

## **LIVE DEMO TUTORIAL USING THE CRM.A ANALYZER**

### **Live Demo at [www.bluedatainc.com](http://www.bluedatainc.com).**

**CRM.a** succeeds for Customer Relationship Management because of its simplicity, which we now illustrate.

To show that **CRM.a** is intuitive, minimal, and quick, our website permits users to experiment with a copy of the Analyzer. With a browser, just pointing-and-clicking does the job. To help users learn to use the Analyzer of **CRM.a**, we work with the so-called “db2” database, created using Microsoft Access.

### **Overview.**

The Customer Relationship Management.analyzer (**CRM.a**) has a minimal design, yet is powerful. Featuring simplicity and ease of use, the Analyzer makes **CRM.a** a highly effective CRM system for studying company performance over the Internet or on a company Intranet with only browsers. The Analyzer processes and extracts summary information from company database tables and presents color graphics that will help

- ? gain insight into customer purchases, problems, and needs,
- ? improve service and promote successful interactions with customers,
- ? guide and stimulate sales activity,
- ? implement interactive selling on the Internet,

The Analyzer accesses tables easily created from existing databases – databases that every company must have and must maintain. **CRM.a** works well with any database management system, such as Access, Oracle, SQL Server, and others. The Analyzer will work with any ODBC-compliant database, and the product ships with a variety of drivers.

Given access to database tables that store the raw information that the user wishes to explore, CRM.a demonstrates ease of use combined with impressive power. It provides valuable insight into company operations, including customer service, sales activity, and interactive selling on the web. With simple pointing and clicking operations, users can carry out a number of easily implemented but very important functions, such as those listed below:

- ? Filtering
- ? Summarizing
- ? Sorting
- ? Graphing
- ? Drill Up/Drill Down

### **Here are examples of what The Analyzer can do:**

- ? Select a table or view within a specific database.
- ? Return a page that contains selected fields from the table.
- ? Search for fields that contain information for a specific query value and return the results table.
- ? Search fields for values that have a numerical relationship, such as greater than, less than, etc.
- ? Summarize selected fields.
- ? Wildcard searches and conditional operators.
- ? Sub-total on selected fields.
- ? Export results sets to a spreadsheet on the end user’s PC.
- ? Drill Up/Drill Down
- ? Graph results

The Tutorial consists of 8 “pages”, each of which illustrates how to extract interesting information from an artificially created list of shipments to imaginary customers. Tutorial 1 discusses “Getting Started”.

## **TUTORIAL 1: GETTING STARTED WITH CRM.a**

If on the bluedatainc website the “Live Demo” option is chosen, you first login using “demo” and “demo”. Select the database table from database “db2”, which is shown below. After submitting your choice, directions on the website ask you to select the fields (columns) that you wish to query and wish to view. Holding down the Control key on your PC, select for both all the fields with the mouse. Then hit the “Submit” button. A table, only the beginning of which we display below, will appear. Note that the table shows shipments to various Customers, including shipment date and the Sales in thousands of dollars. There are 799 records in the full table and they have been sorted by Ship Date. The Analyzer can select a surprising amount of information from this table. First let’s look at “drilling up”.

Total Records: 799

Results For: Table1							
Customer	Salesperson	Ship Date	Telephone d	Product	Sales (\$ x k)	Relations	State
VEASC	Yang	08/04/1994	08/16/1994	Storage	32.38		IN
Täten Inc	Little	08/05/1994	08/10/1994	Peripherals	11.61		MI
Carnes	Larson	08/08/1994	08/12/1994	Computer	65.83		CA
VES	Kay	08/08/1994	08/15/1994	Peripherals	41.34		IN
Prémé	Larson	08/09/1994	08/11/1994	Computer	51.30		CO
Carnes	Kay	08/10/1994	08/16/1994	Computer	58.17		CA
Sams	Yang	08/11/1994	08/23/1994	Computer	22.98		VA
Richt	Bobb	08/12/1994	08/15/1994	Storage	148.33		VA
WI Inc	Kay	08/15/1994	08/17/1994	Computer	13.97		CA
Dale	Clark	08/17/1994	08/23/1994	Peripherals	140.51		AZ
Zuma	Larson	08/18/1994	08/25/1994	Storage	3.25		NJ
Käsel	Larson	08/19/1994	08/29/1994	Peripherals	55.09		MI
Delíc	Larson	08/19/1994	08/30/1994	Computer	3.05		CA

