

MAXIMIZING DIVER FUNCTIONALITY FOR THE END USER



**DI USERS' CONFERENCE
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If Calcs, User Defined Dimensions, External QuickViews, Parameterized Calcs, & \$QVVAL



- Today we will be looking at some creative ways to maximize Diver functionality.
- The report we will ultimately create involves If/And calculations, User Defined Dimensions, External QuickViews, Parameterized Calcs, and \$QVVAL.
- We will approach each of these concepts separately, and then look at ways to use them all together in one report.



If Calcs



- If statements can be created in Diver calculations in various combinations – simple If statements, nested If statements, If/And statements, and If/Or statements.
- Knowing how to create If statements can give you greater control over how data or information displays in your Diver Markers.



Simple If Statements



- The syntax for using the If function in Diver is:
if(condition, then expression, else expression)
- The else expression is optional.
- The calculation below simplifies the purpose of this report: it doesn't matter how many cases the accounts have bought – only whether or not the accounts have bought a particular brand or group of brands:

If(calc[Cases Cachaca]>0, "Y")

The screenshot shows a software interface with a data table and an 'Edit Column' dialog box. The data table has columns for 'Business Name', 'Cases Cachaca', and 'Accts Buying Cachaca'. The 'Edit Column' dialog box is open, showing the definition of the 'Accts Buying Cachaca' column as `if(calc[Cases Cachaca]>0,"Y")`. The dialog box also shows various options for column definitions, including 'Other Columns', 'Model Columns', and 'Info Columns'.

Business Name	Cases Cachaca	Accts Buying Cachaca
Subtotals	6	
3 STAR LIQUOR		
APPLEJACKS		
BJ LIQUOR		
CONTINENTAL LIQUOR		
DANNY'S DISCOUNT LIQUOR		
DISCOUNT LIQUORS		
EMPIRE CENTRAL BEVERAGE		
FOSSIL CREEK LIQUOR #3	1	Y
GOODY GOODY LIQ (95) WHSL	1	Y
HOLIDAY LIQUORS		
LADY LOVE LIQUOR		
LEE'S LIQUOR STORE		
LONE STAR LIQUOR STORE #1	1	Y
MONTICELLO BEER WINE & SPIRIT		
PEPPERMILL SQUARE PACK STORE		
PO GO'S	1	Y
POLY LIQUOR STORE		
RIVERBEND LIQUOR & WINE		
SIGEL'S LIQUOR/FINE WINES #05	1	Y
SONNY'S LIQUOR	1	Y
TIN CUP LIQUOR		
TWO BUCKS DISCOUNT BEVERAGE CE	2	Y
WATERHOLE LIQUOR, THE		
WEST END LIQUOR		
ZESTY LIQUOR		

Edit Column

Definition | Options

Name & Definition

Definition Name: Accts Buying Cachaca

Definition: `if(calc[Cases Cachaca]>0,"Y")`

Other Columns: Cases Cachaca, Cases YTD, Cases LYTD, Cases LYTD Var, Cases YTD Pot Var, Cases Rolling 12 TY, Cases Rolling 12 Var, Cases Rolling 12 Pot Var

Model Columns: Total (selected), Min, Max, Average, % Total, Std Dev

Info Columns: Cases, Dollars, Gallons, Disc\$, Bchg\$, Promo\$, CDGS\$, Flat Cases, Bipromo\$, Cases YTD

Other Data: Functions (abs, and, arccos, arcsin, arctan), Dimension Counts (Model, Year-Month, Sales Index, Item, Vendor), Named Groups (Jan TY, Feb TY, Mar TY, Apr TY, May TY)

Buttons: OK, Cancel

Nested If Statements



- The nested If statement below is able to provide more than just 2 outcomes (then and else).
- The example below enables the user to enhance the information in the system – Diver can display the information in a more attractive manner.

Item	Wine Color	New Wine Color
Totals		
B DOON ALBARINO 750ML -- 38650-15	2-WHITE	White
B DOON BLOODY GOOD RED 750ML -- 42701-15	1-RED	Red
B DOON BLOODY GOOD WHITE 750ML -- 42702-15	2-WHITE	White
B DOON BOUTEILLE CALL 750ML -- 49661-15	1-RED	Red
B DOON CRITIQUE OF PURE 750ML -- 14394-15	2-WHITE	White
B DOON FREISA FRIZZANTE 750ML -- 74080-15	3-ROSE	Pink
B DOON IL FIASCO 750ML -- 82006-15	1-RED	Red
B DOON VIN GRIS DE CIGAR 750ML -- 72197-15	3-ROSE	Pink

Edit Column

Definition | Options

Name & Definition

Definition Name New Wine Color

if([Info[Wine Color]="1-RED";"Red";if([Info[Wine Color]="2-WHITE";"White";if([Info[Wine Color]="3-ROSE";"Pink"])]))

Other Columns

Model Columns

Info Columns

Other Data

Functions

Dimension Counts

Named Groups

OK Cancel

If/And/Or Statements



- The “and” and “or” functions in Diver must be used in conjunction with the “if” function. When you use “and”, both conditions must be true to elicit the then expression; when you use “or,” only one condition needs to be true to elicit the then expression.
- The example below demonstrates the difference between the two. The OR column highlights the accounts that accept delivery on Tuesday or Friday; the AND column highlights the accounts that accept delivery on both Tuesday and Friday.

if(or(Info[Accepts Dlry Tue]="X",Info[Accepts Dlry Fri]="X"),"Tues-Fri","Other")

if(and(Info[Accepts Dlry Tue]="X",Info[Accepts Dlry Fri]="X"),"Tues and Fri","Other")

WH Customer	Accepts Dly Mon	Accepts Dly Tue	Accepts Dly Wed	Accepts Dly Thu	Accepts Dly Fri	Tuesday or Friday	Tuesday and Friday
Totals							
ADELMO'S -- DAL -- 86224					X	Tues-Fri	Other
ALI BABA -- DAL -- 50192		X				Tues-Fri	Other
AMATOS ITALIAN RISTORANTE -- DAL -- 46569		X				Tues-Fri	Other
ANDIAMO -- DAL -- 49897		X			X	Tues-Fri	Tues and Fri
ANDREA'S -- DAL -- 46449			X		X	Tues-Fri	Other
ANDREA'S II RESTAURANT -- DAL -- 46317		X			X	Tues-Fri	Tues and Fri
ANGELO'S SPAGHETTI HOUSE -- DAL -- 49943			X		X	Tues-Fri	Other
ANTONIO RISTORANTE -- DAL -- 78406		X		X		Tues-Fri	Other
ARCODORO & POMODORO @ CRESCENT -- DAL -- 47943			X		X	Tues-Fri	Other
ASTORIA COFFEE -- DAL -- 48117			X			Other	Other
AVANTE RISTORANTE -- DAL -- 49959		X	X	X	X	Tues-Fri	Tues and Fri
AVANTI CAFE -- DAL -- 77796					X	Tues-Fri	Other
AVANTI EURO BISTRO -- DAL -- 78829		X		X	X	Tues-Fri	Tues and Fri

User Defined Dimensions



- User Defined Dimensions first became available with the 6.1 version of ProDiver.
- A User Defined Dimension is a Dimension created by the user. The user types in new values based on existing values of a Console Dimension (Core or Dynamic).
- The UDD can either be used for diving or (if a Core Dimension was used) added as an Info column.
- The new Dimensions you create will be specific to the Marker or DivePlan with which you are working.



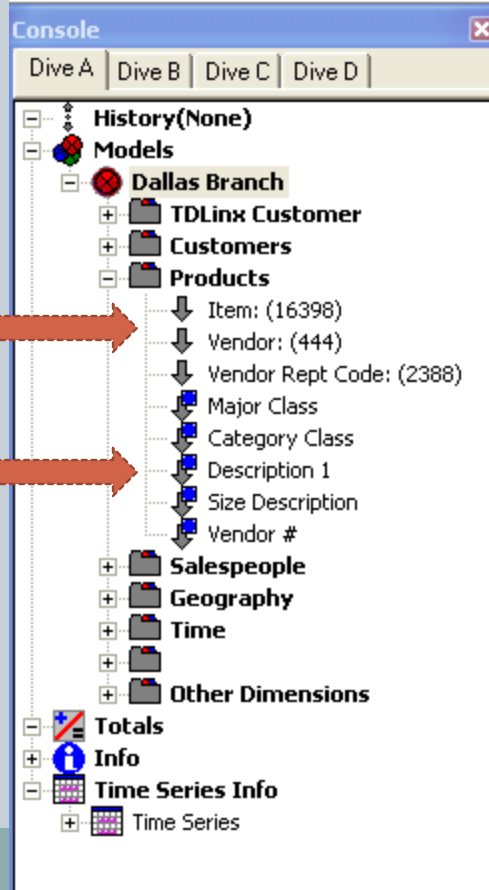
How to Create a UDD



- First, you need to decide which existing Dimension to use to create the UDD. Any Dimension in the Console can be used; ease of editing and performance may dictate use of a Core Dimension.
- However, if you need to add the UDD as an Info column, you must use a Core Dimension (which does not have the blue circle next to the arrow in the Console).
- Once you have decided which Dimension to use, dive on it.

