



Hands on with Essbase, Smartview, and Hyperion Visual Explorer

Tim Vlamis
Mike Nader
Dan Vlamis

Vlamis Software Solutions
Oracle Corporation
Vlamis Software Solutions



Vlamis Software Solutions

- Founded in 1992 in Kansas City, Missouri
- Oracle Partner and reseller since 1995
- Specializes in ORACLE-based:
 - Data Warehousing
 - Business Intelligence
 - Data Transformation (ETL)
 - Web development and portals
 - Multi-dimensional applications
- Delivers
 - Design and integrate BI and DW solutions
 - Training and mentoring
- Expert presenter at major Oracle conferences



Vlamis BIWA Presentations

Presenter	Time	Title
Dan Vlamis, Shyam Nath	Tue 8:30	BIWA Opening Remarks
Chris Claterbos	Tue 4:10-5:00	Having your Business Intelligence the Way You Want It!
Dan Vlamis	Tue 5:10	Lightning round 5-min introduction to Vlamis Software
Tim Vlamis, Dan Vlamis, Mike Nader	Wed 9:00-11:00	Hands on with Essbase, Smartview, and Hyperion Visual Explorer
Peeyush Shukla, Chris Claterbos	Wed 10:10-11:00	Investment Research and Portfolio Mngt Analytics using Oracle OLAP
Mark Thompson	Wed 11:10-13:50	Hands on With Oracle OLAP 11g for Smarter and Faster Data Warehouses



Introductions

Tim Vlamis, StrategyScape

- B.A. Yale University, Economics
- MBA, Kellogg, Northwestern University.
- Founded StrategyScape in 2008
- Active Member, NU Institute Complex Systems

Dan Vlamis, Vlamis Software Solutions

- B.A. Brown University, Computer Science
- Developer for IRI (turned into Oracle OLAP)
- Founded Vlamis Software in 1992
- Wrote portions of Oracle Sales Analyzer



Introductions

Mike Nader, Oracle

- B.S. - English, Minor – Cultural Anthropology
- Global Domain Lead – Essbase and Analytics
- 9 Years Essbase experience (Hyperion / Oracle)
 - Lead Education Development Organization
 - Field Services
 - Essbase Product Management Lead
 - Technical Sales Resource



Agenda

- Multi-dimensional Analysis
 - On-line Analytic Processing (OLAP)
 - Essbase overview
- Connecting to Essbase (hands on)
- Exploring your data (simple spreadsheet report hands-on exercise)
- Exploring your data demo
- Break
- Essbase Outlines (working with data models)
- Outline hands on exercise
- Hyperion Visual Explorer Demo



What this session is

- Hands on introductory session.
- Not a training class.
- Not an advanced demo of “tricks and tips”.



Mooers's Laws

- An information retrieval system will tend not to be used whenever it is more painful and troublesome for a customer to have information than for him not to have it.
- Where an information retrieval system tends not to be used, a more capable information retrieval system may tend to be used even less.