**Table 1A: First 13 Records from the “db2” Database Table**

The “Drill Up” option can be seen at the top of the table on the Analyzer screen. We must fill in the Key Field, the Summary Field, and there are two “Optional Key or Summary Fields”. Under the latter is a box if we wish to summarize. Do this: Select these: Salesperson, Sum of Sales, and Salesperson and check the Summarize box. Then hit the Drill Up button and get the table below. It measures the effectiveness of each Salesperson in terms of Sales dollars and also the Count of sales they made.

Results For: Table1			
Salesperson	Count of Salesperson	Sum of Sales (\$ x k)	
Bobb	42	3,322.74	
Clark	118	8,213.94	
Gray	94	8,597.53	
Kay	121	10,516.13	
Larson	150	10,939.39	
Little	65	3,591.99	
Volk	99	7,283.46	
Wood	68	5,905.42	
Yang	42	3,918.71	

**Table 1B: Result of Drilling Up on Sales Person**

**TUTORIAL 2: MORE DRILLING UP EXAMPLES WITH CRM.a**

By changing the selections at the top of the displayed Table and hitting “Drill Up”, we can quickly determine the performance of Products, States, and assuming that our “relations” with customers are coded rather simply, we can check how we have managed our customer relationships in recent months.

Total Records: 3

Results For: Table1		
Product	Count of Product	Sum of Sales (\$ x k)
Computer	311	26,728.43
Peripherals	241	15,576.06
Storage	247	19,984.82

**Figure 2A: Drilling Up on Product**

Total Records: 20

Results For: Table1		
State	Count of Product	Sum of Sales (\$ x k)
AL	16	598.58
AZ	40	7,391.50
CO	83	4,880.19
CO	19	1,280.14
CT	17	803.87
FL	18	1,396.19
IL	22	910.89
IN	77	4,237.84
MD	19	2,755.24
MI	122	11,283.28

**Figure 2B: Drilling Up on State (Output Table has been truncated)**

Total Records: 9

Results For: Table1	
Relations	Count of Relations
	0
Call Customer	17
Failure	28
Good Mtg	2
Major Problem	3
Problem Solved	10
Suggest Mtg	19
to order more	9
To Visit Us	18

**Figure 2C: Drilling Up on Relations**

**TUTORIAL 3: HOW TO QUERY A TABLE**

After having used the Drill Up feature, hit “Back” on your browser and return to the Query screen. We can look at all customers, but let’s shorten the output table by focusing on one, VEASC. In the “Customer” box, type in “VEASC”. On the right side let’s make “Product” the Key Field and also make it Sort Field 1 and check Ascending Order. Also at the top right check the top four boxes relative to Totals. We get:

Total Records: 5

Results For: Table1							
Customer	Salesperson	Ship Date	Telephoned	Product	Sales (\$ x k)	Relations	State
VEASC	Gray	12/12/1995	12/19/1995	Computer	7.79		IN
VEASC	Gray	10/03/1994	10/11/1994	Computer	1.15		IN
Sub-Totals for Computer - count=2							
Customer = 2	Salesperson = 2	10/03/1994 to 12/12/1995	10/11/1994 to 12/19/1995	Computer	8.93	Relations = 2	State = 2
VEASC	Little	09/06/1994	09/16/1994	Peripherals	6.01		IN
Sub-Totals for Peripherals - count=1							
VEASC	Little	09/06/1994 to 09/06/1994	09/16/1994 to 09/16/1994	Peripherals	6.01		IN
VEASC	Kay	12/13/1995	12/18/1995	Storage	11.08		IN
VEASC	Yang	08/04/1994	08/16/1994	Storage	32.38		IN
Sub-Totals for Storage - count=2							
Customer = 2	Salesperson = 2	08/04/1994 to 12/13/1995	08/16/1994 to 12/18/1995	Storage	43.46	Relations = 2	State = 2
Summarization for Table1 - count=5							
Customer = 5	Salesperson = 5	08/04/1994 to 12/13/1995	08/16/1994 to 12/19/1995	Product = 5	58.40	Relations = 5	State = 5