Core Dimension

Dynamic Dimension



Creating the UDD



- After diving on the appropriate Dimension, right-click in the Dive Window and select “Create User Defined Dimension”. (Note – the window must be a simple tabular at this point.)
- A dialog box will appear, allowing you to give the new Dimension a name and to determine an “undefined” label. You can leave this blank or type something like “Other”.

Description 1	
Totals	
BURNETTS BLUEBERRY VODKA	
BURNETTS CHERRY VODKA	
BURNETTS CITRUS VODKA	
BURNETTS COCONUT VODKA	
BURNETTS ESPRESSO VODKA	
BURNETTS GRAPE VODKA	
BURNETTS ORANGE VODKA	
BURNETTS PEACH VODKA	
BURNETTS PINK LEMONADE	
BURNETTS POMEGRANATE	
BURNETTS RASPBERRY VODKA	
BURNETTS SOUR APPLE	
BURNETTS STRAWBERRY	
BURNETTS SWEET TEA VODKA	
BURNETTS VANILLA VODKA	
BURNETTS WATERMELON	

- Copy Window
- Edit Column...
- Select Columns...
- Select All
- Flip Axes
- Sort Up
- Sort Down
- Edit Window Info...
- Convert to QuickView...
- Convert parents to QuickViews...
- Copy Calculation Reference
- Copy Reporter Reference Item
- Copy Window Dive Reference String
- Create User Defined Dimension...**
- Edit User Defined Dimension...
- Commit User Defined Dimension
- Close User Defined Dimension

Description 1	
Totals	
BURNETTS BLUEBERRY VODKA	
BURNETTS CHERRY VODKA	
BURNETTS CITRUS VODKA	
BURNETTS COCONUT VODKA	
BURNETTS ESPRESSO VODKA	
BURNETTS GRAPE VODKA	
BURNETTS ORANGE VODKA	
BURNETTS PEACH VODKA	
BURNETTS PINK LEMONADE	
BURNETTS POMEGRANATE	
BURNETTS RASPBERRY VODKA	
BURNETTS SOUR APPLE	
BURNETTS STRAWBERRY	
BURNETTS SWEET TEA VODKA	
BURNETTS VANILLA VODKA	
BURNETTS WATERMELON	

Create User Defined Dimension

Name:

Undefined Values:

OK Cancel

Creating the Values for the UDD



- A new column, highlighted in teal, will appear next to the Dimension you are diving on.
- By double-clicking on one of the teal cells, you can type a new value. Press Enter after typing the value.
- If you want to use the same value for multiple cells, you can copy a value by either doing a right-click/Copy or Ctrl+C, and then paste by either doing a right-click/Paste or Ctrl+V. You can paste into multiple selected cells.
- After entering all the values as needed, right-click in the Dive Window and select “Commit User Defined Dimension”.
- Right-click in the Dive Window and select “Close User Defined Dimension”.

Description 1	Vodka Flavor Categories
Totals	Totals
BURNETTS BLUEBERRY VODKA	Berry Flavors
BURNETTS CHERRY VODKA	
BURNETTS CITRUS VODKA	Citrus Flavors
BURNETTS COCONUT VODKA	
BURNETTS ESPRESSO VODKA	
BURNETTS GRAPE VODKA	
BURNETTS ORANGE VODKA	
BURNETTS PEACH VODKA	
BURNETTS PINK LEMONADE	
BURNETTS POMEGRANATE	
BURNETTS RASPBERRY VODKA	
BURNETTS SOUR APPLE	
BURNETTS STRAWBERRY	
BURNETTS SWEET TEA VODKA	
BURNETTS VANILLA VODKA	
BURNETTS WATERMELON	

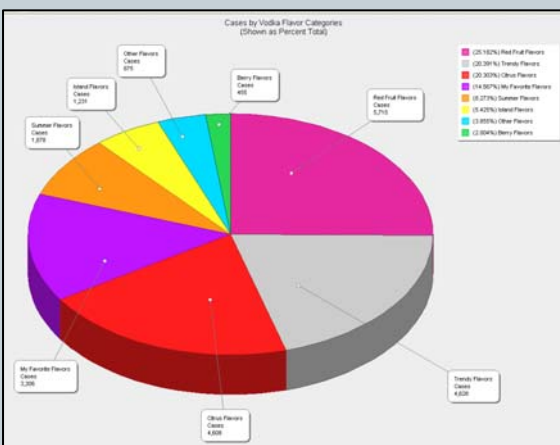
Description 1	Vodka Flavor Categories
Totals	Totals
BURNETTS BLUEBERRY VODKA	Berry Flavors
BURNETTS CHERRY VODKA	
BURNETTS CITRUS VODKA	Citrus Flavors
BURNETTS COCONUT VODKA	
BURNETTS ESPRESSO VODKA	
BURNETTS GRAPE VODKA	
BURNETTS ORANGE VODKA	
BURNETTS PEACH VODKA	
BURNETTS PINK LEMONADE	
BURNETTS POMEGRANATE	
BURNETTS RASPBERRY VODKA	Berry Flavors
BURNETTS SOUR APPLE	
BURNETTS STRAWBERRY	Berry Flavors
BURNETTS SWEET TEA VODKA	
BURNETTS VANILLA VODKA	
BURNETTS WATERMELON	

Edit
 Copy Ctrl+C
 Paste Ctrl+V

Using the UDD



- After closing the UDD, click on the “Other Dimensions” folder in the Console. You will see the new Dimension listed at the bottom.
- You can now utilize the new Dimension in a dive. The examples below demonstrate how a pie chart or a multitabled report could be created utilizing the new Dimension values.



	Cases
Berry Flavors	
BURNETT'S BLUEBERRY VODKA	455
Berry Flavors Total	455
Citrus Flavors	
BURNETT'S CITRUS VODKA	2,823
BURNETT'S ORANGE VODKA	1,243
Citrus Flavors Total	4,066
Island Flavors	
BURNETT'S COCONUT VODKA	1,231
Island Flavors Total	1,231
My Favorite Flavors	
BURNETT'S PEACH VODKA	633
BURNETT'S VANILLA VODKA	2,674
My Favorite Flavors Total	3,306
Other Flavors	
BURNETT'S GRAPE VODKA	875
Other Flavors Total	875
Red Fruit Flavors	
BURNETT'S CHERRY VODKA	2,863
BURNETT'S RASPBERRY VODKA	1,562
BURNETT'S STRAWBERRY	1,302
Red Fruit Flavors Total	5,712
Summer Flavors	
BURNETT'S PINK LEMONADE	1,874
BURNETT'S WATERMELON	361
Summer Flavors Total	1,213
Trendy Flavors	
BURNETT'S ESPRESSO VODKA	200
BURNETT'S PINEAPPLE	800
BURNETT'S SLOW APPLE	1,400
BURNETT'S SWEET TEA VODKA	2,800
Trendy Flavors Total	4,200
Total	22,896

