

INTERACTIVE REPORTING Sales Analysis and Reporting Products

Administrator's Guide

INTERACTIVE REPORTING

Interactive Reporting Administrator's Guide

© Interactive Reporting Ltd., 2003 1 Great Island Enterprise Park • Ballincollig • Cork Phone +353-21-4850455 • Fax +353-21-4850454 • Web http://www.interactivereporting.com

Table of Contents

System Requirements	1
Installation	2
Default Username and Password	2
Configuration	
Mapping data-sources	
Create a new mapping	7
Delete a mapping	7
Database	7
Template	
DB String	8
Creating and Editing the mapping	
Choosing the invoice table	
Table	
SQL (Advanced users only)	
Mapping the Invoice transaction fields	14
Providing descriptive fields	
User Management	
Adding a New User	
System Management	
Settings For Emailing Reports	
Display Preferences	
Look and Feel	
Template	
Editing or Creating a Template	
Variables, Calculated Variables, and Lookups	
Importing a Template	
Exporting a Template	45
Cloning a Template	45
Deleting a Template	45
Installation & Removal	
Standalone Interactive Reporting	
Service Interactive Reporting	46
Performance Optimization	

Setting-up a Data Warehouse	. 49
Analyzing Other Types of Information	. 51
Sample.CSS	. 53

System Requirements

What you must already have...

ou must be using one of the following operating systems:

- Windows 98/Me
- Windows NT 4.0 Workstation
- Windows NT 4.0 Server
- Windows 2000 Pro
- Windows 2000 Server
- Windows 2000 Advanced Server
- Windows XP Pro & XP Home
- Windows 2003

Installation

Getting Interactive Reporting on to the system ...



Default Username and Password

The default user name is **demo** and the default password is **demo**

Configuration

Getting Interactive Reporting ready for use...

dministration of Interactive Reporting is performed via the administration console. To access the Admin section, click on the *Admin* link on the main IR login page as seen below.

ē	http	p://loo	alhost	:5050/ - 1	Micros	oft Inte	rnet Explo	orer		
	Eile	<u>E</u> dit	⊻iew	F <u>a</u> vorites	Tools	Help	Address	🕘 http://loca 💙	🔁 Go	
				Use i	demo (Plea Name Passw as the i	ase sig : ford: Login	password to l	og in.	
	A	Hel Adm	p in	•	Lir See	nk to Ac ction	dministrate	or		~

Figure 1

ogin with the default administrator password of **demo**.

🕘 htt	p://loo	alhos	t: 5050/ad	min/in	dex.as	p - Micros	oft 🔳	
Eile	Edit	⊻iew	F <u>a</u> vorites	Tools	Help	Address	🔁 Go	-
Administrator sign-in Password: Login								
		Use i	demo as t	he pas	sword	to log in.		
			Admir	nistrator	Manua	1		~
				Figu	e 2			

Once logged in the Administration options are available on the first page. Click on Mappings.



Figure 3

Mapping data-sources

For each database to be made available to the users, a mapping must be created. In the example below, a mapping (entitled 'Northwind') has already been created:

🕘 Mappings Maintenand	e - Microsoft Internet Explorer				
<u>File E</u> dit <u>V</u> iew F <u>a</u> vor	es <u>T</u> ools <u>H</u> elp				
Address 🙆 http://localhost	5050/admin/mappings.asp				💌 🔁 Go
					~
		Evaluation License			
Admin Home	Mappings Templates	Users System Sett	ings Look & Feel	Back To Report	Help
	T ,	Mappings Mainten	ance T 1 C I		
	Import	FIg	I rash Can Io	con	
Help Icon	Create New Mannie	Import Manning@	View Preset Mannings	Save as Pres	et
	<u>oreater tew Mapph</u>	ig - import happing -	view in eser mappings		
	Mappings 🔮	Template 🥙 Database 🧐	x		
	1 ! Northwind - De	<u>mo Sales</u> ir_northwind	🛛 🦉 <u>Clone</u> <u>Export</u> <u>Save as pres</u>	<u>et</u>	
		A			
	—	Ŧ			
		•			
	Te	mplate Link	Expor	t	
	Mapping Link		Clone		
					~

Figure 4

Each mapping is characterised by a user-friendly name and a database connection-string.

- Selecting the *trashcan* icon will delete the mapping from the list of those available.
- Clicking on the *Mapping Link* will allow the set up of the existing mapping to be viewed. This will also allow editing of the existing mapping if necessary.
- The *Template Link* will redirect the user to the associated template of the mapping in the Template section of Admin. Here alterations to the existing template can be made is so desired.
- Clicking on the *Clone* link creates a complete copy of the mapping. This is useful if the user has two very similar databases. Simply clone the first one and make the alterations to the second one.
- Clicking on *Import Mapping* results in the following new page (Figure 5) being displayed. Simply enter the path where the stored mapping is located or use the Browse button to locate the mapping if unsure of the destination path.

A Manning Import - Mit	rosoft Internet Evol	oror					
File Edit View Favo	rites Tools Help	0101					
Address 🚳 http://localhos	t:5050/admin/mapping imp	port.asp					💌 🛃 Go
Evaluation License Admin Home Mappings Templates Users System Settings Look & Feel Back To Report Import Mapping						<u>Help</u>	
Source file Browse							

Figure 5

- To export a mapping click on the *Export* link. This will cause a box to pop up on screen advising the user to save the associated template. This is important, as a mapping must have a template. If the associated template does not exists and an import of the mapping is applied, then the import will fail. After this pop up appears a second popup box appears allowing the user to save the mapping to their desired location.
- The *Save as Preset* link creates a preset of the associated mapping. This preset is stored in the *Database Type Field* of *Create New Mappings*.
- When the *Help Icon* is clicked a popup window appears with text relating to the queried item.

Create a new mapping

Click on 'Create New Mapping' to specify another mapping:

Create New Mapping - Microsoft Internet Explor	er	
Eile Edit View Favorites Tools Help Address	http://localhost:5050/admin/create_mapping.asp?action=add	💌 🔁 Go 🛛 🦓
<u>Admin Home Mappings Templates</u>	Evaluation License Users System Settings Look & Feel I Create New Mapping	Sack To Report Help
Name Ø		-
Description ⁰		
Template 🥝	Sales 💌	
Currency Symbol	Leave Blank to use Server Default	
Database Type 🧭	Access	
Database Connect	on	
⊙ DSN Ø	Data Source Username Password	
ODB String @		
	Save	
		~



Enter the name to be used for the mapping and a description of the mapping. Next choose the associated Template for the new mapping. Choose the database type, e.g. Oracle, Access, and SQL Server etc from the dropdown list in Database Type. There are two options available for the Database Connection. Click on 'DSN' to enter a broken down version of the DB sting, or click on 'DB Sting' and type the appropriate database connection-string (DB string). Finally click on 'Save'. If there is a problem, the user will be provided with a useful error message and given the opportunity to try again.

Delete a mapping

Simply click on the trashcan icon (see Figure 2.) next to the database connection-string of the appropriate mapping on the 'Mappings Maintenance' screen.

Database

Enter the type of database that is being used, e.g. Access, SQL Server, Oracle...

Template

Currently there are two standard templates available with Interactive Reporting, *Sales* and *Inventory*. These use a different set of internal tables. E.g. The *Sales* template will contain tables relating to Sales information. Templates can be created in the Template section.

Currency Symbol

Enter the currency symbol that the reports are to be displayed in. If this field is left blank it will pick up the default system currency symbol.

DSN

This gives a drop down list of the system (ODBC) data sources. Select one, and enter the username and password.

DB String

If an ODBC data source is used, then the user can set it up through the Data Sources or ODBC control panel. Here for the Database Connection String, if there is no password, just type in the name of the data source or ODBC connection. If there is a password then the user will have to enter the following.

```
DSN=NameFromControlPanel;UID=your_username;Password=your_pas
sword
```

NB: We advise the user to use the DSN set-up.

Alternatively, the setting up of the data source in the control panel can be skipped and one of the following used

- Access: PROVIDER=Microsoft.Jet.OLEDB.4.0; DATASOURCE=c:\mydatastore\mydatabase.mdb. This has been tested against Access 97,200,XP 2003.
- SQL Server: PROVIDER=sqloledb;DATA SOURCE=myServerName; INITIAL CATALOG=myDatabaseName; USER ID = myUsername;PASSWORD=myPassword. This has been tested against SQL Server 7,2000.
- Oracle: PROVIDER= OraOLEDB.Oracle; DATASOURCE = YourTNSName; USER = johns; PASSWORD = johns;

Database Notes

The following notes are to aid the user when installing the database with Interactive Reporting.

- Access: This has been tested against Access 97,200,XP 2003.
- SQL Server: This has been tested against SQL Server 7,2000.
- Oracle: This only works with the ORACLE ODBC Driver. Always use oracle drivers, not Microsoft. This has been tested against Oracle8i,9i and 10j.