**Table 3A: Using the Query Screen to Examine One Customer**

By sorting and subtotaling on Products, we have determined just how the customer VEASC has ordered from us. We can see that in 1995 and the half-year 1994, computer sales accounted for \$8.93k, peripherals \$6k. Storage, perhaps surprisingly, produced \$43,460 in sales. It can be seen that the salesperson Gray handled computers with this company, Little handled peripherals. Interestingly enough, two salespersons – Kay and Yang—handled storage and did quite well. However, the really big sale of \$32,380 was made back in 1994. Over a year later the next sale of storage was made. This could be worth looking into.

**TUTORIAL 4: HOW TO SUBTOTAL OVER MONTHS and PRODUCTS**

Often we are interested in company performance over time. Here is an example using the same table. On the right side of the Query Page, we check all five options from Show grand total to “If key field is a date, group by month”.

In addition, we make Ship Date the Key Field and we also use it as Sort Field 1. We also elect to sort in ascending Order.

The result is a very long table with subtotals. Because of the length of the table, we will focus only on the subtotal lines. The subtotal shown below is clearly that for the month of 08/1994. The subtotal of sales for that month is \$1,206,260. By moving down the full table, we can examine subtotals for other months of interest.

<u>Customer</u>	<u>Salesperson</u>	<u>ShipDate</u>	<u>Telephon</u>	<u>Product</u>	<u>Sales</u>	<u>Relations</u>	<u>State</u>
					(\$ x k)		
Custo= 21 = 21	Salesp= 21	<b>08/1994</b>	08/10/1994 to 9/23/94	Prod = 21	<b>1,206.26</b>	Rel= 21	State = 21

**Table 4A: Extract from Output Table Showing Sales for August, 1994**

Next hit “Back” on the browser to return to the Query Page. We make a few changes. First we specify that the Product of interest is Storage by typing it into the Product box. Next we make State the key Field and also the Sort Field 1. When we “Submit Query”, we get a long table, state by state. Below we have copied out only the first portion of the Table, which pertains to Alabama. Four sales were made in 1996. So the two customers (Carls and RG Inc) must be new. The total sales amounted to \$55,540.

Total Records: 247

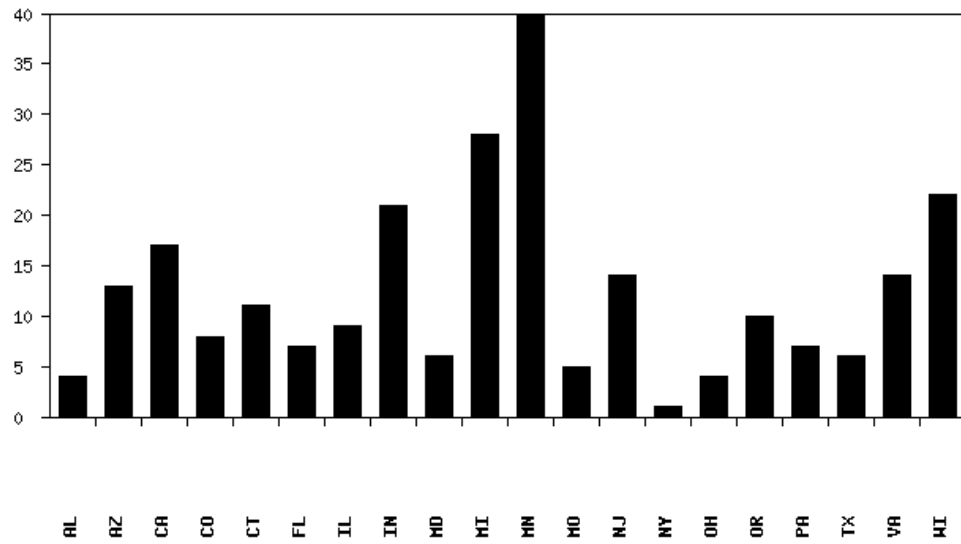
Results For: Table1							
<u>Customer</u>	<u>Salesperson</u>	<u>Ship Date</u>	<u>Telephoned</u>	<u>Product</u>	<u>Sales (\$ x k)</u>	<u>Relations</u>	<u>State</u>
Carls	Gray	02/07/1996	02/16/1996	Storage	19.76		AL
Carls	Wood	04/09/1996	04/12/1996	Storage	31.51		AL
RG Inc	Little	05/13/1996		Storage	3.17		AL
Carls	Bobb	01/17/1996	01/22/1996	Storage	1.10		AL
Sub-Totals for AL - count=4							
<b>Customer = 4</b>	<b>Salesperson = 4</b>	<b>01/17/1996 to 05/13/1996</b>	<b>12/30/1899 to 04/12/1996</b>	<b>Product = 4</b>	<b>55.54</b>	<b>Relations = 4</b>	<b>AL</b>