Using UDDs to Assign Points Values



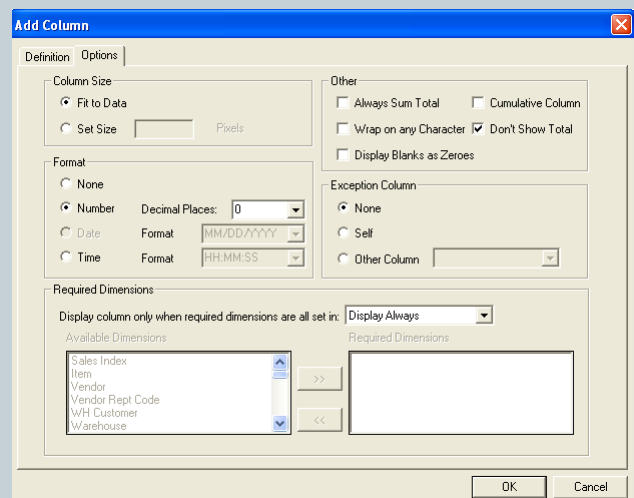
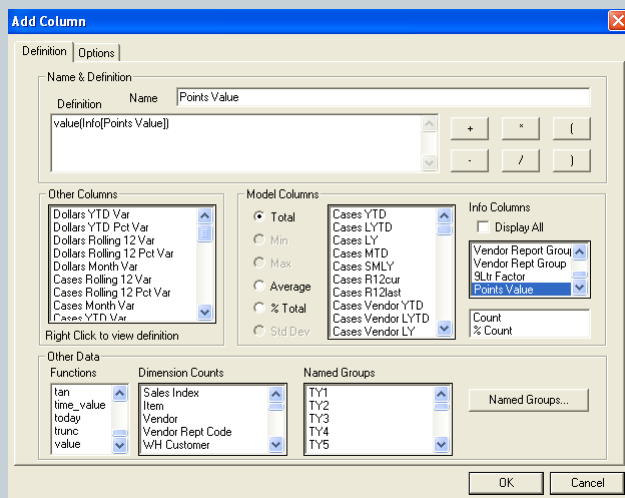
- If a Core Dimension is used to create a UDD, then it is possible to add the UDD as an Info column to the Dive Window, as well as having the possibility to dive on it.
- Remember that the Console tells you which are Core Dimensions and which are Dynamic Dimensions – Dynamic Dimensions have a little blue circle imposed on the diving arrow.
- You can only add the UDD as an Info column if you are diving on, or multitabbed in, the Dimension you used to create the UDD.
- In the example below, a UDD called Points Value has been created for the Core Dimension Vendor Rept Code. Note that the numbers are left-justified, as all UDDs are automatically formatted as text.

Vendor Rept Code	Points Value	
Totals	Totals	
BR COHN CHARDONNAY -- 01	10	
BR COHN MERLOT -- 02	12	
BR COHN OLIVE HILL CAB -- 04	15	
BR COHN PINOT NOIR -- 00	15	
BR COHN SILVER LABEL CAB -- 03	10	
BR COHN SPECIAL SEL CAB -- 05	10	
BR COHN ZINFANDEL -- 11	10	

Formatting the UDD Info Column



- If you are diving on the same Dimension that was used to create the UDD, you should see the UDD listed in the Info Columns section of the Add Column dialog box.
- Because all UDDs are automatically formatted as text, you will need to use the Value function, which will cause Diver to treat the string as numerical values.
- You may wish to switch to the Options tab, to select the Number format, set the decimal places, and select the “Don’t Show Total” option.



Using the UDD in Calculations



- Since the Points Info column has been converted into a number, it can be used in various calculations, as shown below.
- A goal column has been added. A calculation was created that multiplied the “Points Value” column by the “Goal” column – thus giving you the “Points Goal” column.
- By multiplying the Points Value column by a Units Sold column, a Points Achieved column was also created.
- Variance columns were created to display the difference between the Points Achieved and the Points Goal.
- The “Always Sum Total” box was checked on the Points Goal, Points Achieved, and Points Variance columns to cause a total to display. However, the total cannot be forced to display on the percentage variance.

Vendor Rept Code	Points Value	Goal	Points Goal	Points Achieved	Points Variance	Points Pct Var	
Totals		7,703	79,584	16,142	-63,441		
BR COHN CHARDONNAY -- 01	10	153	1,525	499	-1,026	-67.3	
BR COHN MERLOT -- 02	12	98	1,170	217	-953	-81.5	
BR COHN OLIVE HILL CAB -- 04	15	464	6,956	1,064	-5,892	-84.7	
BR COHN PINOT NOIR -- 00	15	8	113	83	-30	-26.7	
BR COHN SILVER LABEL CAB -- 03	10	6,965	69,650	14,235	-55,415	-79.6	
BR COHN SPECIAL SEL CAB -- 05	10	5	50	10	-40	-80.0	
BR COHN ZINFANDEL -- 11	10	12	120	35	-85	-70.8	

What is an External QuickView?



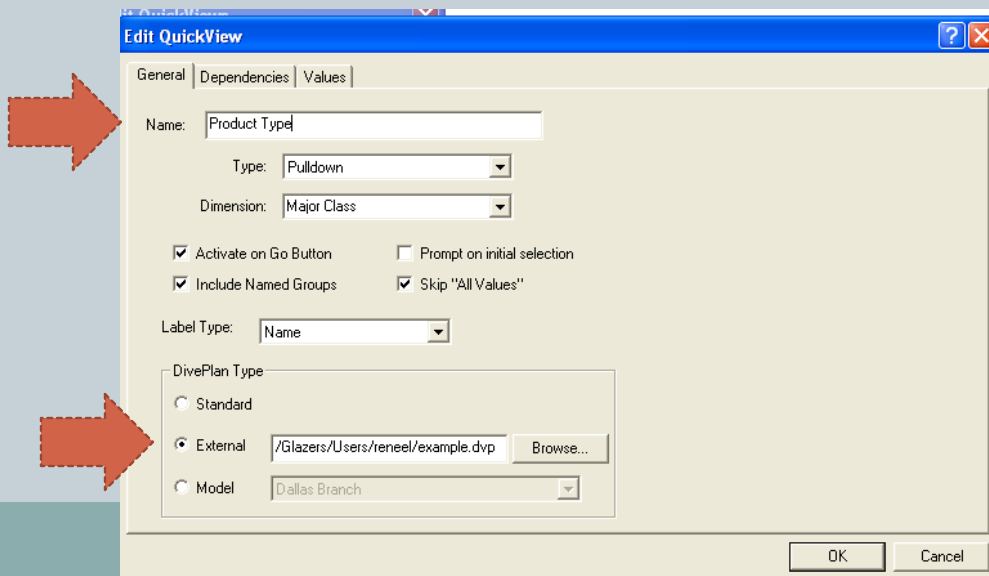
- Model and standard QuickViews affect which values appear in the Dive Window and the data that displays in the columns.
- External QuickViews do not affect which values appear in the Dive Window, and they will only control the data that appears in specifically defined columns (Parameterized Calcs).
- Ultimately, an External QuickView can make a Marker much more flexible and simpler to get info from, for the end user.



How Do I Make an External QuickView?



- To create an External QuickView, you need a Model or DivePlan to support it.
- If you have created Named Groups or User Defined Dimensions to be used in the External QuickView, save the file containing them as a DivePlan.
- Select Edit > Edit QuickViews, and click the Add button.
- Select the External DivePlan type, and click the Browse button. Navigate to the appropriate file and select it.
- You may wish to select the “Activate on Go Button” and the “Include Named Groups” options, but you should always select the “Skip “All Values”” option, as “All Values” will not be applicable for an External QuickView reference as shown here.



External QuickViews (cont'd)



- In the example below, you can see a Marker that contains an External QuickView.
- The value selected in the Product Type External QuickView has no effect on which customers appear in the window.
- The Cases column does not contain a reference to the External QuickView, and therefore the data will not change no matter which value is selected.
- The Cases by Product Type column does contain a reference to the External QuickView, and will therefore change according to the selected value.
- Now you need to know how to create that reference – otherwise known as a Parameterized Calc.

Product Type: NON-ALCOHOLICS Go

WH Customer	Cases	Cases by Product Type
Totals	4,375	100
ALI BABA -- DAL -- 50192	22	
ANDIAMO -- DAL -- 49897	18	
ANDREA'S -- DAL -- 46449	24	
ANDREA'S II RESTAURANT -- DAL -- 46317	26	
ANGELO'S SPAGHETTI HOUSE -- DAL -- 49943	50	1
ANTONIO RISTORANTE -- DAL -- 78406	38	
ARCODORO & POMODORO @ CRESCENT -- DAL -- 47943	13	
ASTORIA COFFEE -- DAL -- 48117	4	
AVANTE RISTORANTE -- DAL -- 49959	47	
AVANTI CAFE -- DAL -- 77796	3	
AVANTI EURO BISTRO -- DAL -- 78829	0	0
AVENTINO'S RISTORANTE -- DAL -- 95759	6	
BELLA ITALIA WEST -- DAL -- 95525	6	
BELLINI'S ITALIAN CAFE & PIZZA -- DAL -- 77953	11	1
BELLINI'S ITALIAN RESTAURANT -- DAL -- 48142	83	11
BIRRAPORETTI'S -- DAL -- 48678	39	3
BRIO TUSCAN GRILLE -- DAL -- 48755	29	

What is a Parameterized Calc?



- A Parameterized Calc is a column calculation that contains a reference to an External QuickView.
- If the External QuickView contains the values of Dimensions like Brand or Product Type, then the reference is somewhat similar to that of a Named Group.

Named Group: Total[Cases YTD, Major Class="NON-ALCOHOLICS"]

Parameterized Calc: Total[Cases YTD, Major Class=\$(Product Type)]



How Do You Create a Parameterized Calc?



