Defining the Universe

UCSC Data Warehouse's Purchase to Pay universe contains detailed information about purchase orders and the purchasing life cycle, from requisition to check, going back to July 1, 1996. It is intended to be used by the Purchasing department, and other interested departments, as an audit mechanism or for analyzing purchasing trends.

Source Systems
- FIS – Purchase Order, Invoice, Check, Receiver, Asset Tag information updated on a nightly basis (Monday – Friday)
- CruzBuy – Requistion information

Features and Limitations

The campus uses many different practices for the purchasing thru payment cycle which result in a variety of transactional record patterns. For example, a simple purchase order often results in a single invoice, but a blanket order often results in multiple invoices against the same commodity line. This variety means there is potential for multiple rows in reporting that can easily cause amounts to be overstated (in error) when information is combined across the transaction types (Purchase Order, Invoice, Check, Receiver, Asset Tag).

What works together:
To help report writers easily identify when they are using incompatible information, the Purchase to Pay universe contains several report contexts (pre-defined sets of joins) as follows:

Purchase Order: Any objects within the "Purchase Order" folder and its sub-folders, such as Commodity, Accounting and Tax information, as well as objects in the "Asset Tag" folder, can be used together in the same query.

Invoice: Any objects within the "Invoice" folder and its sub-folders, such as for Commodity, Accounting, and Tax information, as well as objects in the "Asset Tag" folder, can be used in the same query. In addition, objects in the main "Purchase Order" folder can be included, but not any objects from the sub-folders within the "Purchase Order" folder (meaning, no PO Commodity, Accounting and Tax information).

Headers: Objects from the main folders for "Purchase Order", "Invoice", "Receiver", and "Check" can be used together in the same query. However, objects in sub-folders for Purchase Order or Invoice cannot be included. In other words, header information only.