INTERACTIVE REPORTING ADMINISTRATOR'S GUIDE

- Informix: The Informix CDSK must be installed to have access to the Informix Drivers. This has been tested against Informix 7.2.x
- MySQL: For *MySQL i*nstall MyODBC. Set-up an odbc Datasource in the control panel to the mysql database. This has been tested against MySQL 4,3.23

Creating and Editing a Mapping

To allow the data in the mapped data-source to work with Interactive Reporting, the user must map the appropriate tables and fields within the database to the template expected by Interactive Reporting. Interactive Reporting's Mapping Editor makes this a quick and painless task.

First make a clone of Northwind Demo. This will be the backup copy in case of error. Delete the original Northwind Demo.

Next click the *Create Mapping* link in the mapping section. The *Edit Mapping* screen will appear. Fill out the fields as shown below in Figure 6.

🕘 Edit Mapping - Microso	ft Interne	Explorer 📃	
Eile Edit ⊻iew Favorite	s <u>T</u> ools	Help 🕴 Address 💩 http://localhost:5050/admin/create_mapping.asp 💌 🛃 Go	1
<u>Admin Home M</u> a	ppings_	Evaluation License <u>Templates Users System Settings Look & Feel</u> <u>Back To Report Help</u> <u>Edit Mapping</u>	2
Name 🕝		Northwind - Demo	
Descripti	on 🕜	This is a mapping to the Northwind A Traders database.	
Template	0	Sales 💌	
Currency	Symbol	Leave Blank to use Server Default	
Database	Туре 🕜	Access	
Database	Connect	ion	
⊙ DSN		Data Source ir_northwind Username Password	
ODB St	ring 🕜		
		Save	
			\$

Figure 7

Click on the Save button when finished. The following page will then appear.



Figure 8

Assuming that the DB String is exactly what is required (otherwise click on 'Change' to update it), the user can map the appropriate elements on an invoice by clicking on the 'Invoice' link

Choosing the invoice table



Figure 9

The fields in the invoice transaction may be made visible by specifying either the SQL-table in which they are found or by specifying an SQL statement (make the choice using the radio buttons). In figure 9 the SQL option has been chosen.

Table

The drop-down list will contain the tables that are available in the data-source that the user previously mapped – select the one that corresponds to the main table for invoices/sales transactions.

If there are constraints to be imposed, these may be performed within the 'Where' field (using an SQL-syntax). For example, entering

'*invoice_transactions.qty=1*' would choose only those invoice entries where only a single item was sold.

SQL (Advanced users only)

If the information to encapsulate an invoice the user needed is not directly available within a single table (i.e. it either needs to be calculated or is split across several tables), an SQL statement may be entered, which directly extracts the information.

For example, if the system operates on the basis of price-codes, with a table provided for the lookup of the corresponding price, we may calculate the relevant price for each line on an invoice with the SQL statement:

SELECT *, price FROM pricecodes, invoice_transactions
WHERE invoice_transactions.pricecode=pricecodes.code

For the Northwind example use the following select statement.

SELECT 2.0 as currency_factor, [order details].UnitPrice AS unit_price, [Order Details].Quantity, [Order Details].costprice,Orders.CustomerID,Orders.EmployeeID, Orders.ShipVia,[Order Details].ProductID, Products. CategoryID,Products.SupplierID,Orders.OrderID,Orders. OrderDate FROM Orders INNER JOIN ([Order Details] LEFT JOIN Products ON [Order Details].ProductID = Products.ProductID) ON Orders.OrderID = [Order Details].OrderID

N.B. The user should use this mechanism to exclude voided transactions from any of Interactive Reporting's reports.

When finished, click on 'Next>>' to proceed.

Mapping the Invoice transaction fields

Now that the group of fields relevant to invoice transactions (often entitled Accounts Receivable) has been made available, the individual elements of an invoice must be mapped to Interactive Reporting's template.

Interactive Reporting makes provision for:

- *Category* the code for the item category
- *currency factor* If the data has multiple currencies, it will multiply the price and cost by this factor, to arrive at the final value to display. It helps aggregate financial data from different countries.
- *Cost* the unit cost of the item.
- *Customer* the code for each customer
- *Invoice_date* the date of the transaction
- *Invoice_number* the number/code of the invoice
- *Item* the code for the individual item
- *Price* the unit price for each item on an invoice
- *Qty* the number of a particular kind of item sold
- *Salesgroup* the sales group that this order relates to. This field ties into the sales group level security field under the individual user.
- *Salesrep* the id-code of an individual salesperson. This field ties into the sales initials security field under the individual user.
- *Custom1, custom2, custom3, custom4, custom5* These custom fields allow the user to analyse by other custom fields they might have in the data.

Additional fields may be added in the *Template* section of interactive reporting. This section also details how to apply mathematical equations and formulas to certain fields, e.g. Average_Inventory_Price\$=Sum (quantity * price/quantity)

N.B. *price* and *item* **must** be mapped into the Interactive Reporting template. All other fields are optional, but it is highly advisable to also provide a mapping for *cost* (to allow reports involving profit margin to be generated).

Below is the mapping-editor screen for field-mappings, where the *price* and the *item* have already been mapped (right side of the ->).



Figure 10

Certain linked values are highlighted and underlined, for example <u>EmployeeID</u>. This indicates that these values have child attributes which must also be mapped. To start to map these child values click on the underlined link. The following is the mapping of <u>EmployeeID</u>.

INTERACTIVE REPORTING ADMINISTRATOR'S GUIDE



Figure 11

Choose the Employees table from the drop down Table list. When next is clicked the following page appears. Map as is shown in Figure 11.



Figure 12

The **source** (e.g. the Northwind data-source's invoice_transactions table) fields are mapped to the **destination** (i.e. the Interactive Reporting template) fields by making the appropriate selections in the combo-boxes and clicking on the '<<Connect>>'.

In the example shown, the data-source's *CustomerID* field is about to be mapped to the Interactive Reporting *customer* field.

Invoice transaction fields that have been mapped are shown in the bottom portion of the screen, where a field mapping may be delete by clicking on the trashcan icon

If there are fields that are considered essential, but which are not included in the Interactive Reporting template, they can be mapped to one of the custom fields.

The Rename link allows the user to change the name. This is the name that will be seen in IR.

The Find box, if ticked, places a find icon next to the display box.

The *Visible* box, if ticked, results in this field being included in the generated reports. In this case, if an analysis were performed on customer, then one of the fields displayed in the generated report would be Cities.

The *Analysis* box, if ticked, allows the user to analyse by this field. In the above example, Cities would be included in the drop down menu in the *Analyze by* section of the main reporting page.

Display Type is associated with the filter section of the main reporting page. Choose from eight display types. Please note that if the display type *None* is chosen then *Filter Required* and the *Find* option are not applicable.

If the *Filter Required* box is ticked then a * appears on the main reporting form next to this value. This is to indicate that a value *MUST* be included in this field on the main IR page, for a report to be generated. If there is no value in this field then an error will appear.

Once the mapping has been completed, clicking on 'Finish' will save the changes in the system.

Providing descriptive fields

Below is the result of having provided mappings for *price*, *item*, *customer*, *currency_factor*, *invoice_date*, *invoice_number*, *salesrep*, *qty*, *cost* and *category*.

<u>File Edit View Fav</u>	orites <u>T</u> ools	Help Address 🕘 http://localhost:5050/admin/mapping_edit.asp? 🌱 🎅 Go	
<u>Admin Home Map</u>	pings <u>T</u> e	Evaluation License mplates <u>Users</u> System Settings Look & Feel Back To Report <u>Help</u>	<
	Map	ping Editor (Master Screen)	
	Name	Northwind - Demo <u>(Sone Export Save as preset</u>	
	Description	· · · · · · · · · · · · · · · · · · ·	
	Template	Sales	
	DSN	ir_northwind (Username=")	
	Database	Access Currency Symbol Server Default	
<u>Transactions</u>)		Supplier(Custom1) • Supplier(Custom1) • Supplier(Custom1) Combo Box • CompanyName->Description(description) currency_factor.>Currency Factor(currency_factor) unit_price->Price(price) Quantity->Qty (gty) costprice->Cost (cost) CustomerID->Customer (customer) • Customerers (Customer) • Customerers (Customer) • CustomerID->Cust ID (custon) • City->City (customer_custom1) EmployeeID->Sales Rep. (salesrep)	ant.
		Sales Rep (Sales Rep) EmployeeID->Rep # (salesrep) LastName->Name (salesrep_name) Region->Region (salesrep_customI)	
	•	ProductID->Item (item)	
		Item (Item) ProductID->Item (item) Multi-Select Combo Box ProductName->Description (description)	
	•	CategoryID->Category (category)	
		 <u>Categories (Category</u>) CategoryName->Description (description) CategoryID->Category (category) 	
	•	OrderID->Invoice No. (invoice_number)	
		<u>Validate & Save</u>	~

Figure 13

However, *Item, Supplier* and *category* have mapped only id/code-numbers and so are quite userunfriendly. Many databases will also provide tables to lookup descriptive names corresponding to id/code-numbers. One may provide the corresponding descriptions by clicking on the link appropriate to the field for which a description must be provided and then a mapping is made to the appropriate descriptive field (as above for the invoices).