- Step One in creating a Parameterized Calc is to create an External QuickView. This will contain the values that control the column definition.
- An External QuickView needs a DivePlan or Model as its data source.
- You can just save a DivePlan from the Marker you are using.



How Do You Create a Parameterized Calc?



- What if there is not a simple Model or DivePlan to reference?
- You can create a single-Dimension Model from a text file.
- This can provide better performance if the Model containing the Dimension to be used is large. It can be limited to just those values and Named Groups you want.
- You do risk creating a Dimension value list that does not match the data in the Marker Model, so take care.
- Use DI-Diver functionality or Visual Builder to create the Model.



Saving the DivePlan



- If you will be using Named Group values in your External QuickView, they need to exist in both the DivePlan that you save and the Marker you are working with.
- The same rule applies to User Defined Dimensions – before saving the DivePlan, create and edit your User Defined Dimensions and then save the DivePlan.

The screenshot shows a dialog box titled "Edit Named Groups" with a close button (X) in the top right corner. The dialog is divided into several sections:

- List Group:** A dropdown menu showing "Last 3 Mos TY". To its right are "Edit Group" and "Remove" buttons.
- Group Dim:** A dropdown menu showing "Last 3 Mos TY". To its right is a "Define Group By:" dropdown menu set to "Month Range".
- From:** A section with a dropdown menu showing "This Month". Below it are two rows of controls:
 - Row 1: A radio button selected for "Current", followed by "+/-" and a text box containing "-3", and "Month(s)". To the right is a "Year" dropdown set to "Current" and another "+/-" text box.
 - Row 2: A radio button for "Month", followed by a dropdown menu.
- To:** A section with a dropdown menu showing "This Month". Below it are two rows of controls:
 - Row 1: A radio button selected for "Current", followed by "+/-" and a text box containing "-1", and "Month(s)". To the right is a "Year" dropdown set to "Current" and another "+/-" text box.
 - Row 2: A radio button for "Month", followed by a dropdown menu.
- Bottom:** Two buttons: "Edit group and close" and "Close".

Creating the External QuickView



- To create the External QuickView, go to Edit > Edit (or Add) QuickViews, and click the Add button.
- Set the DivePlan Type to “External” and use the Browse button to navigate to the appropriate DivePlan.
- Select the appropriate Dimension. If you are going to use the same Dimension for more than one QuickView, type a different name for the QuickView in the Name field, like Period 1.
- Select any desired options, but always “Skip “All Values””.
- Go to the Values tab if you want to Include or Exclude any values.
- No dependencies should be set for External QuickViews.
- Click OK.
- Add another QuickView if appropriate by repeating the above steps, except that a different name should be typed in the Name field, like Period 2.

The screenshot shows the 'Edit QuickView' dialog box with the 'General' tab selected. The 'Name' field contains 'Period 1'. The 'Type' is set to 'Pull-down' and the 'Dimension' is 'Year-Month'. The 'Activate on Go Button' and 'Include Named Groups' checkboxes are checked. The 'Skip "All Values"' checkbox is also checked. The 'Label Type' is set to 'Name'. Under 'DivePlan Type', the 'External' option is selected, with the path '/Glazers/Users/reneel/DI UGC/ly vs' and a 'Browse...' button. The 'Model' dropdown is set to 'Dallas Branch'. 'OK' and 'Cancel' buttons are at the bottom.

The screenshot shows the 'Edit QuickView' dialog box with the 'General' tab selected. The 'Name' field contains 'Period 2'. The 'Type' is set to 'Pull-down' and the 'Dimension' is 'Year-Month'. The 'Activate on Go Button' and 'Include Named Groups' checkboxes are checked. The 'Skip "All Values"' checkbox is also checked. The 'Label Type' is set to 'Name'. Under 'DivePlan Type', the 'External' option is selected, with the path '/Glazers/Users/reneel/DI UGC/ly vs' and a 'Browse...' button. The 'Model' dropdown is set to 'Dallas Branch'. 'OK' and 'Cancel' buttons are at the bottom.

Using the QuickViews



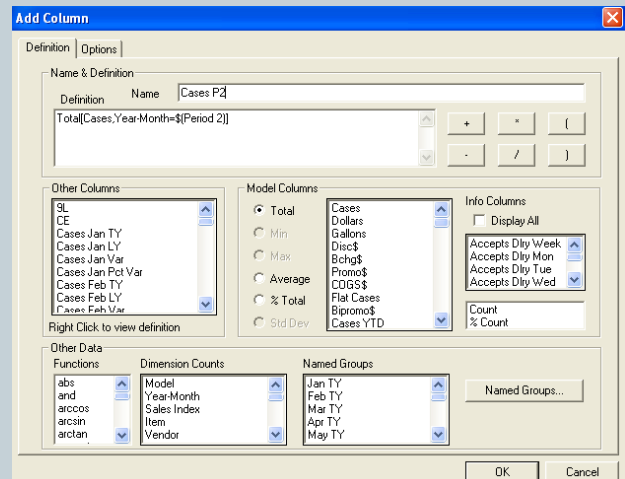
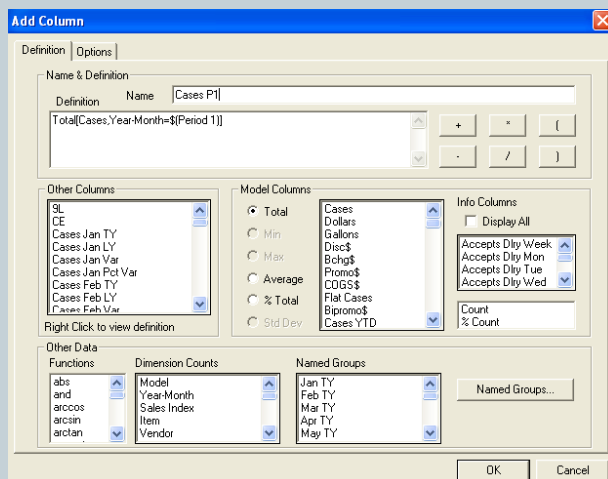
- Before creating the new columns, go ahead and select values from the new QuickViews. If there are any regular columns in the Dive Window (i.e., Cases YTD), they will not be affected by any selections you make in the External QuickViews.
- Note that Model QuickViews (TDLinx Foodtype Desc) can exist alongside External QuickViews.

TDLinx Foodtype Desc Japanese / Sush		Period 1 Last Month TY	Period 2 Last Month LY	Go
WH Customer [Dallas Branch-Dive A]				
WH Customer				
Totals				
ASAHI TEPPENYAKI & SUSHI -- DAL --	48363			
AVOCADO CALIFORNIA ROLL& SUSHI -- DAL --	47234			
AWAJI JAPANESE RESTAURANT -- DAL --	77424			
BENIHANA -- DAL --	49506			
BENIHANA -- DAL --	77478			
BLUE OCEAN SUSHI -- DAL --	99926			
CAFE HANA -- DAL --	99959			
CHAUCER'S STEAK & SUSHI -- DAL --	48406			
CHAUCER'S SUSHI & GRILL -- DAL --	49505			
COOL BAMBOO -- DAL --	48369			
COWTOWN SUSHI -- DAL --	99586			
DALLAS FISH MARKET -- DAL --	48104			
DEEP SUSHI -- DAL --	77927			

Creating the Column(s)



- After clicking on any column in the Add Column dialog box, you will need to manually type in the modification.
- Between the column definition and the close bracket, type a comma. Then type the name of the Dimension or User Defined Dimension used to create the External QuickView and an equals sign followed by a \$, and the name of the QuickView in parentheses:
Total[Cases,Year-Month=\$(Period 1)]
- Change the name of the column appropriately.
- Repeat for 2nd column, if appropriate, referencing the 2nd QuickView.



Using the Marker



- Now you have a Marker in which you can use the QuickViews to easily select varying time frames.
- By selecting different values in the QuickViews, you change the column definitions.
- This is more flexible than setting up multiple columns in which each column references a specific time frame.
- Variance columns can be created, using the Parameterized Calc columns.
- This will take up less space than the 4 QuickViews required with Time Series QuickViews, and may be simpler for occasional Diver users.