Calvin Mooers 1959

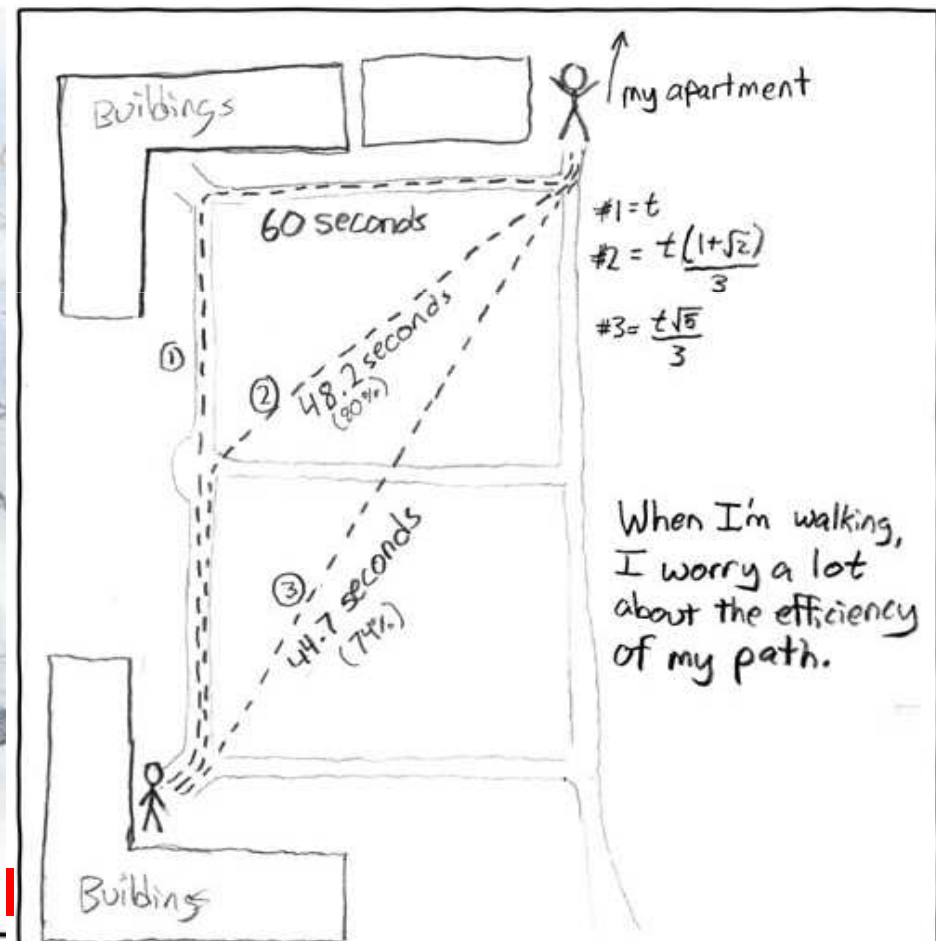
ORACLE

Primary Uses of BI Tools

Exploration



Explanation





Essbase Advantages

- Multidimensional user view of data
- Users create own reports
- Users create own measures
- Easy drill-down, rotate
- Iterative discovery process (not just reports)
- Ad-hoc analysis
- Ability to include heterogeneous data sources in analysis.