For example, to associate a customer's name with the *customer* field that has already been mapped, click on the 'Customer' link and map the appropriate table:

http://localhost/salesbi Ele Edit View Eavorite	uddy/admin/mapping_edit1.asp?mapping_id=127&mapping=customer - Microsoft Internet Explorer	
Admin Home	IR - Internal Mappings Templates Users System Settings Look & Feel Back To Rep	ort <u>Help</u>
	Mapping Editor (1 of 2) Customers (customer) Mapping	
	⊙ Table Customers 🔮 ❷ Where	
	⊙ SQL 🖉 🖉	
	Filter Option Comba Box 🕑 🛛 Title Customers 🔮	
	<back next="">></back>	×

Figure 14

Here, the customer names are stored in the Sales data-source's 'Customers' table, so this must be selected.

The filter option drop-down allows specification of how this field will be exposed to users:

- Combo Box select one item from a scroll bar list
- *Combo Box* w/codes- select one item from a drop-down list, but shows the underlying code in the dropdown.
- *Multi-Select Combo boxes* select more then one item from a scroll bar list.
- *Multi-Select Combo Boxes w/codes* select more then one item from a drop down list and give the underlying code in the dropdown.
- *Multi-Select Combo boxes (w/ o All)* select more then one item from a scroll bar list but does not have the *ALL* option in the list.

- *Multi-Select Combo Boxes w/ codes (w/ o All)* select more then one item from a drop down list and give the underlying code in the dropdown but does not have the *ALL* option in the list.
- *Text Box* type the appropriate customer id
- *None* not visible

Optionally, the user may edit the title of the mapping – this is appropriate generally only in the case of a mapping to one of the custom fields.

One may enter an optional *Where* condition for the table or even select the information using an SQL statement.

<u>Eile E</u> dit <u>V</u> iev	v F <u>a</u> vorites <u>T</u> ools <u>H</u> elp				
🕁 Back 👻 🔿	- 🙆 🛃 🚮 😡 Search	📓 Favorites 🛛 🍏	🖪 • 🎒 🕅 • 🗐 😽		
Address 🙆 http:	://sir/admin/mapping_edit2.asp	?mapping_id=94&maj	oping=customer	▼ 🖗 Go	Links »
	<u>Mappings</u> <u>Users</u>	System Sett	ings Look & Feel	Home	<u> </u>
	Ma Cu	pping Edi stomers (custor	tor (2 of 2) ^{mer)} Mapping		
	Source CustomerID ContactName ContactTitle Address City Region PostalCode Country Phone Fax	< <connect< th=""><th>Destination custon customer_custom1 customer_custom3 customer_custom4 customer_custom5 description</th><th></th><th></th></connect<>	Destination custon customer_custom1 customer_custom3 customer_custom4 customer_custom5 description		
		< <back< td=""><td>Finish</td><td></td><td>×</td></back<>	Finish		×
) E Done				🔠 Local intranet	

Clicking 'Next>>' to map the descriptive field, we get:

Figure 15

The *Source* Field contains a list of all the field names in the table selected on the previous screen. If an SQL option was used instead of the table option then the list contains the entire field names used in the *Select* part of the SQL statement.

The *Destination* Field contains a list of all the Interactive Reporting field names associated with the table selected on the previous screen. For the more common field names such as

Name and ID, Interactive Reporting provides set names to connect to. There are also a number of custom fields that may be used for the less commonly used fields.

Here, we must simply associate the relevant id/code-numbers with each other, along with the relevant descriptive field (which will always have a destination name of *description*). Both the id/code-number field and the description field must be mapped.

To connect a field from the source box to the destination box simple click on the value to be connected in each box and then press the connect button.

Note: A Destination value may be connected to only *ONE* Source value but a Source value may have multiple Destination values connected to it.

For the customer mapping in our Sales example, we connect *CustomerID* with *custno*, CompanyName with description and City to customer_custom1.



Figure 16

Once a source item and a destination item have been linked the result appears at the bottom of the screen. Associated with the new connection is a list of data that deals with the appearance of the data on the main screen. The data is as follows

- 1. The <u>Rename</u> feature allows the user to customise the Destination name to make it more intuitive when it appears on the main screen.
- 2. The Trash Can icon deletes the connection.
- 3. The Visible Box feature allows this value to appear in the generated report when the box is clicked.
- 4. The Find Box feature places a *find icon* next to the value. This allows the user to search for the value.
- 5. When the Analyze Box is clicked this value is then placed in the *Analyze* drop down menu.
- 6. The <u>Text Box</u> has eight options The options are:
 - Text Box Field has a text box to enter value.
 - Combo Box Field has a drop down menu with values.
 - Combo Box w/codes Field has a drop down menu with values and codes in parenthesis.
 - Multi-Select Combo Box Field has a drop down menu with values. More then one value may be selected.
 - Multi-Select Combo Box w/codes Field has a drop down menu with values and codes in parenthesis. More then one value may be selected.
 - None Field does not appear in the Main Screen.
 - Multi-Select Combo Box (w/o ALL) Field has a drop down menu with values. More then one value may be selected. *ALL* is not included at the top of the list.
 - Multi-Select Combo Box w/codes (w/o ALL)- Field has a drop down menu with values and codes in parenthesis. More then one value may be selected. *ALL* is not included at the top of the list.

Clicking on 'Finish' returns us to the Mapping Editor's master screen, where the association we have just made is now visible:

<u>File E</u> dit <u>V</u> iew F <u>a</u> ve	orites <u>T</u> ools	Help Address 🗃 http://localhost:5050/admin/mapping_edit.asp? 🛩 🌄 Go	-				
Evaluation License Admin Home Mappings Templates Users System Settings Look & Feel Back To Report Help							
	Mapping Editor (Master Screen)						
	Name Description	Northwind - Demo <u>Cone Export Save as preset</u>					
	Template DSN	Sales ir_northwind (Username=") Change					
	Database	Access Currency Symbol Server Default					
• Invoice (Invo Transactions) Users will select customers from a combo-box	ice/Sales	OrderDate->Sales (invoice_date) SupplierID->Supplier (customI) • Supplier (CustomI) • CompanyName->Description (description) currency_factor->Currency Factor (currency_factor) unit_price->Price (price) Quantity->Qty (gty) costprice->Cost (cost) • CustomerID->Customer (customer) • Customers (Customer) • CustomerID->Customer (customer) • CustomerID->Cust ID (custon) • City->City (customer_customI) EmployeeID->Sales Rep. (salesrep) • Sales Rep (Sales Rep) • LastName->Name (salesrep_name) • Region_Pastore (salesrep_name) • Region_Pastore (salesrep_name)	in the second				
		Region->Region (satesrep_custom1) ProductID->Item (item)					
		<u>Item (Item)</u> ProductID->Item (<i>item</i>) Multi-Select Combo Box ProductName->Description (description)					
Click when finished	•	CategoryID->Category (category) • <u>Categories (Category)</u> • CategoryName->Description (description) Comdo Box • CategoryID->Category (category) OrderID->Invoice No. (invoice_number)					
		Validate & Save	~				

Figure 17

When the mapping process is completed it is essential to click on the 'Validate and Save' link to verify the integrity of the mapping and store it.

N.B. To verify that the user have accurately mapped the invoice transaction fields, they should validate some of Interactive Reporting's reports against existing reports.

User Management

Controlling user access...

A ccess to Interactive Reporting is managed through user accounts (much like the accounts that operate at system-level). Clicking on 'Users' - after following the administrator sign-in procedure (as above) - brings the user to the following page:

Ę	Use	r Maiı	ntenar	ice - Micro	soft	Internet	Explorer					
	Eile	<u>E</u> dit	⊻iew	F <u>a</u> vorites	Tool	s <u>H</u> elp	Address	Attp://localhost:50)50/admin/use	rs.asp	💌 🔁 Go	-
	A	dmii	<u>1 Ho</u>	<u>me</u>	Ma Lo	apping ok & F J	Evah <u>s]</u> Feel User N	uation License Cemplates Back To Re Iaintenanc	<u>Users</u> e <u>port</u> e	<u>Sys</u> <u>Help</u>	stem Settings	8
				Login	0	Current	Logins 🕜	# Logins ^② (since 3/3/2004)	Full Name	0		
				jblog	ggs	())	0	0	Jim Blo	ggs Ø		
				demo	<u>2</u>		0	352	Joe Blo	ggs Ø		
				dem	<u>51</u>		0	0	QCL U	ser 🛛		
					Ado	l New	<u>User</u> ø	<u>Reset login</u>	i counter	0		X

Figure 18

This screen lists those accounts already created (in the example above, three users has been created (e.g. *Joe Bloggs* with login *demo*). A user may be removed from the Interactive Reporting system by clicking on the trashcan icon, or his details may be edited by clicking on his login.

Current Logins contains an online record of those users currently logged in to the user side of Interactive Reporting. The record also indicates how many users are currently using a specific account.

#Logins contains a record of how many times a user has logged into the system on with the user or the administrator side since the date indicated at the top of the field. To reset, simply click on the *Reset Login Counter* link. This will also update the date at the top of the field.