TDLinx Foodtype Desc Japanese / Sush Period 1 Last Month TY Period 2 Last Month LY Go					
WH Customer [Dallas Branch-Dive A]					
WH Customer	Cases P1	Cases P2	Cases Var	Cases Pct Var	
Totals	588	670	-82	-12.2	
ASAHI TEPPENYAKI & SUSHI -- DAL -- 48363	3		3		
AVOCADO CALIFORNIA ROLL& SUSHI -- DAL -- 47234	3		3		
AWAJI JAPANESE RESTAURANT -- DAL -- 77424					
BENIHANA -- DAL -- 49506	16	31	-15	-48.4	
BENIHANA -- DAL -- 77478					
BLUE OCEAN SUSHI -- DAL -- 99926	0	7	-7	-100.0	
CAFE HANA -- DAL -- 99959		5	-5	-100.0	
CHAUCER'S STEAK & SUSHI -- DAL -- 48406		24	-24	-100.0	
CHAUCER'S SUSHI & GRILL -- DAL -- 49505		35	-35	-100.0	
COOL BAMBOO -- DAL -- 48369		3	-3	-100.0	

More Ways to Use External QuickViews and Parameterized Calcs



- Using the same Marker with the Period External QuickViews, additional External QuickViews can be inserted to make the Marker even more flexible.
- Instead of using Named Groups to build brand-specific columns (i.e., Cases Sake Last Month), another External QuickView could be added to allow the user to select Brands as well as time frames.
- First, if you want any Named Groups to show up in the Brand External QuickView, build them and re-save the DivePlan.
- Then add an External QuickView for Brand.

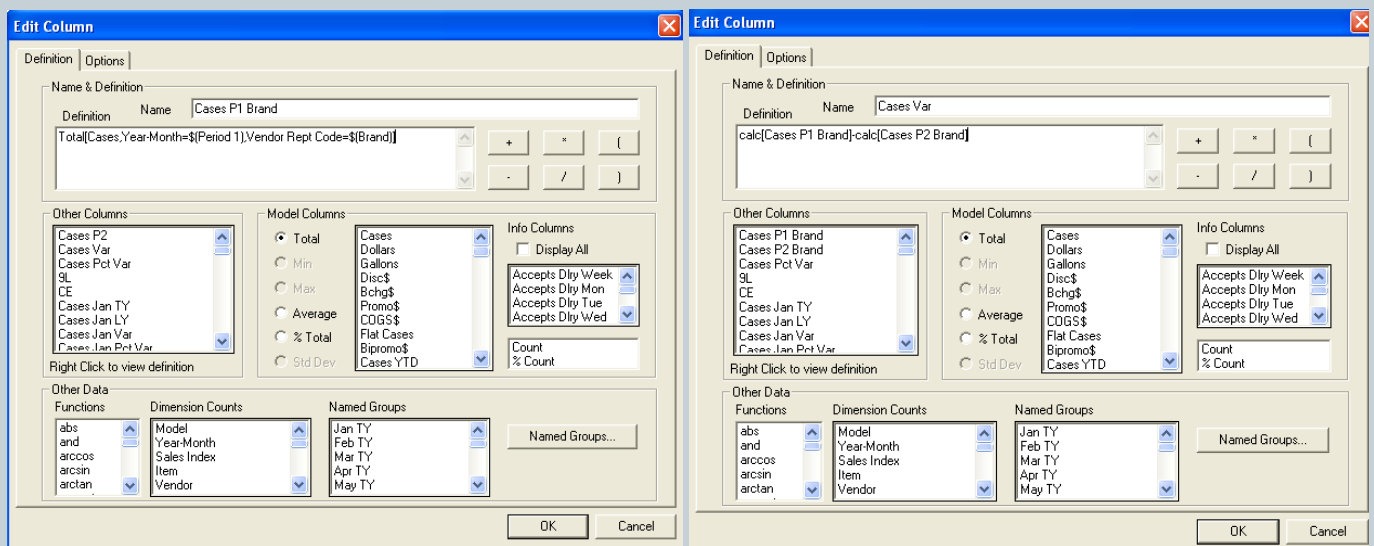
The screenshot shows the 'Edit QuickView' dialog box with the following settings:

- General | Dependencies | Values
- Name: Brand
- Type: Pulldown
- Dimension: Vendor Rept Code
- Activate on Go Button
- Prompt on initial selection
- Include Named Groups
- Skip "All Values"
- Label Type: Name
- DivePlan Type:
 - Standard
 - External: /Glazers/Users/reneel/DI UGC/ty vs (with a Browse... button)
 - Model: Dallas Branch
- Buttons: OK, Cancel

Using 2 External QuickViews in a Parameterized Calc



- The syntax for adding in the new Parameterized Calc is the same as before:
 ,Dimension Name=\$ (Quickview Name)
- After adding to the Cases P1 column, rename the column.
- Copy the reference and paste it into the Cases P2 column. Rename the column.
- If variance columns have been created, change the column names in the definition.



Using 2 Types of External QuickViews in a Parameterized Calc



- Now we have a flexible tracker that allows the user to select any time frame and any brand, instead of being hard-coded to specific periods and/or Named Groups.

TDLinx Foodtype Desc Japanese / Sush						Period 1 Last Month TY		Period 2 Last Month LY		Brand Sake Brands		Go
WH Customer	Cases P1 Brand	Cases P2 Brand	Cases Var	Cases Pct Var								
Totals	168	177	-9	-4.9								
ASAHI TEPPENYAKI & SUSHI -- DAL -- 48363	2		2									
AVOCADO CALIFORNIA ROLL& SUSHI -- DAL -- 47234	2		2									
AWAJI JAPANESE RESTAURANT -- DAL -- 77424												
BENIHANA -- DAL -- 49506	11	16	-5	-31.3								
BENIHANA -- DAL -- 77478												
BLUE OCEAN SUSHI -- DAL -- 99926	0	4	-4	-100.0								
CAFE HANA -- DAL -- 99959		5	-5	-100.0								
CHAUCER'S STEAK & SUSHI -- DAL -- 48406												
CHAUCER'S SUSHI & GRILL -- DAL -- 49505												
COOL BAMBOO -- DAL -- 48369												
COWTOWN SUSHI -- DAL -- 99586		-1	1	100.0								
DALLAS FISH MARKET -- DAL -- 48104		3	-3	-100.0								
DEEP SUSHI -- DAL -- 77927	4	13	-9	-69.2								
EDOHANA HIBACHI & SUSHI -- DAL -- 98920	1	2	-1	-50.0								

Using \$QVVAL in the Report Format



- Although a useful, flexible tracker has been created, the column headers don't give the user any information about the values being selected in the External QuickViews.
- The Marker should be put into Report format so that the \$QVVAL syntax can be used to give the user details about the External QuickView selected values.
- \$QVVAL can be used in Report Titles and/or Column Headers.
- First, switch the Marker to the Report format and unlock it.

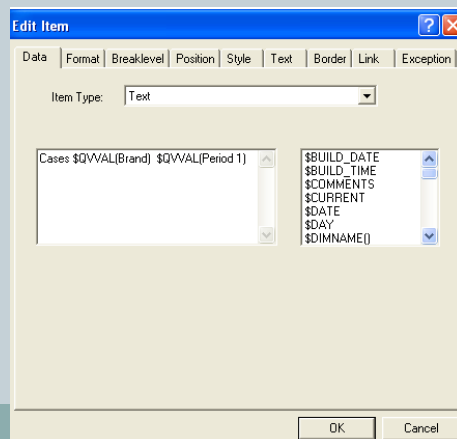
TDLinx Foodtype Desc: Japanese / Sush Period 1: Last Month TY Period 2: Last Month LY Brand: Sake Brands

WH Customer	Cases P1 Brand	Cases P2 Brand	Cases Var	Cases Pct Var
PIRANHA KILLER SUSHI -- DAL -- 98960	15	9	6	66.7
JINBEH JAPANESE RESTAURANT -- DAL -- 49393	11		11	
BENIHANA -- DAL -- 48506	11	16	-5	-31.3
SUSHI AXIOM WEST 7TH -- DAL -- 50776	10		10	
KOBE STEAKS OF ADDISON -- DAL -- 83125	10	11	-1	-9.1
SAKE TORO -- DAL -- 48691	8	9	-1	-10.2
SUSHI TAO -- DAL -- 48743	7	6	1	16.7
TEPPO YAKITORI SUSHI BAR -- DAL -- 77689	7	4	3	75.0
JINBEH JAPANESE RESTAURANT -- DAL -- 78159	6	9	-3	-33.3
SUSHI AXIOM HIBACHI & BAR -- DAL -- 50231	6		6	
SUSHI ZUSHI OF DALLAS LLC -- DAL -- 46656	5	1	4	306.2

Using \$QVVAL in the Report Format



- Double-click the Cases P1 Brand column header to select it.
- Change the Item Type pulldown value to Text.
- The syntax for using the \$QVVAL is:
\$QVVAL(QuickView Name)
- Type in the text as shown in the example below.
- Note that there needs to be an extra space between the \$QVVAL(Brand) and \$QVVAL(Period 1); otherwise the values will run together.
- Repeat for the Cases P2 column header, but this time use \$QVVAL(Period 2).