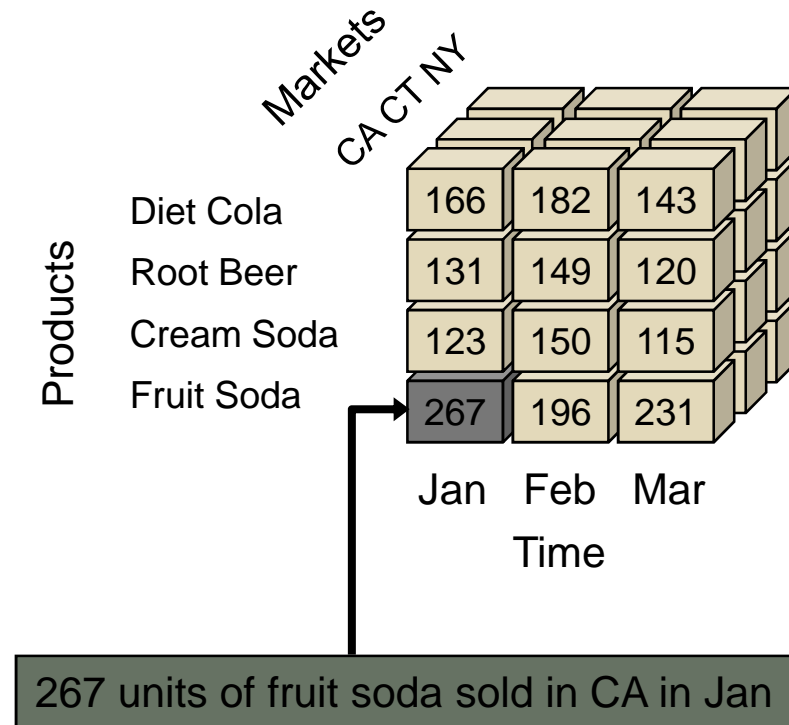


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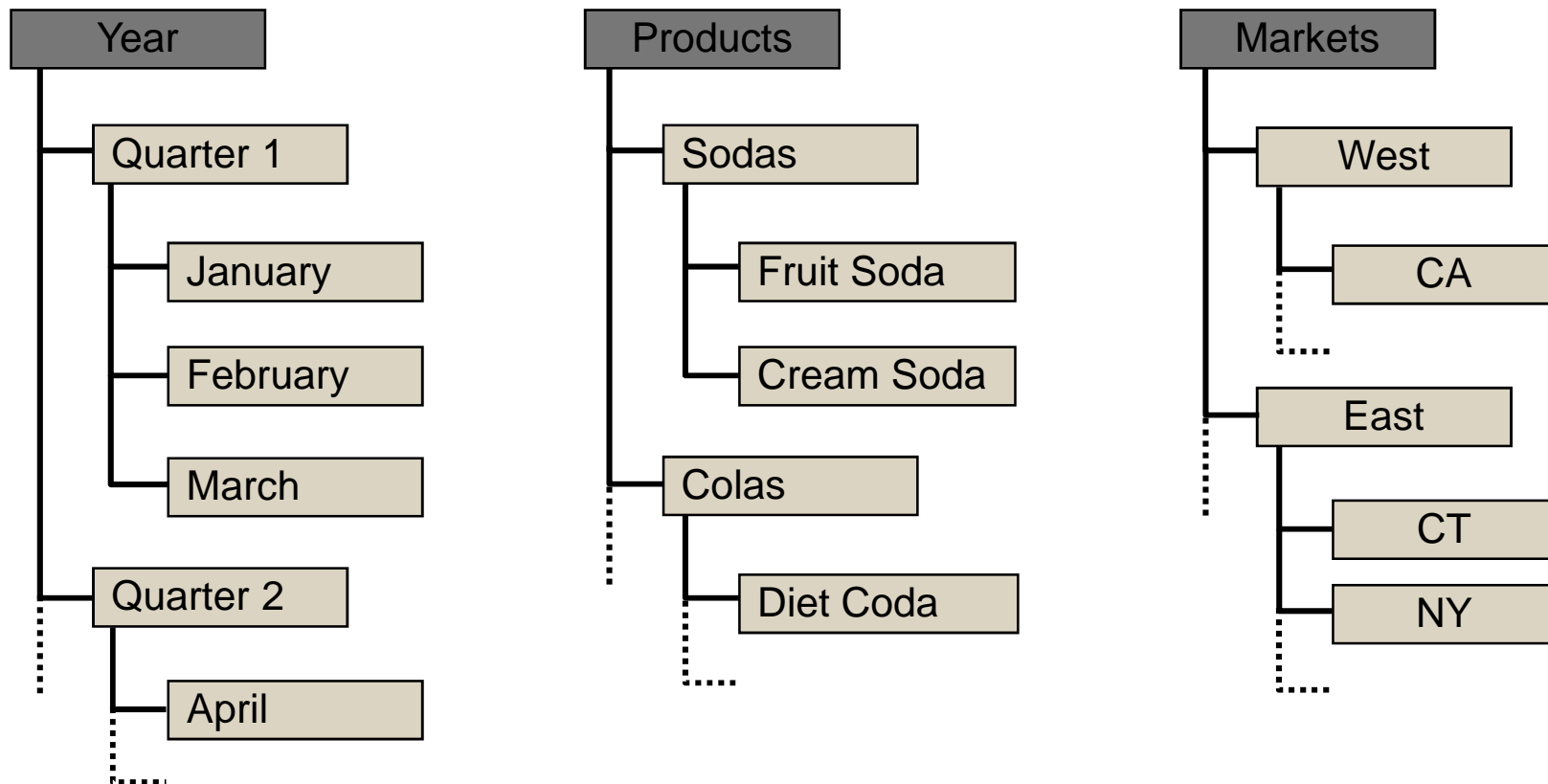
3-D Cube

- Dimensions
 - Time
 - Products
 - Markets
- Members
 - Jan, Feb, Mar (Time)
 - Diet Cola, Root Beer, Cream Soda, Fruit Soda (Products)
 - CA, CT, NY (Markets)
- Measures
 - Sales



