

## **BEGINNING CRYSTAL 2003 USERS CONFERENCE**

### ***What is Crystal?***

Seagate Crystal Reports is a third party software that is used to design custom reports. These custom reports read databases such as Expandable and extract, group and sort data to create custom reports that can be printed and distributed to either management or subordinates.

### ***What is Data?***

Data is the information that is stored within the database. The data consists of tables or files, which are filled with fields or pieces of information.

### ***What is a Table?***

There are a number of tables in the EII database (over 120). A list of the tables called a Table Layout (showing all of their data elements and types) can be found on your CD, under the Beginning Crystal folder (session # 11).

### ***What types of Tables are there?***

In order to help you understand what types of tables there are in EII and what kinds of information can be found in these tables, here is a list of some tables that are commonly used in Crystal reports. For a complete list of EII Tables and their fields, refer to the Table Layout document included with your materials. This list is NOT complete. Its purpose of the following list is to give you an idea of common data fields used for Crystal Reports and the table in which they reside.

## **Types of tables**

### **Master Tables**

SOFCM - Customer Master table  
POFVM - Vendor Master table  
ICFPM - Parts Master table  
PDFBM - Bill of Materials table  
GLFCA – Chart of Accounts

### **Order Header Tables**

SOFOM - Sales Order header  
POFOM - Purchase Order header  
JCFJM - Job (Work Order) header  
ARFIM - AR Invoice header  
APFVO – AP voucher file

### **Line Tables**

SOFOD – Sales Order line  
POFOD – Purchase Order line  
JCFJS – Job Operation  
ARFID - AR Invoice line

### **Transaction Tables**

SOFST - Shipping Transactions  
POFRT – Receipt Transactions  
ICFIT – Inventory transactions  
JCFCD – Job Cost  
ARFIT – AR Invoice transactions  
APFVT – AP Voucher transactions

### **Other Tables**

ICFSS - Stock Status  
POFVP – Vendor Part table  
SOFCP – Customer Part table  
SOFSH – Sales History table  
SOFBH – Booking History

### **Types of information**

customer name, address, phone #, state  
vendor name, address, phone #, state  
part description, cost, type,  
assembly id, component id, qty per  
company id, dept, account, account type, account status, description

### **Types of information**

sold to, ship to, bill to, terms, salesman id, sales region, order status, tax code  
vendor id, vendor name, terms, buyer id, order status  
assembly id, job status, order qty, balance due, WIP balance, product line  
customer id, invoice type, total invoice amt, freight amt, tax amt, inv balance  
vendor id, invoice type, invoice amt, invoice balance,

### **Types of information**

Part id, scheduled ship date, inventory qty, inventory balance due,  
Part id, scheduled receipt date, inventory qty, inventory balance due  
Work center, description, balance due, started qty, scrapped qty  
Part id, unit price, unit cost, product line

### **Types of information**

Part id, so line #, qty shpd, action date, invoice #, bill of lading, sales dept & acct  
Part id, po line #, qty recd, action date, invoice #, inv cost, po cost,  
Part id, Stores Code, inv. qty, total std cost, action type, program id  
Job id, operation code, Action type, action date, amount  
Invoice number, dept and account, amount, gl month and year  
Voucher id, invoice number, dept and acct, gl month and year

### **Types of information**

part id, stores code, quantity on hand, issues receipts adjustments month to date  
your part id, vendor part id, last po price, last po id, vendor id, buyer id  
your part id, customer part id, last so price, last so id, cust id,  
part id, gl month & year, cogs amt, sales amt, ship to & sold to cust ids, salesman id  
part id, gl month & year, qty, price, ship to & sold to cust ids, salesman id

### ***How do I know which fields to use to link the Tables together?***

When you want information from more than 1 table, you need to link them together by a common field. Crystal Reports has a feature called Smart Linking that automatically links common field names between tables. This should NOT be used, there are many common fields like date last update or date created that will be used in both fields, but they will not link correctly because they have different (not common) values.

An example of how to link is if you wanted an open Sales Order backlog report, you would probably want information from the Sales Order Header table (SOFOM) and the Sales Order Detail table (SOFOD). The common link between these tables is the SO\_ID field. You would not want or need to have links with other common fields between these tables.

### ***What the heck is does a one-to-many link mean?***

Crystal allows us to manually links tables together, but based on what type of table it is, the link may be a one to one link or a one to many link between the tables.

An example would be linking the Parts master table (ICFPM) to the New standards table (PDFNS). There exactly one to one link in ICFPM for each record PDFNS. There cannot be multiple records with the same part id in either of these tables.

An example of a one to many link is between SOFOM and SOFOD. There can be many sales order lines on a sales order, but only one sales order header record per sales order. This can cause complications when you want to create subtotals and totals on your report.

### ***Selecting Records***

Record selection is how you eliminate records from your report. For example if you want a sales order backlog report, you will SELECT sales orders with an order status of O (open). Any records that table and their corresponding linked table(s) will not be included in the report. Selections rules are how you can fine-tune what information is selected. You may have multiple select rules for a single report.

### ***Creating Formulas***

Formulas are ways to create values that may not exist within Expandable. For example to get the inventory value in a storeroom, you need to multiply the quantity on hand in the stock status table (ICFSS). This is accomplished with a formula.

### ***Grouping Records***

Grouping is a way to keep records together under a common field value. An example of a grouping sales order could be by salesman id.

### ***Totaling and Sub-totaling***

After successfully grouping records, you may want to create subtotals. For example Sales amount could grouped and sub totaled by salesman id. You can suppress the printing of the details and just print values from the end of the grouping for a summarized report of Sales by salesman id.

**Crystal Advice/Tips:**

Start simple – Create a simple report verify the data being selected.

Save the Report – since you know what can happen, save the report early and often in case your workstation locks up.

Define what you want the report to look like and what information you want to include by sketching an example on a piece of paper.

Validate that the data being selected is accurate. If you know you last months sales were not \$100,000,000 but your report says they were \$100,000,000 then you have a problem with your report.

Use Crystal Help with in the program, this is the same info as in the Crystal Users Guide.

To practice creating a report and for a step-by-step guide, refer to your CD and under Beginning Crystal (Session 11) there is a 39-page document that goes step by step into creating and modifying a crystal report.

Practice makes perfect. This is also true in creating crystal reports the more you create, the more you will venture into creating more complex and sophisticated reports.