Using \$QVVAL in the Report Format



- Now the Report format gives you all the information you need about the values selected in the External QuickViews.
- Changing the values in the External QuickViews will automatically cause the column headers to update – no maintenance required!

TDLinx Foodtype Desc: Japanese / Sush

WH Customer	Cases Sake Brands Last Month TY	Cases Sake Brands Last Month LY	Cases Var	Cases Pct Var
PIRANHA KILLER SUSHI -- DAL -- 98960	15	9	6	66.7
JINBEH JAPANESE RESTAURANT -- DAL -- 49393	11		11	
BENIHANA -- DAL -- 49506	11	16	-5	-31.3
SUSHI AXIOM WEST 7TH -- DAL -- 50776	10		10	
KOBE STEAKS OF ADDISON -- DAL -- 83125	10	11	-1	-9.1
SAKE TORO -- DAL -- 48691	8	9	-1	-10.2
SUSHI TAO -- DAL -- 48743	7	6	1	16.7
TEPPO YAKITORI SUSHI BAR -- DAL -- 77689	7	4	3	75.0
JINBEH JAPANESE RESTAURANT -- DAL -- 78159	6	9	-3	-33.3
SUSHI AXIOM HIBACHI & BAR -- DAL -- 50231	6		6	
SUSHI ZUSHI OF DALLAS LLC -- DAL -- 46656	5	1	4	306.2

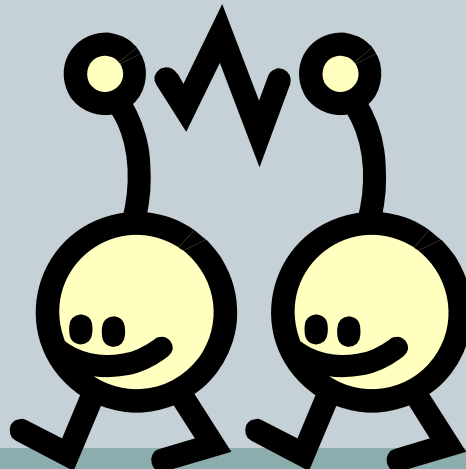
TDLinx Foodtype Desc: Japanese / Sush

WH Customer	Cases Sake Brands This Month	Cases Sake Brands SMLY	Cases Var	Cases Pct Var
PIRANHA KILLER SUSHI -- DAL -- 98960	7	13	-6	-46.2
JINBEH JAPANESE RESTAURANT -- DAL -- 49393	5		5	
CAFE HANA -- DAL -- 99959	4	4	0	0.0
DEEP SUSHI -- DAL -- 77927	3	3	0	11.1
WASABI SUSHI -- DAL -- 99950	3	14	-11	-78.6
RA SUSHI BAR RESTAURANT -- DAL -- 48744	3	6	-3	-50.0

Creating User Defined Dimensions to Match Column Headers



- Now that you have seen how to create External QuickViews and use the values in Parameterized Calcs, we will try a new way to use User Defined Dimensions, which will then be utilized in External QuickViews.
- Just as External QuickViews/Parameterized Calcs can help reduce the number of columns with specific Named Groups, there is a way to reduce the number of columns with different measures, like Cases and Dollars.
- This involves creating User Defined Dimensions that exist solely for the purpose of matching column headers in a Diver Marker.



Creating a “Measure” User Defined Dimension



- Start by diving on a Dimension – pretty much any Dimension. The Dimension that you choose to build the UDD with is meaningless. The only question is whether the Dimension you choose has enough values to match your options.
- In the example below, the Dimension selected has 5 values, but the UDD only contains 2 values: Cases and Dollars.
- Commit and close the UDD, and save the file as a DivePlan.

Major Class	Cases	Dollars
Totals	9,955,283	877,566,450
BEER	632,910	14,924,094
COOLERS	239,544	6,678,845
NON-ALCOHOLICS	203,275	5,042,001
SPIRITS	3,122,272	467,058,489
WINES	5,757,283	383,863,021

Create User Defined Dimension

Name:

Undefined Values:

OK Cancel

Major Class	Measure	Cases	Dollars
Totals	Totals	9,955,283	877,566,450
BEER	Cases	632,910	14,924,094
COOLERS	Dollars	239,544	6,678,845
NON-ALCOHOLICS		203,275	5,042,001
SPIRITS		3,122,272	467,058,489
WINES		5,757,283	383,863,021

Using the UDD in the External QuickView



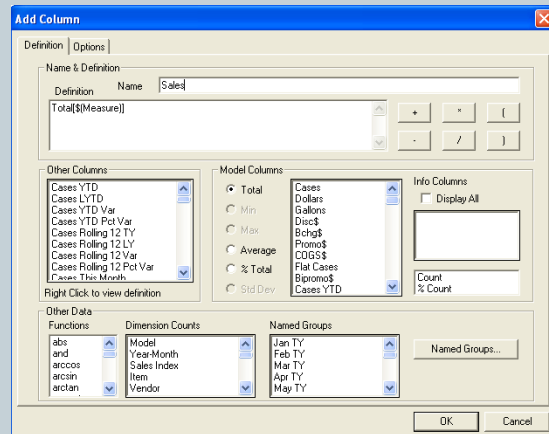
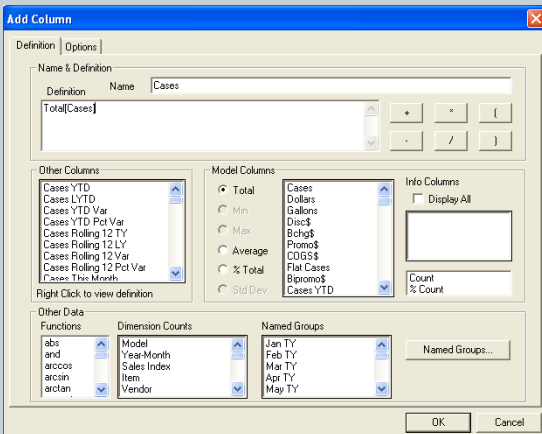
- Now we need columns that match up with the values in the UDD – the values of the Measure UDD are Cases and Dollars, so columns with those names have been added to the Dive Window.
- Then create an External QuickView for Measure. You will have to type “Measure” into the Dimension field. The options for “Activate on Go Button” and “Skip “All Values”” have been selected.
- You may also wish to switch to the Values tab to exclude the <Blank Value> so that it does not display in the QuickView.

TDLinx Foodtype Desc	Cases	Dollars
Totals	42,847	4,052,718
American	5,761	500,268
Asian (Other)	1,270	108,635
BBQ/Ribs	317	28,464
Chinese	434	37,249
Deli	46	6,362
Diner	10	439
Donut	2	66
European	114	7,677
French	606	57,601
Hamburger	2	102
Indian	6	513
Italian	5,943	516,460
Japanese / Sush	1,012	79,059
Korean	43	3,556
Latin	597	48,131
Mexican	793	64,423
Middle Eastern	198	18,338
None	7,174	663,341
Pizza	1,560	129,427
Seafood	2,337	259,155
Southwestern	704	80,643
Steak	4,047	498,892
Thai	201	15,549
Varied Menu	9,599	923,924
Vietnamese	71	4,445

Building the Parameterized Calc



- Both Cases and Dollars are Model Columns. Bring up the Add Column dialog box, and press either one. Then replace “Cases” with \$(Measure).
- Note that, in this case, there is no need for an equals sign, as there was with the Brand or Period Parameterized Calcs.
- If you want to change any settings, remember to select the Options tab.



New Sales Column



- Now you can remove the Cases and Dollars columns from the Dive Window.
- Changing the selected value in the Measure QuickView will cause the column to toggle from one data element to another.
- This can be much easier for an end user than switching out the columns.