**Table 4B: Exploring Company Sales of Storage Products by State  
(Table has been truncated to show only Alabama sales.)**

### **TUTORIAL 5: GRAPHING OUTPUTS**

We begin by using “Back” on our browser to return to the Query Page. Leave the settings as they were, i.e. we will consider only Storage sales and use States as the Key Field and Sort Field. At the top right of the Query Page, we can leave unchanged the fact that the first four options beginning with Show grand total were checked

Go to the bottom of the page. The Chart Selection is at present set on Histogram. Let’s just leave it. Next hit the button called “Create Chart”. On the next screen where we are asked to Select Key Field, choose State and hit the Draw button. Below we display what we get as output:



**Table 5A: A Histogram of Storage Product Deliveries to Various States**

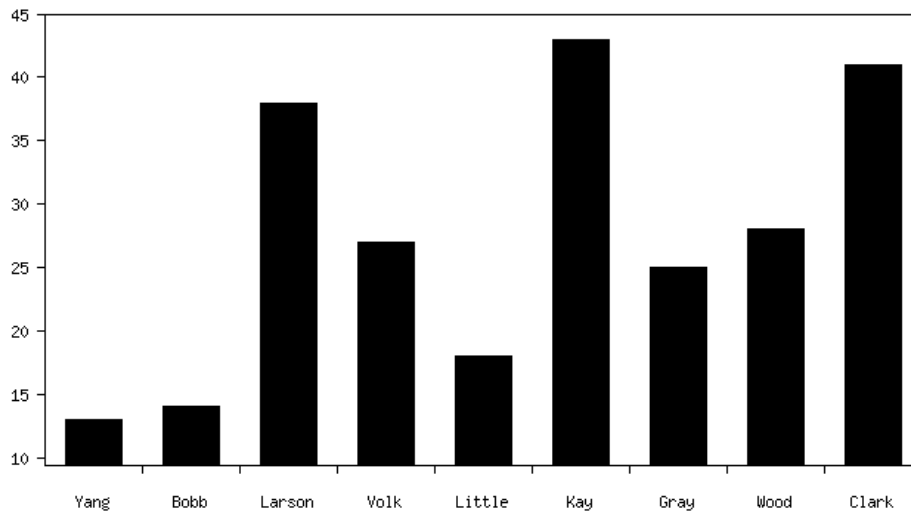
The Histogram lets us see very quickly where we have been making deliveries, i.e. which states are our best customers. The horizontal axes lists the 20 states to which the company delivers. The vertical axis lists how many shipments of the company Storage products were made to each State in the last year and a half.

### ***TUTORIAL 6: FURTHER ILLUSTRATIVE USE OF THE HISTOGRAM***

We will continue to study the capabilities of histograms. Next we make a simple change to the Histogram Page which can be done almost instantaneously, which is one of the attractions of working with **CRM.a**. The speed with which new results can be obtained encourages experimentation. Often the results are highly informative.