Adding a New User

A new user may be added by clicking on the 'Add New User' link (in the example below, we're adding user 'Buchanan):

🚰 Add new user - Microsoft Internet	Explorer	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>F</u>	telp 🕴 Address 💩 http://localhost:5050/admin/user_edit.asp?action=a 🗙 🎅 Go	A
<u>Admin Home Mapr</u> Look	Evaluation License <u>bings Templates Users System Settings</u> <u>& Feel Back To Report Help</u> Add new user	
Login-Name Ø	buch	
Password		
Full Name	Buchanan	
User Key [©] 05	Secondary User Key	
Group Key [®]	If you don't use groups, you can ignore this	
Access Level 0	Restricted to User Key	
Logon Domain@	Subnet 0.0.0.0 (All)	
Mapping 🛛	All	
	Update	
1		~

Figure 19

Click when finished

Associated with each user are the following attributes:

- Login the login-id the user is assigned
- Password the password that the user needs to gain access to Interactive Reporting
- *Full name* the user's full name (or a descriptive name for the account)
- User Key this is used for security purposed. By entering a numeric user key here, and selecting access level to **Restricted to User Key**, it will create a customized view of the data. The data will be restricted to the information associated with the user key. The field associated with this restriction is set in the template section. For example, say that this value in the template section has been set to salesrep. In Northwind, the salesrep have a numeric value associated with them which can be seen by using the 'combo boxes with codes' option on the filters. By entering this value in the User Key field, and setting the access level to **Restricted to User Key**. Interactive Reporting will create a customized view of the data. This enables sales representatives to analyse their own sales information without being privy to other sales reps' information. In the above example, when the user Buchanan logs in to IR, he will only see sales data related to him. This is because the User Key is set to 05 and the Access level is set to Restricted to User Key.

- Secondary User Key In some cases the User Key alone is not sufficient to chose a specific individual or item. In this case a secondary key may need to be used. Simply place the numeric value in the Secondary User Key field and set the access level to **Restricted to Secondary User Key.** Proceed as in the User Key scenario. Again the field associated with the numeric value is set in the Template section.
- *Group Key* The Group Key field is used in conjunction with the Access level field as a security measure. Group Key contains the numeric value of the group with which the user wishes to restrict viewing. In our example it would be the salesrep group to which the user belongs (set in Template Section). When **Restricted to User Key** is selected in the Access Level field the user will be restricted to seeing information for that specific salesrep in that specific group only.
- *Access level* level of access that the user is permitted. There are 4 different levels
 - *Restricted to User Key* The user is restricted to the value in the User Key field. This key could be used for sales rep, suppliers, buyers or even customers.
 - Restricted to Secondary User Key The user is restricted to the value in the Secondary User Key field. This key could be used for sales rep, suppliers, buyers or even customers.
 - *Restricted to Group Key* The user is restricted to only seeing the information related to the Group Key. This would be appropriate for giving a Sales Manager access to analysing the information just in their own group.
 - *Full Access* The user has full access to view all financial data that has been mapped. This would be appropriate for a CEO or CFO.
- Login Domain this is the IP address that the user is restricted to. Leave blank to allow access from anywhere.
- *Subnet* This allows the administrator to control the IP address range from which the user can access the site from. This ranges from login on from a specific IP address, a range of IP addresses or any IP address. The five levels are
 - No Restriction User can log in from anywhere in the subnet.
 - Class A Restriction- (255.0.0.0)- If the 'Login Domain' is set to 4.5.6.7 and the Subnet is set to 255.0.0.0(ClassA) then this means that the user can log in from machines whose IP address start with 4 The final three digits in the IP address may range from 000-255.
 - Class B Restriction- (255.255.0.0)- If the 'Login Domain' is set to 4.5.6.7 and the Subnet is set to 255.255.0.0(ClassB) then this means that the user can log in from machines whose IP address start with 4.5 The final two digits in the IP address may range from 000-255.
 - Class C Restriction (255.255.0)- If the 'Login Domain' is set to 4.5.6.7 and the Subnet is set to 255.255.255.0(ClassC) then this means that the user can only

log in from machines whose IP address start with 4.5.6. The final digit in the IP address may be from 000-255.

- *Full Restriction or Exact* The user may only log in from machine whose IP address is set to 4.5.6.7
- *Mapping* the data-source mapping with which the user is allowed to work (alternatively, access may be granted to *all* data-source mappings)

When finished, click on 'Update' to add the new user to Interactive Reporting.

System Management

Changing Interactive Reporting settings...

ssociated with Interactive Reporting are a number of settings which facilitate its operation. Clicking on 'System Settings' - after following the administrator sign-in procedure (as above) – redirects the user to the following page:

- ,			
<u>File E</u> dit <u>V</u> iew F <u>a</u> vo	orites <u>T</u> ools <u>H</u> elp Ad	dress 🕘 http://localhost:5050/admin/syste	m_settings 💙 🎅 Go 🛛 🧗
Admin Home Mapp	Evo ings Templates Us	uluation License ers <u>System Settings</u> Look & Fee Help	1 Back To Report
	Syst	em Settings	
			-
	Administrator Password	••••	Ξ.
	Session Timeout	120 minutes 📀	
	Default Start Date	01/01/2003 💷 🏼 📀	
	Default End Date	31/12/2003 📴 🌒	
	Year Start	January 🖌 🕜	
	Week Start	Sunday 💙 🔮	
	Settings For Emailing	g Reports	
	Email Source	john@interactivereporting.ne 3	
	SMTP Server	mail.interactivereporting.net 3	
	SMTP Port	25	
	URL to Sales Buddy	http://localhost:5050/	
	Email Problem Reports	john@interactivereporting.ne 3	
	Display Preferences		

Figure 20

System-settings is divided into three sections, the General section, the Email section and the Display/Licensing section. The following are a list of those items that appear in the general section:

- *Administrator* password the password required to access administration functions (the default is *demo*)
- *Session Timeout* If there has been no activity on the Interactive Reporting site for the duration specified by the administrator then the user is automatically logged out and the screen returns to the log in page.
- *Default Start Date -* The start date that will appear by default on the main IR page.
- Default End Date The end date that will appear by default on the main IR page.
- *Year Start* This setting allows the administrator to set the start date of the financial year. For example, if the accounting financial year starts in July, when the user analyses by year, it will use July-June as the period to measure.

Settings For Emailing Reports

The system-settings available for modification in the Email section are:

- *Email Source* When sending an email it is customary to have a reply address. When the user requests a report to be emailed to him, the address provided in Email Source field will be the reply-to address of the email.
- *SMTP Server* This field contains the address of the SMTP server to use.
- *SMTP Port* This field specifies the port number, usually port 25, to be used by SMTP on the SMTP Server.
- URL to Interactive Reporting This field contains the HTTP path to the Interactive Reporting web server.
- *Email Problem Reports* When an error occurs when emailing a report, it is important that an Administrator is contacted to rectify the problem. The field Email Problem Reports contains the email address that the system will automatically use if an error of this nature occurs.

Eile Edit View Favorites Iools Help Address	s 🕘 http://localhost:5050/admin/sy	/stem	_settings 💙 🔁 Go 🛛	1
Display Preferences				^
Threshold colouring	12 %	0		
Number of Digits	0	0		
Default comparison method	Change 🖌 🖌	0		
Default ordering method	Code 💌	0		
Filter value ordering	Description 💌	0		
Filter value search-type	Case-Sensitive 💌	0		
Max. number of rows	5000	0		
Max. number of columns	100	0		
Background image filename		0		
License Key	Zifsk3cFiv4CuUpEsWqFPLxj	0		
Customer Company Name	Evaluation License	0		=
Default Font Size	+0 🔽	0		
[[[Jpdate			
				~

Figure 21

Display Preferences

The system-settings available for modification in the Display section are:

- Threshold Colouring This will flag stuff below a certain margin % in red
- *Number of Digits* The number of digits to display the Quantity field to.
- Default Comparison Method This setting is used for the Volume and Margin values in the Comparison Reports. The method can be set to actual *change* or *percentage change*. *Percentage Change* shows the difference of the volume and the margin as a percentage while *Change* show the actual difference.
- *Default Ordering Method* this value indicates the default ordering to use when a report is generated. It has two options by which to order the columns: Code or Description.
- *Filter Value Ordering:* This value indicates the default for the *Order By* dropdown when the user initially logs-on to Interactive Reporting. It has two options: to order by *Code* or *Description*.
- *Filter Value Search-Type:* The find box (appears on the find screen when the find icon is selected) in the filter section of IR uses this value. If this is set to *Case-Sensitive* then all case sensitive boxes when searching for a value default to Case-Sensitive and a tick appears in the case-sensitive box.

- *Max no. of Roms* This specifies the number of rows, which can be displayed. If there are more rows generated then this number then an error appears advising the user to modify their search criteria.
- *Max no. of Columns* This specifies the number of columns, which can be displayed. If there are more columns then this generated in a report then an error appears advising the user to modify their search criteria.
- *Background Image Filename* This allows specification of an image to use as a background. **The image must be in the images/ directory**.
- *License Key* This field is used to update the database with the alphanumeric license key. This unique key will be issued to the user by Interactive Reporting or by the reseller, either for evaluation purposes or on purchase of the product.
- *Customer Company Name:* This field is needed for the licensing of Interactive Reporting. This field value must match that given to Interactive Reporting or to its representative.
- *Default Font Size:* The default font size sets the font for the text in the generated reports. There are five options to choose from ranging from +2 to -2. The default option for this is 0.