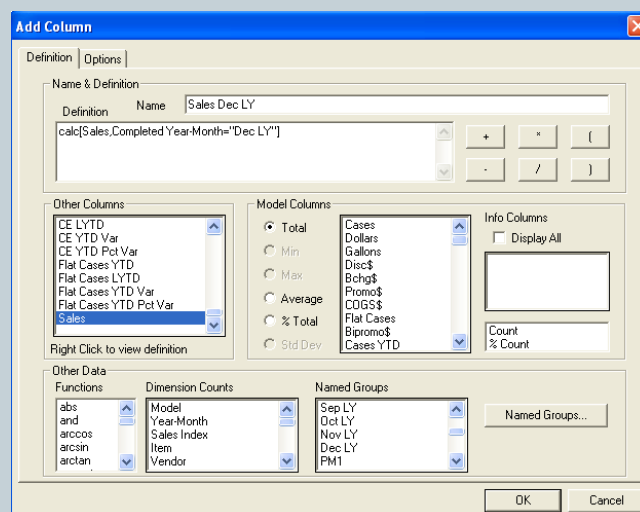
Measure Cases <input type="button" value="Go"/>	
TDLinx Foodtype Desc	Sales
Totals	42,847
American	5,761
Asian (Other)	1,270
BBQ/Ribs	317
Chinese	434
Deli	46
Diner	10
Donut	2
European	114
French	606
Hamburger	2
Indian	6
Italian	5,943
Japanese / Sush	1,012
Korean	43

Measure Dollars <input type="button" value="Go"/>	
TDLinx Foodtype Desc	Sales
Totals	4,052,718
American	500,268
Asian (Other)	108,635
BBQ/Ribs	28,464
Chinese	37,249
Deli	6,362
Diner	439
Donut	66
European	7,677
French	57,601
Hamburger	102
Indian	513
Italian	516,460
Japanese / Sush	79,059
Korean	3,556

Sales Column with Named Groups



- It is possible to use the new “Sales” column in conjunction with Named Groups for time periods, as in the example below. The column will show either Cases or Dollars for Dec LY, depending on which value is selected in the Measure QuickView.
- Users would need to be educated that only “Sales” columns will change according to the Measure QuickView. Any previously built columns, like Cases YTD will not be affected by the Measure QuickView.



La Pièce de Resistance



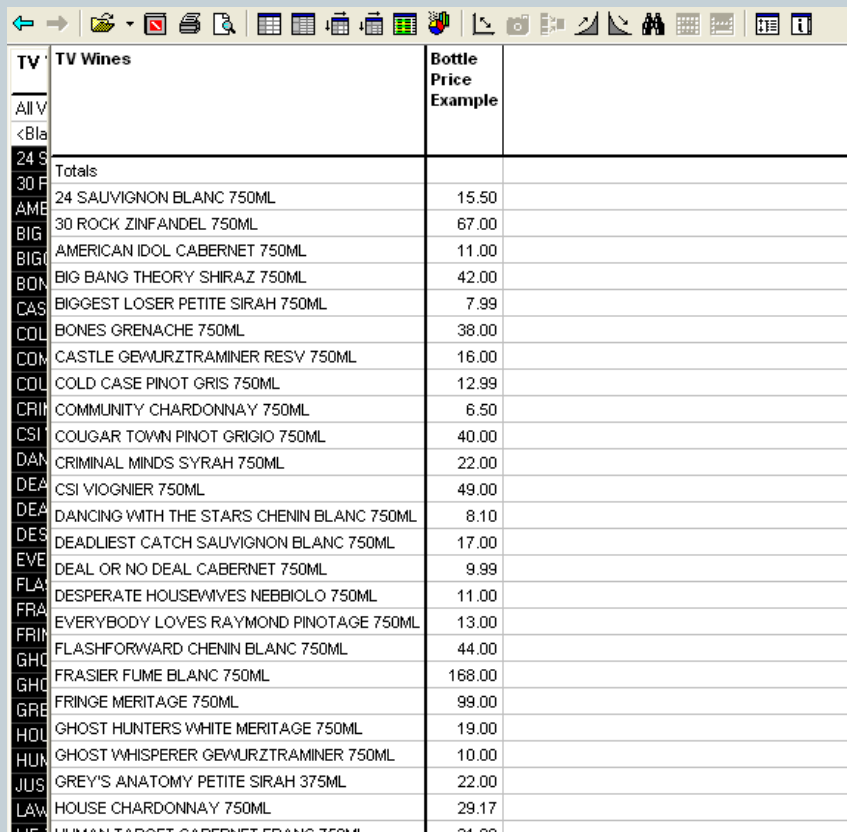
- OK, we have covered If calcs, User Defined Dimensions, External QuickViews, \$QVVAL, and Parameterized Calcs.
- Now we're going to build a report that brings them all together.



Bottle Price Range Report



- The report below is a list of (quite phony) wines with their prices. I want to set up the Report so that any user could choose specific bottle price ranges without knowing how to use the “Find” option.



TV	TV Wines	Bottle Price Example
All V		
<Bla		
24 S	Totals	
30 F	24 SAUVIGNON BLANC 750ML	15.50
AME	30 ROCK ZINFANDEL 750ML	67.00
BIG	AMERICAN IDOL CABERNET 750ML	11.00
BIG	BIG BANG THEORY SHIRAZ 750ML	42.00
BON	BIGGEST LOSER PETITE SIRAH 750ML	7.99
CAS	BONES GRENACHE 750ML	38.00
COL	CASTLE GEWURZTRAMINER RESV 750ML	16.00
COL	COLD CASE PINOT GRIS 750ML	12.99
CRIM	COMMUNITY CHARDONNAY 750ML	6.50
CSI	COUGAR TOWN PINOT GRIGIO 750ML	40.00
DAN	CRIMINAL MINDS SYRAH 750ML	22.00
DEA	CSI VIOGNIER 750ML	49.00
DEA	DANCING W/TH THE STARS CHENIN BLANC 750ML	8.10
DES	DEADLIEST CATCH SAUVIGNON BLANC 750ML	17.00
EVE	DEAL OR NO DEAL CABERNET 750ML	9.99
FLA	DESPERATE HOUSEWIVES NEBBIOLO 750ML	11.00
FRA	EVERYBODY LOVES RAYMOND PINOTAGE 750ML	13.00
FRID	FLASHFORWARD CHENIN BLANC 750ML	44.00
GHO	FRASIER FUME BLANC 750ML	168.00
GHO	FRINGE MERITAGE 750ML	99.00
GRE	GHOST HUNTERS WHITE MERITAGE 750ML	19.00
HOL	GHOST WHISPERER GEWURZTRAMINER 750ML	10.00
HUM	GREY'S ANATOMY PETITE SIRAH 375ML	22.00
JUS	HOUSE CHARDONNAY 750ML	29.17
LAW	HUMAN TARGET CABERNET FRANC 750ML	24.00

If/And Calculations



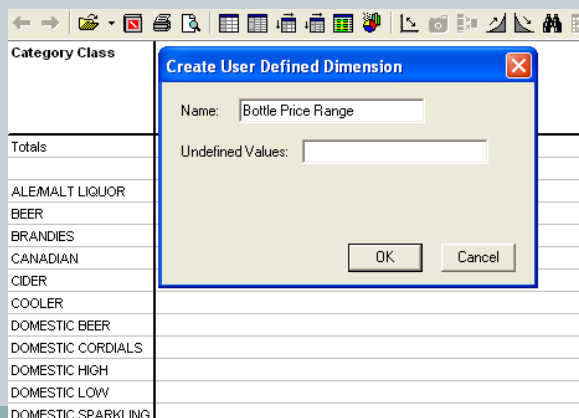
- Create separate columns for the specific bottle price ranges: \$10 or less, \$10-\$20, \$20-\$50, and \$50 or more. If/And calculations are needed here:
- `if(calc[Bottle Price Example]<=10,calc[Bottle Price Example])`
- `if(and(calc[Bottle Price Example]>10,calc[Bottle Price Example]<=20),calc[Bottle Price Example])`
- `if(and(calc[Bottle Price Example]>20,calc[Bottle Price Example]<=50),calc[Bottle Price Example])`
- `if(calc[Bottle Price Example]>50,calc[Bottle Price Example])`

TV Wines	Bottle Price Example	\$10 or less	\$10 to \$20	\$20 to \$50	\$50 or More	
Totals						
24 SAUVIGNON BLANC 750ML	15.50	15.50				
30 ROCK ZINFANDEL 750ML	67.00				67.00	
AMERICAN IDOL CABERNET 750ML	11.00	11.00				
BIG BANG THEORY SHIRAZ 750ML	42.00			42.00		
BIGGEST LOSER PETITE SIRAH 750ML	7.99	7.99				
BONES GRENACHE 750ML	38.00			38.00		
CASTLE GEWURZTRAMINER RESV 750ML	16.00		16.00			
COLD CASE PINOT GRIS 750ML	12.99		12.99			
COMMUNITY CHARDONNAY 750ML	6.50	6.50				
COUGAR TOWN PINOT GRIGIO 750ML	40.00			40.00		
CRIMINAL MINDS SYRAH 750ML	22.00			22.00		
CSI VIOGNIER 750ML	49.00			49.00		
DANCING WITH THE STARS CHENIN BLANC 750ML	8.10	8.10				
DEADLIEST CATCH SAUVIGNON BLANC 750ML	17.00		17.00			
DEAL OR NO DEAL CABERNET 750ML	9.99	9.99				
DESPERATE HOUSEWIVES NEBBIOLO 750ML	11.00		11.00			
EVERYBODY LOVES RAYMOND PINOTAGE 750ML	13.00		13.00			
FLASHFORWARD CHENIN BLANC 750ML	44.00			44.00		
FRASIER FUME BLANC 750ML	168.00				168.00	
FRINGE MERITAGE 750ML	99.00				99.00	

Creating a Bottle Price Range UDD



- Now we need to create a User Defined Dimension that will contain values to match the Bottle Price Range column headers.
- It does not matter which Dimension is used to create the UDD, as long as it has enough values.
- The UDD is named “Bottle Price Range” and the values entered must **exactly** match the column headers.
- Save this file as a DivePlan.
- Re-save the Marker so that the UDD is integrated into the Report.