By using the pull-down menu, it is very easy to select Salesperson rather than State as the Key Field for the histogram. Our focus is still on Storage, which was the selection we made on the previous histogram. Our purpose is to see how the various salespersons performed in selling the Storage products. We then press the Draw button and get the chart shown below.

When it comes to selling Storage there appear to be three heavy hitters on the sales staff. We note that Larson, Clark, and Kay have all done extremely well in terms of numbers of sales made. Usually there will be an excellent correlation between number of sales made and revenues achieved. We have other ways of checking on this. Such sales productivity information is valuable for forward planning.



**Table 5A: Histogram Showing Performance in Selling Storage Products**

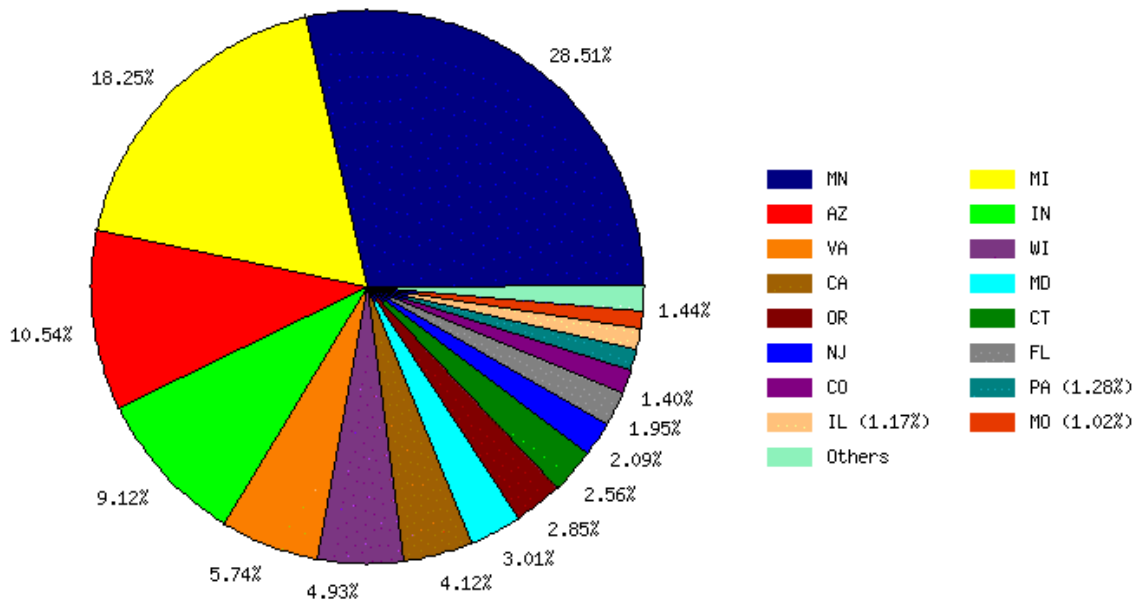
This figure suggests that it might be advisable to have certain salespersons concentrate on a particular one of the three product lines, which comprise Computers, Peripherals, and Storage. Clearly Larson, Clark, and Kay are candidates to focus on Storage Sales.

### TUTORIAL 7: PIE CHARTS

Using “Back” to return to the choice of chart, we can this time select Pie and hit Create Chart. The next screen asks us to select the Key Field and the Summary Field. Why not State and Sales? Hit “Draw” and get the chart shown below, which is in color. Note that we elected to show sales as percentages although we had the option of showing absolute numbers.

Obviously the Midwest is a source of strength for the company. Looking at the legend to the right of the Pie Chart, we see the States arranged in a left-right, left-right manner. Thus the biggest selling State -- Minnesota -- is listed top left. The next best customer State, Michigan, is to the right of it. Next is Arizona, which is not in the Midwest. But it is followed (on its right) by Indiana, which is. Then comes another exception, VA. Then back to the Midwest with Wisconsin.

Note how easy it is to select from the pull-down menu another Key Field. We chose State but there are several other choices that make good sense. Ship Date actually makes sense because it displays the performance month by month either as sales percentages or absolute sales dollars.