When finished, click on 'Update' to store the changed settings to the Interactive Reporting system. For some of the changes to appear on the main Interactive Reporting page it may be necessary to shutdown and restart IR.

Look and Feel

How to customize the header and footer and to put a custom specified corporate look and feel on it.

By selecting custom Look and Feel from the System Setting, the user can then go to the Look and Feel screen and enter custom HTML for the top and bottom of the Interactive Reporting screen.

Current Templates will contain a number of pre-designed *looks* for Interactive Reporting. Simply choose a template and press Update to implement this new *Look and Feel*.

<u>E</u> ile <u>E</u> dit ⊻iew	Favorites	Tools	Help					
Mar	opings_	<u>Us</u>	ers	Interactive Reporti System Settings Look &	ng (Internal) Look & Feel Feel	Home	Help	<u>*</u>
Current Template	Interactive	Report	ting2 💌					
Custom Lo	ook & F	eel 📀						
Header								
	<u> </u>							
Footer								
								-
CSS Style Sheet ^②	<br BODY (ba A:link (A:visite	ackgro [color ed {co	und: # :#eeee	∮7fff00) eee) ∮765424)				1
sample.css	H1 (font H2 (font	-size	: 24pt : 18pt	; font-family: aria ; font-family: brag	l) gadocio)			•
				Update				
								•
5]							🚰 Local intranet	/

Figure 22

To create a customized design then

- 1. Click on the Design My Own field in the Current Template drop-down menu.
- 2. Enter the customised HTML header design details in the *Header* Section. Another web server must serve any images referred to in the html.

- 3. Enter the customised HTML footer design details in the *Footer* Section.
- 4. Enter the customised style sheet in the CSS, or the Cascading Style Sheet section.

A sample CSS file is provided to aid the creation of customer specific designs. To view this, simply click on the link. The File SAMPLE.CSS can also be found in Appendix D at the end of this document

Template

How to easily create a new template or copy an existing template.

Interactive Reporting allows the user to easily modify database criteria, without having to deal with database tables or forms, by using the *Template* editor.



Figure 23

Template contains a list of all available templates in the system (Figure 24). A template must be created for each database that is to be made available to the users. Each template is characterised by a user-friendly name and a description. When a new template is created the Template list is automatically updated.

The template name is also used to show the details of the template. By clicking on the template name the *Template Editor* page appears which allows the user to view or edit this data.

The *Export* feature allows a template to be exported to another machine or simply saves the template to another directory.

The *Clone* feature is one of Interactive Reporting most powerful tools. To create a second template of a mapping clone the first template and make alterations to this clone, this saves time in creating a new template and also reducing the testing time.

Eile Edit Vier	w F <u>a</u> vorites <u>T</u> ools	Help 🕴 Address 🍓 http://localhost:5050/admin/schemas.asp 🛛 🎦 Go 🧤
		Evaluation License
<u>Admin Home</u>	<u>Mappings</u>	<u>Templates Users System Settings Look & Feel</u> <u>Back To Report Help</u>
		Templates
	Crea	ite New Template ² Import Template ²
	Templates 🕜	Mappings 🕐
	1 Inventory 🖗 Bapo	<u>rt clore</u> No Related Mappings
	2 <u>Sales</u> @ <u>Baport</u> Clo	Northwind - Demo Go To Mapping
2		

Figure 24

Under the *Mappings* heading the user will find a list of mappings associated with each template. To go to a specific mapping related to a template select the mapping from the drop down list and press the *Go to Mapping* button.

The *Create Template* feature allows the user to easily create a customer specific template. To do this, click on the link to the Create Template pages.

The *Import Template* feature allows an existing template to be imported from outside the database. E.g. from the web, or a different database. Clicking on the link will redirect to the Import Template pages.

Editing or Creating a Template

The page *Template Editor (Master Screen)* enables the user to create a new template or modify an existing one. To enter this page click on an existing template. If this is an existing template then there will be a list of data in this section. To alter or add to this data simple click on the relevant underlined blue text.

Ele Edit View Favorites Tools Help Address Address Address Address Address Address Address Address Address Add Variables Add • Variables Add • Ø sost • Ø sot • Ø s
 Template Editor (Master Screen) Name Sales Provi Cone O Description Invoice/Sales Change Principal Table artran Variables Add Invoice/Sales Change Principal Table artran Variables Add Invoice/Sales Change Principal Table artran Variables Add Invoice/Sales Change Principal Table artran Calculated Variables Add Invoice/Sales Change Principal Table artran Invoice/Sales Principal Table artran Calculated Variables Add Invoice/Sales Change Principal Table artran Invoice/Sales Change Principal Table artran Clause Add Invoice/Sales Change Principal Table artran Invoice/Sales Principal Table artran Invoice/Sales Principal Table artran Invoice/Sales Principal Table artran
Name Sales Provides/Sales Description Invoice/Sales Change Principal Table atran • ♥ gty • ♥ gty • ♥ cost • ♥ price • ♥ price • ♥ currency_factor • Calculated Variables ● Add ▲ dd ▲ ♥ ● Qty=Sum (qty) ▲ dd ▲ ♥ ● AvgCost5=Weighted Sum (qty*cost*currency_factor/qty)
 Variables Add g gty g cost g price g currency_factor Calculated Variables Add G Qty=Sum (qty) G Avg Costs=Weighted Sum (qty*cost*currency_factor/qty)
 Avg Price\$=Weighted Sum (qty*price*currency_factor/qty) Total Costs\$=Sum (qty*cost*currency_factor) Total Sales\$=Sum (qty*price*currency_factor) Profit\$=Sum (qty*price*currency_factor-qty*cost*currency_factor)
 Lookups Add (a tem (description, item, item_custom], item_custom10, item_custom2, item_custom3, item_custom4, item_custom5, item_custom6, item_custom7, item_custom3, item_custom9) (a tegory (category, description) (a tegory, description, tegory, tegory, description, tegory) (a tegory, tegory, description, tegory) (a tegory, tegory, description, tegory) (a tegory, tego

Figure 25

The first section contains the details pertaining to the set up of the template, i.e. Template Name, Template Description etc. Clicking on the *Change* button will allow the user to alter this data if necessary. See Figure 25.

There are two types of edit available, the simple and the advanced. To see the advanced details simply click on the advance feature.

🗿 Edit Schema - Microsoft Internet Explorer		
<u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp	dress 💩 http://localhost:5050/admin/schema_edit_name.asp?action=edit	t&sche 🚩 🛃 Go 🛛 🧗
<u>Admin Home Mappings 7</u>	Evaluation License <u>Femplates Users System Settings</u> <u>Back To Report Help</u> Edit Template	Look & Feel
Name 🛛	Sales	
Description Ø	Invoice/Sales > Transactions	
Principal Table Ø	artran	
	▲ Advanced ▼	
	Save	
<u></u>		\$

Figure 26

Naming conventions are important when creating a new template. Try to make the *Name* as user friendly and descriptive as possible. This name will appear in the Administration Templates section as well as in the drop down menu in the Edit Mapping page. *Description* reveals what type of information the template contains.

🗿 Edit Schema - Microsoft Internet Explorer 📃 🗖 🔀								
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools	Help 🕴 Address 🗃 http://localhost:5050/admin/schema_edit_name.asp?action=edit&schema_type_id=1&r 💙	🔁 Go 🛛 🥂						
Admin Home Mappin	Evaluation License ngs <u>Templates Users</u> <u>System Settings</u> <u>Look & Feel</u> <u>To Report</u> <u>Help</u>	Back						
	Edit Template							
Name 0	Sales							
Description 🛛	Invoice/Sales > Transactions							
Principal Table 🛛	artran							
	▲ Advanced ▼							
Default Analyze By 10	salesrep Restricted Analyze By 1 ⁽²⁾ customer	~						
Default Analyze By 2 🤨	customer Restricted Analyze By 2 Category	~						
Default Analyze By 3 🔮	category Restricted Analyze By 3 item	~						
User Security ⁰	salesrep 💌 Secondary User Security 0 💌							
Group Security®	salesgroup 💌							
	Save							
		>						

Figure 27

- The *Default Analyze by 1* field is the default field of *Analyze by* in the Interactive Reporting home page, when the user has been granted **full access**.
- The *Default Analyze by 2* field is the default field of the first *Then By* drop down list in the Interactive Reporting home page, when the user has been granted **full access**.
- The *Default Analyze by 3* field is the default field of the second *Then By* drop down list in the Interactive Reporting home page, when the user has been granted **full access**.
- The *Restricted Analyze by* field are similar to the *Default Analyze by* fields. These are the values used if one of the fields in the *Default Analyze by* is restricted due to user, secondary or group security field settings of a user. These are used when the user has been granted any other access other then full access.
- The *User Security* field determines at which level data will be displayed in the report. For example, set this value to salesrep. If a users access level is set to **Restricted to User Key** in the user section and they log into IR then only the data related to a particular sales representative would be shown at the report.
- The *Secondary User Security* field determines at which level data will be displayed in the report. For example, set this value to custom1. If a users access level is set to **Restricted to Secondary User Key** in the user section and they log into IR then only the data related to a particular supplier would be shown at the report.
- The *Group Security* field determines at which level data will be displayed in the report. As an example, if Group Security has been assigned to salesgroup only the data related to a sales group will be shown at the report if the users access level is set to **Restricted to Group Key**. If this field is mapped to a value and the users access level is set to either 'restricted to user key' or 'restricted to secondary user key' then the value in the group key section of the user acts as a second restriction. For example, if Group Security is set to salesgroup, and User Security is set to salesrep in the template, and in the user section, user Buchanan User key field is set to 5 and the Group Key set to c, then when Buchanan logs in his data is restricted to salesrep 5 in salesgroup c. If salesrep 5 belongs to a different group then no data will be shown.