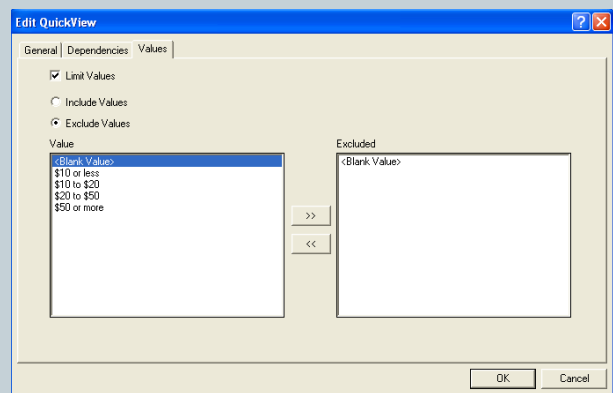
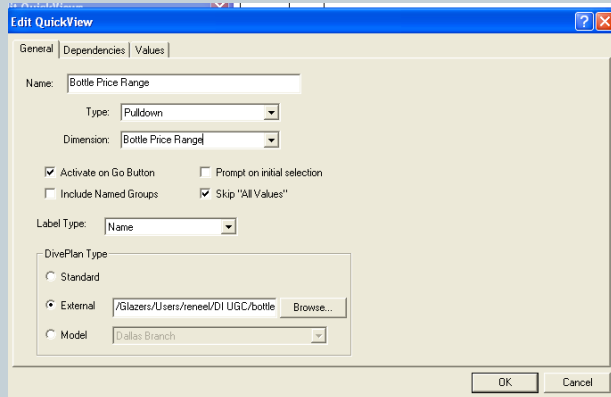


Category Class	Bottle Price Range	
Totals	Totals	
ALE/MALT LIQUOR	\$10 or less	
BEER	\$10 to \$20	
BRANDIES	\$20 to \$50	
CANADIAN	\$50 or more	
CIDER		
COOLER		
DOMESTIC BEER		
DOMESTIC CORDIALS		

UDD External QuickView



- Create an External QuickView. Select the DivePlan that contains the Bottle Price Range User Defined Dimension.
- Be sure to select the option for “Skip “All Values”” and exclude the <Blank Value> so that only the UDD values appear in the QuickView.



Bottle Price Range Calc



- Now that we have the External QuickView containing the UDD values for the bottle price ranges, we can make the Parameterized Calc.
- Bring up the Add Column dialog box and select one of the price range columns in the Other Columns section.
- Replace the name of the column with the External QuickView reference, as shown below:
calc[\$(Bottle Price Range)]
- Name the column “Selected Range” and click OK.

Bottle Price Example	\$10 or less	\$10 to \$20	\$20 to \$50	\$50 or More
Totals				
24 SAUVIGNON BLANC 750ML	15.50	15.50		
30 ROCK ZINFANDEL 750ML	67.00			67.00
AMERICAN IDOL CABERNET 750ML	11.00	11.00		
BIG BANG THEORY SHIRAZ 750ML	42.00		42.00	
BIGGEST LOSER PETITE SIRAH 750ML	7.99	7.99		
BONES GRENACHE 750ML	38.00		38.00	
CASTLE GEWURZTRAMINER RESV 750ML	16.00	16.00		
COLD CASE PINOT GRIS 750ML	12.99	12.99		
COMMUNITY CHARDONNAY 750ML	6.50	6.50		

Focusing the Rows



- The other price columns can now be removed (not deleted) from the Dive Window.
- In order to remove the items that do not fit into the selected Range, a simple Find statement is needed.
- Click the Find option on the toolbar. Select the options to focus on “Non-Empty” rows, and click OK.
- Now try selecting some of the other values in the Bottle Price Range, and see what happens.

The screenshot shows a software interface with a table of wine data. A dialog box titled "Find Numbers in Selected Range" is open over the table. The dialog box has the following fields and options:

- Find:** A text input field containing "50".
- Action on Find:** Radio buttons for "Focus" (checked), "Group", and "Group with Others".
- Find others:** A checkbox for "Save in Marker" (checked).
- Find by:** Radio buttons for "Expression", "Non-Empty" (selected), "First", and "Last".
- Items:** A text input field containing "10".
- Advanced Find...:** A button at the bottom right.

The background table shows a list of wine bottles with their names and prices. The "Selected Range" column is highlighted in black. The "Bottle Price Range" is set to "\$10 or less".

TV Wines		Selected Range
Totals		
24 SAUVIGNON BLANC 750ML		
30 ROCK ZINFANDEL 750ML		
AMERICAN IDOL CABERNET 750ML		
BIG BANG THEORY SHIRAZ 750ML		
BIGGEST LOSER PETITE SIRAH 750ML	7.99	
BONES GRENACHE 750ML		
CASTLE GEMURZTRAMINER RESV 750ML		
COLD CASE PINOT GRIS 750ML		
COMMUNITY CHARDONNAY 750ML	6.50	
COUGAR TOWN PINOT GRIGIO 750ML		
CRIMINAL MINDS SYRAH 750ML		
CSI VIOGNIER 750ML		
DANCING WITH THE STARS CHENIN BLANC 750ML	8.10	
DEADLIEST CATCH SAUVIGNON BLANC 750ML		
DEAL OR NO DEAL CABERNET 750ML	9.99	
DESPERATE HOUSE VIVES NEBBIOLO 750ML		
EVERYBODY LOVES RAYMOND PINOTAGE 750ML		

TV Wines		Selected Range
Subtotals		
BIG BANG THEORY SHIRAZ 750ML	42.00	
BONES GRENACHE 750ML	38.00	
COUGAR TOWN PINOT GRIGIO 750ML	40.00	
CRIMINAL MINDS SYRAH 750ML	22.00	
CSI VIOGNIER 750ML	49.00	
FLASHFORWARD CHENIN BLANC 750ML	44.00	
GREY'S ANATOMY PETITE SIRAH 375ML	22.00	
HOUSE CHARDONNAY 750ML	29.17	
HUMAN TARGET CABERNET FRANC 750ML	21.00	
JUSTIFIED MERLOT 750ML	26.00	
LAW & ORDER PINOT GRIS 750ML	22.00	
LOST MOSCATO 750ML	48.15	
MEDIUM MOURVEDRE 750ML	36.50	
MYTHBUSTERS CHAMPAGNE 750ML	26.25	
NCIS SEMILLON 750ML	34.50	
SCRUBS MERLOT 375ML	25.00	
SOPRANOS SANGIOVESE 750ML	39.00	

\$QVVAL



- Now you have a Marker that will show you the items within each bottle price range in the QuickView.
- Click the Report toolbar button.
- In the Title section, type Items with Bottle Price \$QVVAL(Bottle Price Range). Select other options as desired and click OK.

Default Report

Report Style: Tabular

Default Tabular Report

Edit Summary Layout...

Title: Bottle Prices \$QVVAL(Bottle Price Range)

Totals: Top, Bottom

Subtotals: Top, Bottom, None

Page Numbers, Include Print Header

Date, Include Print Footer

Gridlines, Include Parent Info

Fit to Page

Load Template... OK Cancel

Bottle Price Range \$50 or more Go

Bottle Prices \$50 or more

TV Wines	Selected Range
30 ROCK ZINFANDEL 750ML	67.00
FRASIER FUME BLANC 750ML	168.00
FRINGE MERITAGE 750ML	99.00
MENTALIST SHIRAZ 750ML	88.00
SEINFELD RIESLING 750ML	52.00
SEX & THE CITY BLUSH 750ML	62.00
STAR TREK SPARKLING 750ML	91.80
THE OFFICE RIESLING 750ML	99.00
TUDORS VIOGNIER 750ML	54.70
VAMPIRE DIARIES RED BLEND 750ML	66.60
Subtotal	

Summary



- **If/And Calcs**
- **User Defined Dimension**
- **External QuickViews**
- **Parameterized Calcs**
- **\$QVVAL**
- **A combination of the above functions enabled the creation of this Marker.**

Summary



- The real secret to being a “Power User” is being able to build reports that require skill and knowledge to create, but neither skill nor knowledge to utilize.

