edit
- This will save the report or layout back to the Business One database.
- Hit the Refresh button in the Report and Layout Manager and you will see the report with your new name



Exercise 1

Report & Layout Manager Import & Export



Exercise 1 – Report & Layout Manager Import & Export

Exercise Objectives

- Import reports and Business One Report Packages into the SAP Business One main menu
- Move a report to a different folder
- Change document name and more
- Create new Report folders
- Export Crystal Reports
- Run Crystal reports from SAP Business One
- “Copy” a System Crystal reports layout