Purchase Order Changes: Any objects within the "Purchase Order – All Change Sequences" folder and its subfolders for Commodity, Accounting and Tax can be used together in the same query. However, objects from any other folder cannot be included.
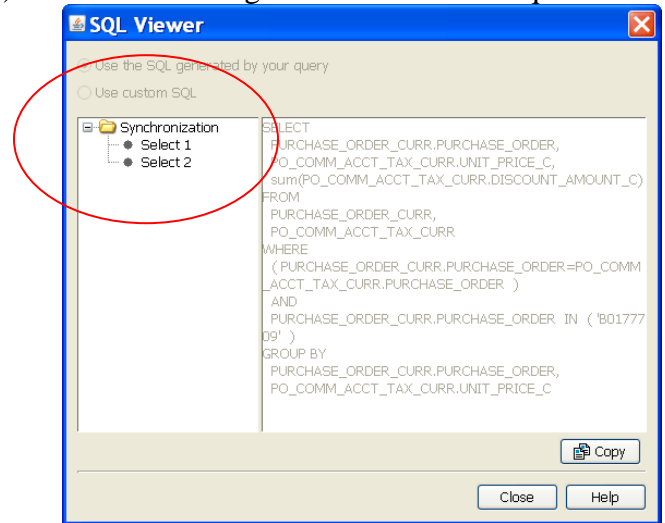
What doesn't work together:
Report writers will not be able to mix (in the same <u>query</u>) Purchase Order Commodity/Accounting/Tax information with Invoice Commodity/Accounting/Tax information nor can they mix Purchase Order Changes information with anything else.   However, this does not mean the information can't be used in the same <u>report</u>. Various report writing strategies can be used to mix them.
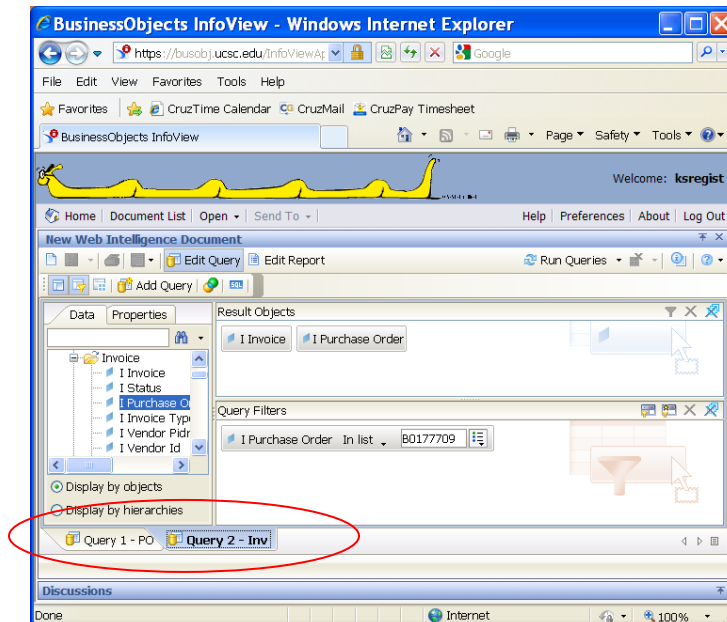
How to get around incompatibilities:
 Various report writing strategies can be used to mix incompatible information, including:
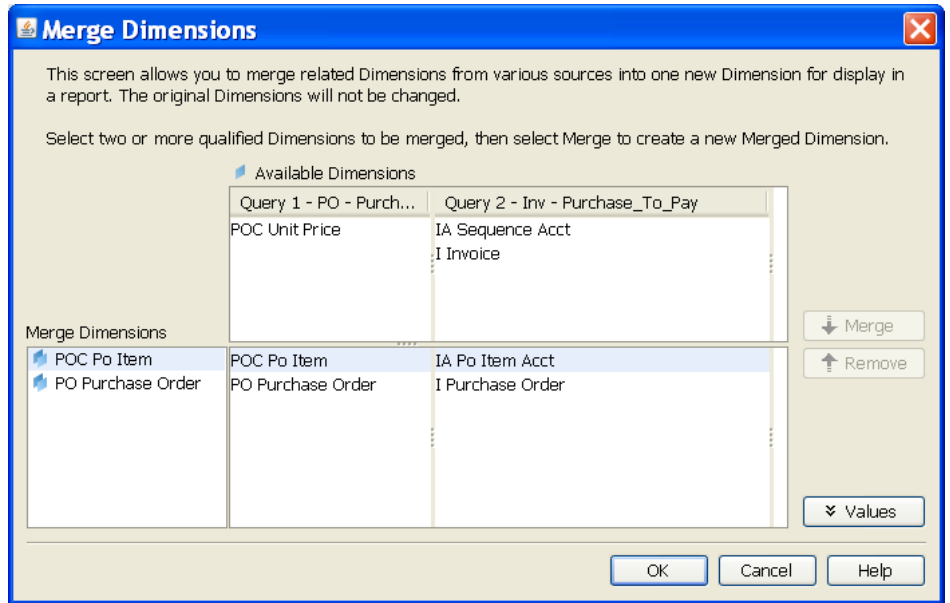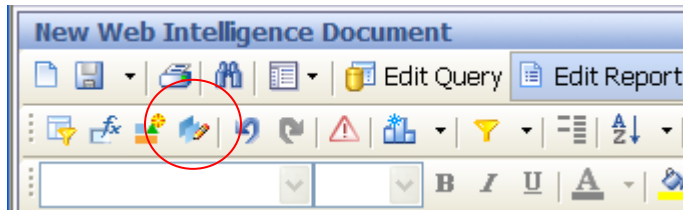
> <u>Single Query Synchronization:</u> Including incompatible objects in a single query will automatically cause the query to split into two parts (to run). In essence, the PO part of the query runs separately from the Invoice part of the query. The information is then returned to the report. Measures (pink orb objects that are amounts and counts) can be used together, but Dimensions (blue cube objects that are text, codes or dates) cannot be used together across the two queries.
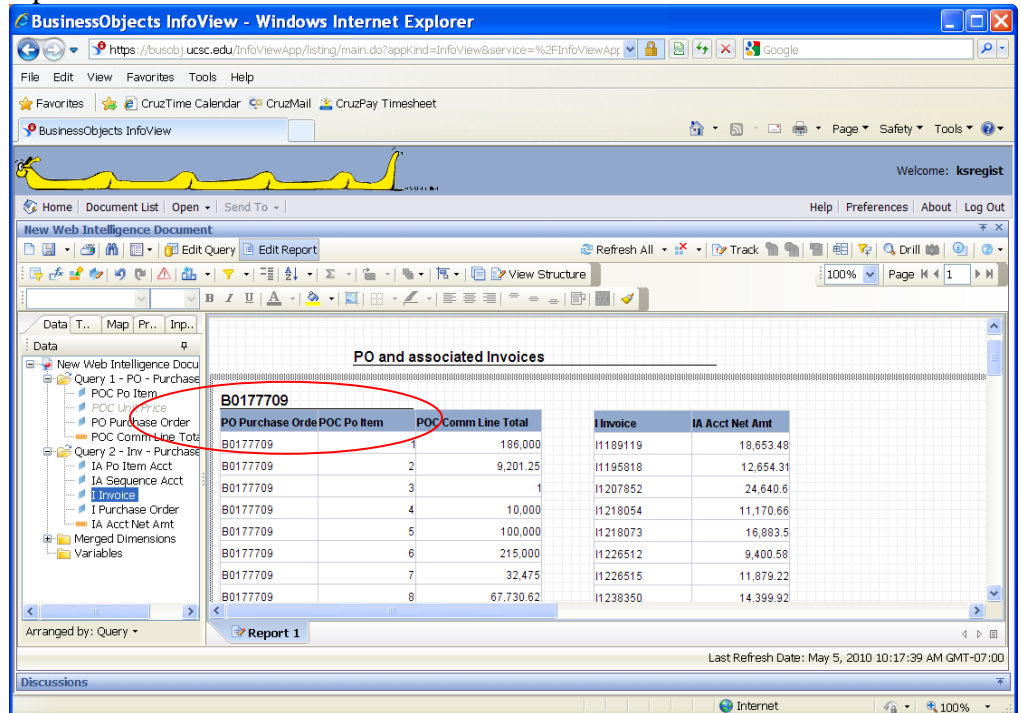