Variables, Calculated Variables, and Lookups

The second section of the main template page contains the actual template data. When a new template is created this section contains only the empty lists of *Variables*, *Calculated Variables*, and *Lookups*.

The terms of the *Variables* list correspond to a number or currency variable. They are used for the evaluation of the Calculated Variables. The Name field may *not* be left blank. They Type field contains one of two values, *Number* or *Currency*. These values appear in the 'Destination' section of a mapping.

Edit/Add Numbers - Microsoft	Internet Explorer	
<u>File E</u> dit <u>Y</u> iew F <u>a</u> vorites <u>T</u> ools	Help	A
	IR - Internal	^
Mappings Users	System Settings Look & Feel Schemas	<u>Home Help</u>
	Edit Number	
ど Done		Second intranet

Figure 28

By clicking on the Advanced feature more options become available.

🗿 Edit/Add Numbers - Micro	Edit/Add Numbers - Microsoft Internet Explorer									
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u>	ols <u>H</u> elp									
	IR - 1	Internal			^					
<u>Mappings</u> User	s System Settings	Look & Feel	Schemas	Home	<u>Help</u>					
	Edit M Name Ø que Type Ø Nu	Number			Ш					
	Default Value	anceu]							
	Redmea	Yes Y			_					
	S	ave			~					
E Done				Second Second	intranet 🛒					

Figure 29

The *Default Value* should be either blank or numeric. The *Required field* determines whether a mapping is required for the particular Variable. It can accept only two values, either 'Yes' or 'No'. If 'Yes' is chosen the variable will need to be mapped in the principal table.

The *Calculated Variables* are the quantities that appear in the report, e.g. in Analyze, in the drop downs next to Pivot or Chart. In the right-hand-side the formula that produces the calculated variables is displayed. These values are not seen in the mapping section. Rather, these quantities

use the values from the Variables section in calculations. A calculated variable will only be seen in a report if the variables used in its equations have been mapped in the associated mappings.

🗿 Edit/Add Measu	ires - Microsoft Internet Ex	plorer	
<u>.</u> Eile <u>E</u> dit ⊻iew	Favorites <u>T</u> ools <u>H</u> elp	ddress 💩 http://localhost:5050/admin/schema_edit_measure.asp?error_foun 💌 🔁 🤇	50 🥂
<u>Admin Home</u>	<u>Mappings</u> Ad	Evaluation License <u>Templates Users System Settings Look &</u> <u>Back To Report Help</u> Id Calculated Variable	<u>Feel</u>
	Title ⁰	Quantity	
	Туре 0	Number	
	Count 🔽 🕐	Qty	
		▲ Advanced ▼	
	 ✓ Order By Ø ✓ Detail Report Ø ✓ Comparison Rep ✓ Charting Ø Font Color Ø 	 □ Top/Bottom Order By Ø □ % of Total Ø port Ø □ Comparison Delta Ø ☑ Pivot Report Ø ◎ ₩ Font Size Ø ▼ Font Style Ø ▼ Save 	
			V

Figure 30

Here, in figure 30, we have a Simple and an Advanced option. The simple view contains *Title*, *Type* and *Sum* fields. All other fields are contained in the Advanced section.

- The *Title* field cannot remain blank. Valid Titles can begin only with **text**, and they can contain only **text**, **numbers** or the **underscore** (_). The Title should be unique.
- In the *Type* field the Calculated Variable may only be Number, Currency or Percentage Type.
- The *Count* field gives the numerator and the denominator (if any) of the function that constitutes the Calculated Variable. The sub-fields of the numerator can be numbers, mathematical expressions, and/or functions of Variables. If a field does not exist in the Variables list, then the numerator is invalid. The denominator can be left empty, or it can be a number, mathematical expressions, and/or functions of Variables, in a similar fashion as the numerator. Care should be taken not to have the denominator equal to 0.
- The *Order By* field gives the possibility of ordering by the particular Calculated Variable in the report. If checked, the Calculated Variable will appear in the drop down list of Order By in the Interactive Reporting home page.
- *Detail Report*, if checked, will allow the value to appear in the detailed report (the final generated document after all drilldowns).

- The *Comparison Report* field allows a comparison of the Calculated Variable to be performed. If Comparison Report is checked, the Calculated Variable will appear in the analysed data by the Comparison report. For example, if this box is active for Qty, then there will be a Qty field in both date sections of the comparison report.
- The *Charting* field allows the Calculated Variable to be investigated by the Chart option of the report. If Charting is checked, the Calculated Variable will appear in the drop down list next to Chart button in the Interactive Reporting home page.
- *Top/Bottom Order By* field is the field associated with the 'View' drop down on the main IR page. If this box is clicked then the value will be placed in the 'by' drop down list of the 'View' field. For example, if Avg Cost, Qty, Profit and Margin% all have this box ticked, then in IR if top 20 is selected, one of these four options is the restriction criteria for the top 20. E.G. Top 20 customers by profit would produce a report selecting the 20 customers with the highest profit.
- If the % of Total field is checked it will add an extra field in the report with the percentage of the Calculated Variable.
- If the *Comparison Delta* field is checked, then an extra Calculated Variable field will be added in the Comparison Report. This will show the difference between the values in the two date ranges. For example, if this is set for Qty, then a new field 'Qty Var' will appear on the right side of comparison report. This field contains the difference between the qty in date range 1 and the qty in date range 2. This field should only be used if the *Comparison Reporting* box has been ticked.
- The *Pivot Report* field allows the Calculated Variable to be investigated by the Pivot option of the report. If Pivot Report is checked, the Calculated Variable will appear in the drop down list next to Pivot button in the Interactive Reporting home page.
- Font Colour This optional field enables the choice of a colour by which the Calculated Variable will be displayed in the Pivot Report. The colour may be manually typed or chosen from the palette icon.
- *Font Style* This optional field enables the choice of font size by which the Calculated Variable will be displayed in the Pivot Report.
- *Font Size* This optional field enables the choice of font style (bold, italic) by which the Calculated Variable will be displayed in the Pivot Report.

The *Lookups* are the field names that constitute the Destination fields of the principal table in the Mapping Editor pages. The fields inside the parentheses are the Destination fields of the child tables that are used to construct a mapping.

🗿 Add/Edit Lookup - Microsoft Internet Explorer								
Eile Edit View Favorites Tools He	lp 🕴 Address 🔕 http://loo	alhost:5050/admin/schema:	_edit_lookup.asp?actic	n=addi 💙 🛃 Go 🛛 🧗				
🚱 Back 🝷 🕥 - 💌 😰 🏠	🔎 Search	s 🕢 🔗 🍓	🖸 • 📃 🖏	28				
	Evaluation	n License						
Admin Home Mappings	Templates Back To R	<u>Users</u> Sys eport Help	tem Settings	Look & Feel				
	Add L	ookup						
	Internal Name 🛛		-					
	Analysis Label 🛛							
□Detail Report Ø								
	Data Type 🔮	Date 💌						
	Align 🤨	Left 💌						
Save								
				~				

Figure 31

The *Internal Name* field is the name that will appear in the destination section of the mapping. Valid Internal Names can begin only with **text**, and they can contain only **text**, **numbers** or the **underscore** (_). The Name should be unique and it cannot remain blank.

The Analysis Label field cannot remain blank. This is an internal name used in the database.

If the *Detail Report* field is checked, the Lookup will appear in the Detail Analysis report. The Data Type field can have one of three values: Date, Text or Text with Lookup.

The *Date Type* contains three values. The difference between *Text* and *Text with Lookup* is that the second provides more details for the determination of the attributes of each lookup that appear inside the parentheses. Dates and Invoice Numbers cannot have attributes. If the data type "Text with Look up" is selected then additional information appears on the screen as can be seen in Figure 32. This causes a mapping value with a child mapping to be created in the destination field in the associated mapping. The number of extra custom fields can be set by selecting a number in the 'Number of Attributes' section. In the following example, the two attributes would appear in the mapping screen as size_custom1 and size_custom2. Both the key and description label may be changed to more suitable names if desired. The value in the 'Number of Attributes' may be increased at any stage but may not decreased.

Align is used to determine which side of the IR screen the filters and dates should appear. The data type 'Date' is automatically set to 'Left' and all other data types are automatically set to 'Right'. This may be manually changed if so desired.