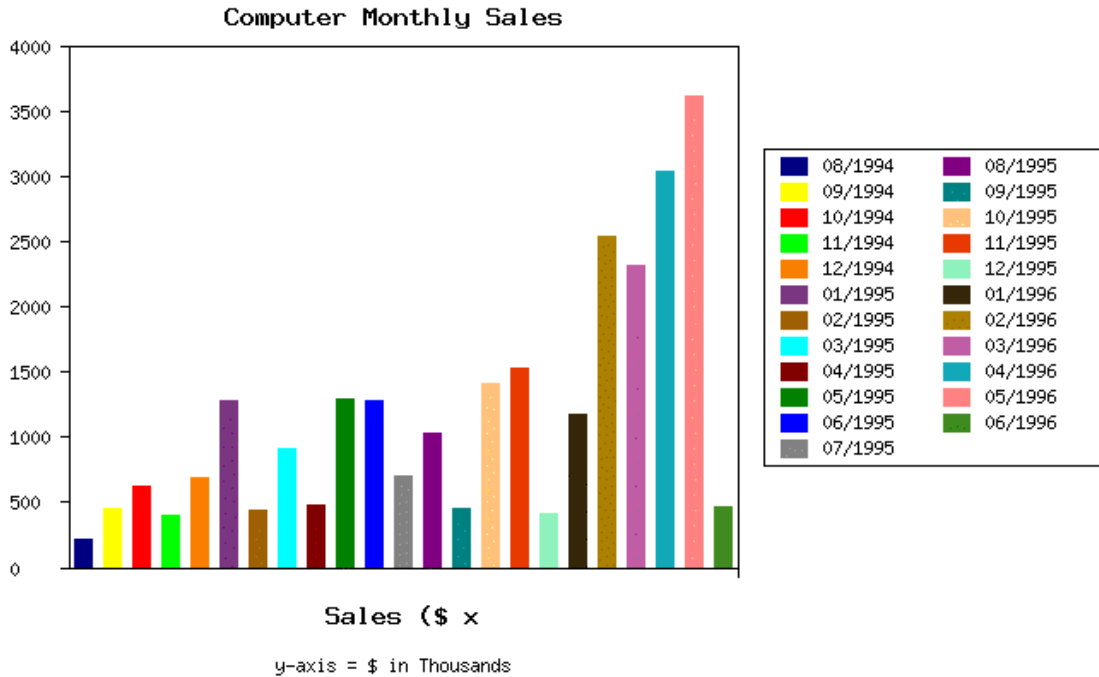


**Figure 7A: Pie Chart Showing Storage Sales by State**

### TUTORIAL 8: THE “COLUMN BAR” OUTPUT AND SUMMING BY MONTH

We want to see the capability of another way of presenting information, namely as a “Column bar”. We have the option of studying sales over time for the entire product line or of doing it for one product. Let’s look at one product in particular – computers, which we do by entering “computer” in product box on the Query Page. Next we will select a simple graphical way to review the sales results, month by month.

The reason for doing this is perhaps that our present interest is in the big picture, rather than the monthly sales down to the last penny. If so, the ability to perform addition automatically on all the invoices indicating shipments for successive months is very useful. Choosing the column bar display on the Query Page, we proceed and will get results immediately and in a format that is easy to grasp. We use Ship Date as the Key Field and Sales as the Summary Field and hit the “Draw” button. What we get is the following:



**Figure 8A: Column Bar Display of Monthly Computer Sales**

This presentation is most useful when the table is long, possibly consisting of tens of thousands of entries. Rather than look down a long table, we likely prefer to quickly and effortlessly get the overall picture without having to go to the Accounting Dept. for help. As illustrated, the database table to which we have access might consist of daily invoices for one or for several years. It is quite possible that the number of invoices numbers 100,000 or so.

Most people would prefer initially just one diagram that accurately describes the product’s performance over time. In this particular case, we have focused our attention on Computers, which is just one of the company products lines, the others being Storage and Peripherals.

Sales are increasing nicely early in 1996. Similar output diagrams for Storage and for Peripherals would enable comparisons for the purpose of deciding how to allocate R&D money and perhaps the sales budget.