> <u>Multiple Queries:</u> A single report can be fed from more than one query. It's important to include as many objects-in-common as possible for joining/merging the information inside the report.
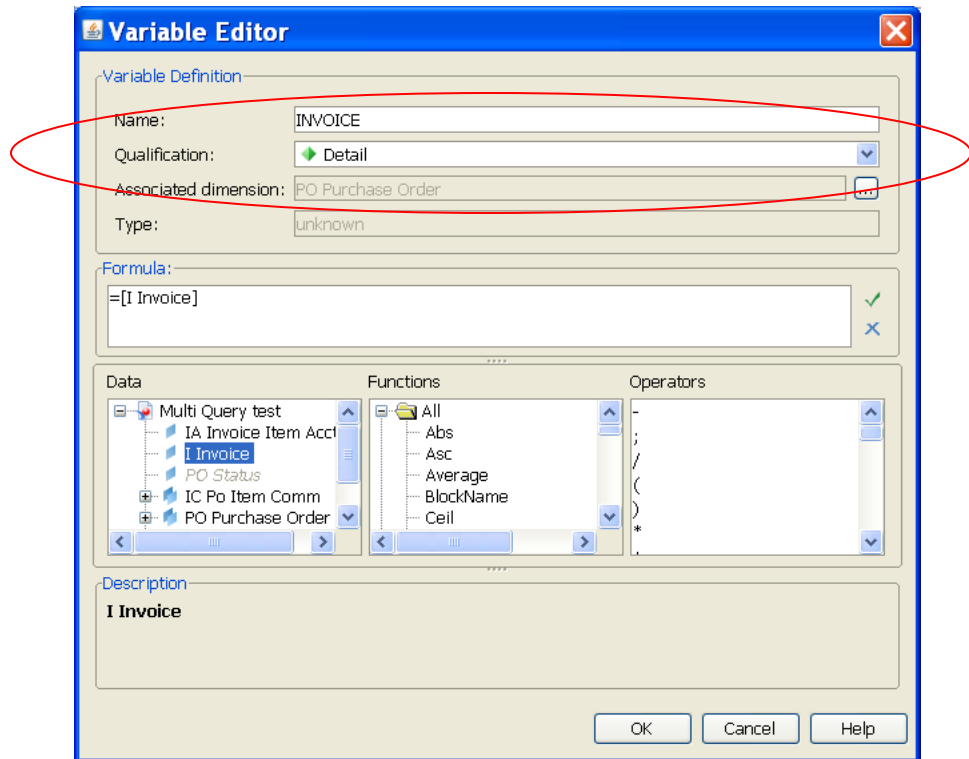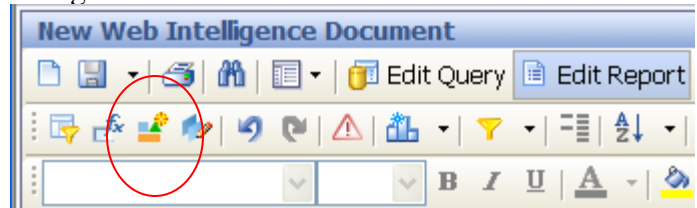
To Merge Dimensions:

Master-Detail Sections: A report can display multiple tables on the same page, such as the purchase order information on the left and invoices on the right. To associate them to each other, drag and drop the Purchase Order above the table on the left – this will create a master Section (a break) that will group the tables.

Detail Objects: If you really need to include the information from one query with the other query, you can create custom variables that are detail objects -- green pyramids that use a unique object in common to piggy back themselves onto. The concept is that anywhere the object in common can be used, the detail object can be used.

To get to the Variable Editor

Classes Defined
The types of data that are available in the Purchase to Pay universe fall into these categories:

Purchase Order:
Information from the current version (cumulative iterations) of the purchase order in FIS Banner. In the main folder the objects are all to be considered "header" information, meaning one row per purchase order.

PO Commodity:
Line item information from the purchase order.

PO Accounting:
FOAPAL accounting information from each line item of the purchase order.

PO Tax:
Tax code information from each line item of the purchase order.

Invoice:
Information from each invoice associated with a purchase order in FIS Banner. In the main folder the objects are all to be considered "header" information, meaning one row per invoice.

Invoice Commodity:
Line item information from the invoice.

Invoice Accounting:
FOAPAL accounting information from each line item of the invoice.

Invoice Tax:
Tax code information from each line item of the invoice.

Check:
Information from each check associated with an invoice in FIS Banner. An invoice can have more than one check number associated with it if one check has been cancelled/voided.

Receiver:
Information from each receiver associated with an purchase order in FIS Banner. A purchase order line item can have more than one receiver associated with it, and there are often "false starts" (incomplete transactions) so pay attention to the Status object.

Asset Tag:
Information from each asset tag record associated with either a purchase order or an invoice in FIS Banner. This information is particularly difficult to use and the transactional records do not always include both the purchase order number and the invoice number in them.

Purchase Order – All Change Sequences:
Information from each iteration of the purchase order in FIS Banner. In the main folder the objects are all to be considered "header" information, meaning one row per purchase order per change sequence.

    PO Commodity – All Change Sequences:
    Line item information from each purchase order change sequence.

    PO Accounting – All Change Sequences:
    FOAPAL accounting information from each line item from each purchase order change sequence.

    PO Tax – All Change Sequences:
    Tax code information from each line item from each purchase order change sequence.

<u>Helpful Hints</u>
Use the Cancel and Status Indicators in query conditions for Purchase Order, Invoice and Check to prevent duplication of amounts, particularly for Invoice and Check.