🗿 Add/Edit Lookup - Microsoft Internet Explorer								
Eile Edit View Favorites Tools	Help Address 🛃 http:	/localhost:5050/admin/schema_	edit_lookup.asp?action	=add&s 🗙 🛃 Go	R			
Admin Home Mappings	Evalua Templates Users	<i>tion License</i> <u>System Settings</u> <u>Help</u>	Look & Feel	Back To Report	<			
Add Lookup								
	Internal Name 🕜	Size						
	Analysis Label 📀	Size						
	🗌 Detail Report 🛙							
	Data Type 🛛	Text with Lookup 💌						
	Align 🕜	Right 🚩						
	Key Label 🔮	key]					
	Description Label	description]					
	Number of Attribu	tes 🛛 🛛 💌						
Save								
					×			

Figure 32

Importing a Template

The *Import Template* feature allows the user to import an existing template from outside the database. E.g. from the web or a different database.

Schema Import - Microsoft Internet Explorer													
Eile	Edit	⊻iew	F <u>a</u> vorites	Tools	Help	Help Address 🕘 http://localhost:5050/admin/schemas.asp					*	🔁 Go	-
<u>Admi</u>	in Ho	me	Mappir	<u>ıgs</u>	Temp	olates_	Evaluati <u>Users</u>	on License System Setting <u>Help</u>	<u>s]</u>	Look & Feel	<u>Back</u>	To Repor	<u>t</u>
Import Template							Ш						
Source file Browse								*					

Figure 33

Simply click on the link to redirect to the Import Template pages as seen below. Click the *Browse* button to locate the template to import or type the path directly. Once the correct path is in the *Source File* field press the *Import* button. The user will then be automatically returned to the main *Template* page. The new imported template will be present in the template list.

NB. Please ensure that the name/description of the template, WITHIN the imported template file, is unique. The following error appears if the name is not unique "A template by this name is already installed"

Exporting a Template

The *Export* feature allows the user to export a template to another machine. When clicked on, a *file Domnload* window appears allowing the user either save the template onto the system, or open the template to view it. Remember, this template is to be reused on the same system, the template name/description within the file must be changed. In this case it would be preferable to use the *Clone* feature as the name/description will be automatically changed.



Figure 34

Cloning a Template

The *Clone* feature is one of Interactive Reporting most powerful tools. When creating a second template on the same system the user can clone the first template and make alterations to this clone, saving time in creating a new template and also reducing the testing time. Once the clone link is clicked a second copy is automatically created with the clone tag at the end of the template name.

Deleting a Template

To delete a template press the trash icon button next to the template to be delete in the template list. To delete the template there must be no mapping associated with it. Either delete, or change the template type, of all associated mappings.

Installation & Removal

Choosing the correct version of Interactive Reporting for you...

here are currently two versions of Interactive Reporting available to a customer, a standalone version or a service version.

Standalone Interactive Reporting

This version is easily set up. Simply follow the online instructions. To remove, go to the control panel. Click on 'Add or Remove Programs'. Scroll down until 'Interactive Reporting' is found and click on this. Once this has been highlighted a 'Change' and 'Remove' button appear. Simply click on the remove button to remove Interactive Reporting from the system.

Service Interactive Reporting

Services applications can only run on Windows NT, Windows 2000 and Windows XP. To install, save the ir_service.exe executable to a directory with full permissions. For the basic installation type ir_service -i from the command line.

C:\WINDOWS\System32\cm	id.exe	- 🗆 🗙				
C:\sir>ir_service /?						
Install and de-install WEBSvr/NT service (web server) WEB service cannot be used interactively						
ServiceName [-i] [-u] [- ServiceLongName]	-v] [-a] [-d] [-port PortValue] [-svc ServiceName] [-name				
-i -u -v -a -d -port PortValue -svc ServiceName -name ServiceLongName Notes:	Installs the service Uninstalls the service Prints current status Automatically start the service Debug mode creates a debug file Registers the service on the specified port Used only with -i option Specifies the name of the service Used with -i and -u options Specifies the description of the service Used only with -i option					
- There can be several C:\sir>	services with different names running	•				

Figure 35

INTERACTIVEREPORTING should now appear in the 'Services' section of 'Settings - >Control Panel -> Administrative Tools -> Services'. Highlight this and click the **start** option in the top left hand corner. Interactive Reporting should is now ready for use.

To remove the service version, stop INTERACTIVEREPORTING in 'Settings ->Control Panel -> Administrative Tools -> Services'. Next simply type ir_service -u. *Service INTERACTIVEREPORTING removed* appears as a confirmation.

Please note that if the extra options available are used in the installation, the exact same syntax <u>**MUST**</u> be used during removal. E.g. If ir_service -i -svc v23 is used during installation then ir_service -u -svc v23 must be used during removal.

Appendix

Performance Optimisation

Supercharging Interactive Reporting...

F Interactive Reporting is working too slowly, the following should be considered:

1. Using Database Indexes

To get reasonable speed it is advisable to create database indexes in the invoice transaction table on the *invoice_date*, *category*, *salesrep*, *invoice_number*, *item* and *customer* fields. Unless this is done, it will be difficult to obtain quick results from the reports.

2. Minimizing the number of fields to transfer.

Every field transferred takes up space. Invoice Transaction tables can sometimes have up to 60 fields or more. Interactive Reporting only uses a few of these fields (i.e. *item*, *cost*, *price*, *qty*, *category*, *salesrep*, *invoice_date*, *invoice_number*, *customer*). If only the necessary fields are transferred, and hence the amount of data imported is reduced, then the database access will be quicker. This is particularly true if there are millions of records present. Essentially, the database server does not have to read in or cache as much information.

Similarly, if the user has remote locations, where branch or other company data is be stored, it would mean that they would have less data to transfer.

3. Separate Database for Analysis.

If a large number of analyses are run, this may affect the performance of the accounting system. One approach to rectify this is to transfer the data to a separate database. We suggest a daily import script to import the data. If this approach is adopted, the real-time reporting capabilities will be lost.

Advice on setting-up a separate data warehouse is given in the next appendix.

If one of the reports is particularly slow, while most others are fast, then a database index is probably missing on one of the columns specified for analysis.

48

Appendix

Setting-up a Data Warehouse

Moving data about...

f a separate data warehouse is set up, the following tips might be useful:

1. Microsoft Access

We recommend that the user keeps a template database. Every night, a fresh copy of the template should be made, and the data imported into the copy. This is a throwaway copy and will be replaced the next night. The reason we recommend this is that file-size grows with every data import and the database will cease functioning once file-size reaches 2GB. The data-warehouse will use the copy.

2. SQL Server

We recommend the use of Microsoft Data Import Tool (DTS) to set-up a database task to import the relevant tables. This task can be scheduled either nightly (for the current database) or monthly (for any history file that may exist). We also recommend that transaction logs are not kept on the data warehouse (uncheck 'Truncate Log' on the 'Checkpoint' option). Otherwise, the database will keep on growing unnecessarily and become unresponsive.

3. History Files

The user should only need to import the history file once a month, while the current file should be imported daily. The reason is that the history file shouldn't change once the month's data has been closed. Both History and Current files should be indexed.

If the accounting system does store them separately, then they will need to be combined at some stage. The user can combine them by using a View with a union in it. This may be accomplished using the SQL option in the Data-Mapper. The advantage of a union is that it will remove duplicate rows. However, a history signifier should not be included in the union. A combined table can also be generated, though this must be performed carefully to avoid duplicate rows. The current table can contain rows that come from before the start of the period.

4. Left Joins

For data consistency, the system is designed to always use a left join whenever data is joined with another table (we do not want the system to lose any rows when trying to calculate a sales figure).

If SQL is used, then an attempt should be made to try to use LEFT JOINs when combining other tables with the main invoice transaction table from the system.

If an analyse is performed by several variables with the same filter, and different results obtained, it may mean that the LEFT JOINs are incorrect.

Appendix

Analysing Other Types of Information

Extending Interactive Reporting...

lthough Interactive Reporting is principally designed to allow analysis of the Accounts Receivable paradigm, it may be extended to the following:

1. Sales Order Transactions

Interactive Reporting can be used to analyse sales transactions. The user just needs to connect it to the Sales Transaction database, renaming the column titles.

2. Invoices

If the user does not have Invoice Transactions available, the invoices can still be analysed. The user should map the invoice line-total to price, and leave quantity unmapped (qty will default to 1). There will be no average cost or average price columns. Users will not be able to analyse by item (unless there is an item to invoice correspondence).

3. Inventory

By mapping 'inventory cost' to *price*, 'inventory on hand' to *qty*, the user can analyse the inventory information. The user should import the main inventory table (or the 'inventory at location' table if they wish to analyse multiple warehouses). The column titles should also renamed.

4. Sales Orders

If Sales Transactions is not available, then *Sales Orders* can still be analysed. To do this map the invoice total to *price*, and leave *qty* unmapped. There will be no average cost or average price columns. Users will not be able to analyse by item (unless there is an item to sales order correspondence). The user should also rename the column titles.

5. Purchasing Order Transactions and AP Transactions.

Analysis of the PO transactions and AP transactions should be possible by mapping COG to *price*.

52

Appendix D

Sample.CSS

Sample Style Sheet for Look and Feel Section and explanation of contents.

The following section includes sample.css, a sample style sheet, and after this file there is a detailed explanation of what each field in this file does.

STYLE type="text/css">

<!-BODY {background: white; font: Arial}
A: link {color: blue}
A: visited {color: teal}
H1 {font-size: 24pt; font-family: Arial}
H2 {font-size: 18pt; font-family: braggadocio}
H3 {font size:14pt; font-family: Desdemona}
font {font-family: times}
.analysisSelect_select {}
.analysisSelect_title {font-size: 12pt; font-weight: bold; color: black}
.analysisSelect_titleCell {text-align: left}
.analysisInfo_row {}
.analysisInfo_cell {text-align: left; color: black}
.analysisInfo_cell {text-align: left; color: black}</pre>

.filter_heading {font-weight: bold; color: red}
.filter_title {}
.filter_titleCell {text-align: left; font-weight: bold; color: #444488}
.filter_select {}
.filter_selectCell {}
.filter_text {}
.filter_textCell {}
.filter_date {}
.filter_dateCell {}

.ir_title {font-size: 18pt; font-weight: bold; color: darkblue} .screen_title {font-size: 18pt; font-weight: bold; color: gray}

.screen subtitle {font-size: 12pt; font-weight: bold; color: #00007F} .screen_instruction {font-size: 16pt; font-weight: bold; color: black} .loginInstruction {font-size: 16pt; font-style: italic; font-family: arial; color: blue} .login titleCell {font-weight: bold; text-align:left} .errorMessage {font-size: 12pt; font-weight: bold; font-family: arial; color:red} .promptMessage {font-size: 12pt; font-style: italic} .noRecordsFound {font-size: 14pt; font-weight: bold; color:red; text-align: center} .smallHelpText { font-size: 12; } .table class {border-width: 2; border-style: ridge} .tableheading row {background-color: #E0E0E0; font-size: 14; font-weight: bold; } .tableheading_cell {text-align:center; font-weight:bold; border-width: 1; border-style: none } .tableheading totalCell {text-align: right; font-weight: bold; font-style: italic; borderstyle: none} .tablerow_even_row {background-color: #FFFFF} .tablerow odd row {background-color: #F0F0F0} .tablerow titleCell {font-weight: bold; border-width: 1; border-style: solid} .tablerow_totalCell {font-weight: bold; border-width: 1; border-style: solid; text-align: right} .tablerow cell {border-width: 1; border-style: solid; text-align: right} .tablegrouptotal_row {background-color: #FFFFCC; font-weight: bold; text-align: right} .tablegrouptotal titleCell {border-width: 1; border-style: solid} .tablegrouptotal cell {font-weight:bold; border-width: 1; border-style: solid}

.tablegrouptotal_cell {font-weight:bold; border-width: 1; border-style: solid} .tabletotal_row {background-color: #CCFFFF; font-weight: bold; text-align: right} .tabletotal_titleCell {border-width: 1; border-style: solid} .tabletotal_cell {border-width: 1; border-style: solid}

.favouritesTable_class {border-width: 2; border-style: ridge} .favouritesTable_heading_row {font-weight: bold; font-style:italic; background-color: #E0E0E0; font-size: 16} .favouritesTable_heading_cell {} .favouritesTable_row {background-color: white} .favouritesTable_cell {border-width: 1; border-style: solid; } .favouritesTable_operation {}

</STYLE>

The following is an explanation of the classes that appears in the sample.css file. The file is divided into six sections. These are the styling format for:

- the overall look on all the pages (i.e. text styles, background colour,etc.)
- the Analysis section on the main page
- the Filter section on the main page
- the Tables produced from the reports
- the error and help messages which occur when producing a report

• the Favourites section on the main page

This indicates that we are creating a Style Sheet. **<STYLE TYPE=''text/css''>**

Include the changes inside the tags <!--->

Section 1

This sets the background color to white and the overall text font to arial. Please remember to keep the data within the curly {} brackets.

BODY {background: white; font: arial}

This sets the unclicked names on links and drill downs to blue. E.g. the "Logout" link on the main page of Interactive Reporting.

A:link {color: blue}

This sets the clicked names on links and drill downs to teal. E.g. the "Home" link of Interactive Reporting turn to teal after being pressed.

A:visited {color: teal}

These are the defaults for Headers, these are currently not used by Interactive Reporting.

H1 {font-size: 24pt; font-family: arial}

H2 {font-size: 18pt; font-family: braggadocio}

H3 {font size:14pt; font-family: Desdemona}

This chooses the *Font* style of most of the text in Interactive reporting, eg *Analyze by*, *Categories*

font {font-family: times}

Section 2

This section deals with the analysis section of Interactive reporting. It sets the color,size and style of the text and the alignment of the drop down menus. The text in the drop down menus is unaffected.

.analysisSelect_select {}

The following affects the Analysis section on the main page.

.analysisSelect_title {font-size: 12pt; font-weight: bold; color: black} .analysisSelect_selectCell {text-align: left}

.analysisSelect_titleCell {}

The following affect the analysis data labels of the reports, i.e. if the user press the *Pivot Report* button the data at the top of the report, Mapping and Mapping type etc, is affected.

.analysisInfo_row {}

```
.analysisInfo_titleCell {font-size: 12pt; font-weight: bold; color: black}
.analysisInfo_cell {text-align: left; color: black}
```

Section 3

This section affects the filter text on the home page, e.g. *Categories and Date Range*. The text in the drop down menus is unaffected.

The first command affects the text of the *Filter* label on the main page. The text in the drop down menus is unaffected. The rest of the commands deal with the look of the filter section.

.filter_heading {font-weight: bold; color: red}
.filter_title {}
.filter_titleCell {text-align: left; font-weight: bold; color: #444488}
.filter_select {}
.filter_selectCell {}
.filter_text {}
.filter_textCell {}
.filter_date {}
.filter_dateCell {}

Section 4

This changes the style of the Interactive Reporting Logo .ir title {font-size: 18pt; font-weight: bold; color: darkblue} This changes the style of the headings of certain pages, eg the *Change Password* title on the change password page. .screen title {font-size: 18pt; font-weight: bold; color: gray} .screen subtitle {font-size: 12pt: font-weight: bold: color: #00007F} This changes the style of the instruction, eg the Choose date-ranges for comparison instruction on the compare page. .screen instruction {font-size: 16pt; font-weight: bold; color: black} The next two commands alter the style of the login details. .loginInstruction {font-size: 16pt; font-style: italic; font-family: arial; color: blue} .login titleCell {font-weight: bold; text-align:left} The following commands change the style of the various error messages. .errorMessage {font-size: 12pt; font-weight: bold; font-family: arial; color:red} .promptMessage {font-size: 12pt; font-style: italic} .noRecordsFound {font-size: 14pt; font-weight: bold; color:red; text-align: center} .smallHelpText { font-size: 12; }

Section 5

The Table Class section deals with the results tables produced from Pivots and Analysis

.table_class {border-width: 2; border-style: ridge}

This section of the table class is responsible for the styling of the table header area. .tableheading_row {background-color: #E0E0E0; font-size: 14; font-weight: bold;}

.tableheading_cell {text-align:center; font-weight:bold; border-width: 1; borderstyle: none}

.tableheading_totalCell {text-align: right; font-weight: bold; font-style: italic; border-style: none}

This section of the Table Class is responsible for the styling of the main table area. Here it can be seen how the odd numbered rows have a different color to the even numbered rows to help clarify the data.

.tablerow_even_row {background-color: #FFFFFF}

.tablerow_odd_row {background-color: #F0F0F0}

.tablerow_titleCell {font-weight: bold; border-width: 1; border-style: solid}
.tablerow_totalCell {font-weight: bold; border-width: 1; border-style: solid; textalign: right}

.tablerow_cell {border-width: 1; border-style: solid; text-align: right}

This section of the Table Class styles the grouping section of the table. When analysis data there is a drop down menu available which allows the user to group the data, e.g. into sales by day or quarter. This section styles this output

.tablegrouptotal_row {background-color: #FFFFCC; font-weight: bold; textalign: right}

.tablegrouptotal_titleCell {border-width: 1; border-style: solid}
.tablegrouptotal_cell {font-weight:bold; border-width: 1; border-style: solid}
The final section of the Table Class refers to the total section of the table.
.tabletotal_row {background-color: #CCFFFF; font-weight: bold; text-align:
right}

.tabletotal_titleCell {border-width: 1; border-style: solid} .tabletotal_cell {border-width: 1; border-style: solid}

Section 6

Finally, we come to the "look and feel" of the favourites section. This section is found at the button of the home page.

.favouritesTable_class {border-width: 2; border-style: ridge} .favouritesTable_heading_row {font-weight: bold; font-style:italic; backgroundcolor: #E0E0E0; font-size: 16} .favouritesTable_heading_cell {} .favouritesTable_row {background-color: white} .favouritesTable_cell {border-width: 1; border-style: solid; } .favouritesTable_operation {}