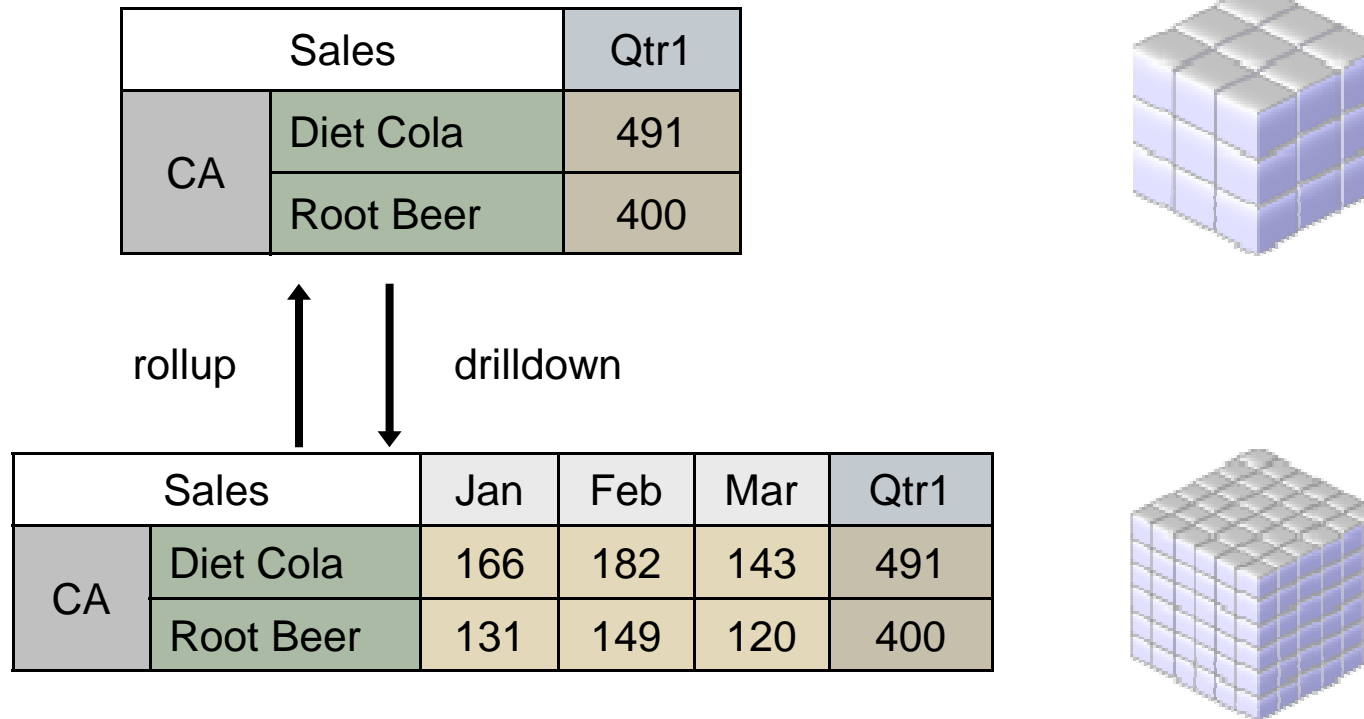
Dimension Hierarchies

For each dimension, you can organize the set of its members in a hierarchy.



Rolling Up and Drilling Down

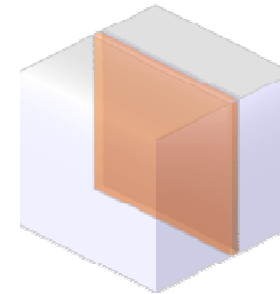
- Rollup summarizes data by climbing up the dimension hierarchy (dimension reduction).
- Drilldown is the reverse of rollup.



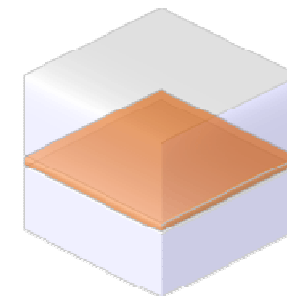
Pivoting

Pivot rotates the data cube to change the data visualization.

Sales		January	February
CA	Diet Cola	166	182
	Root Beer	131	149
CT	Diet Cola	78	56
	Root Beer	55	69



Sales	CA		CT	
	January	February	January	February
Diet Cola	166	182	78	56
Root Beer	131	149	55	69





Online Analytical Processing

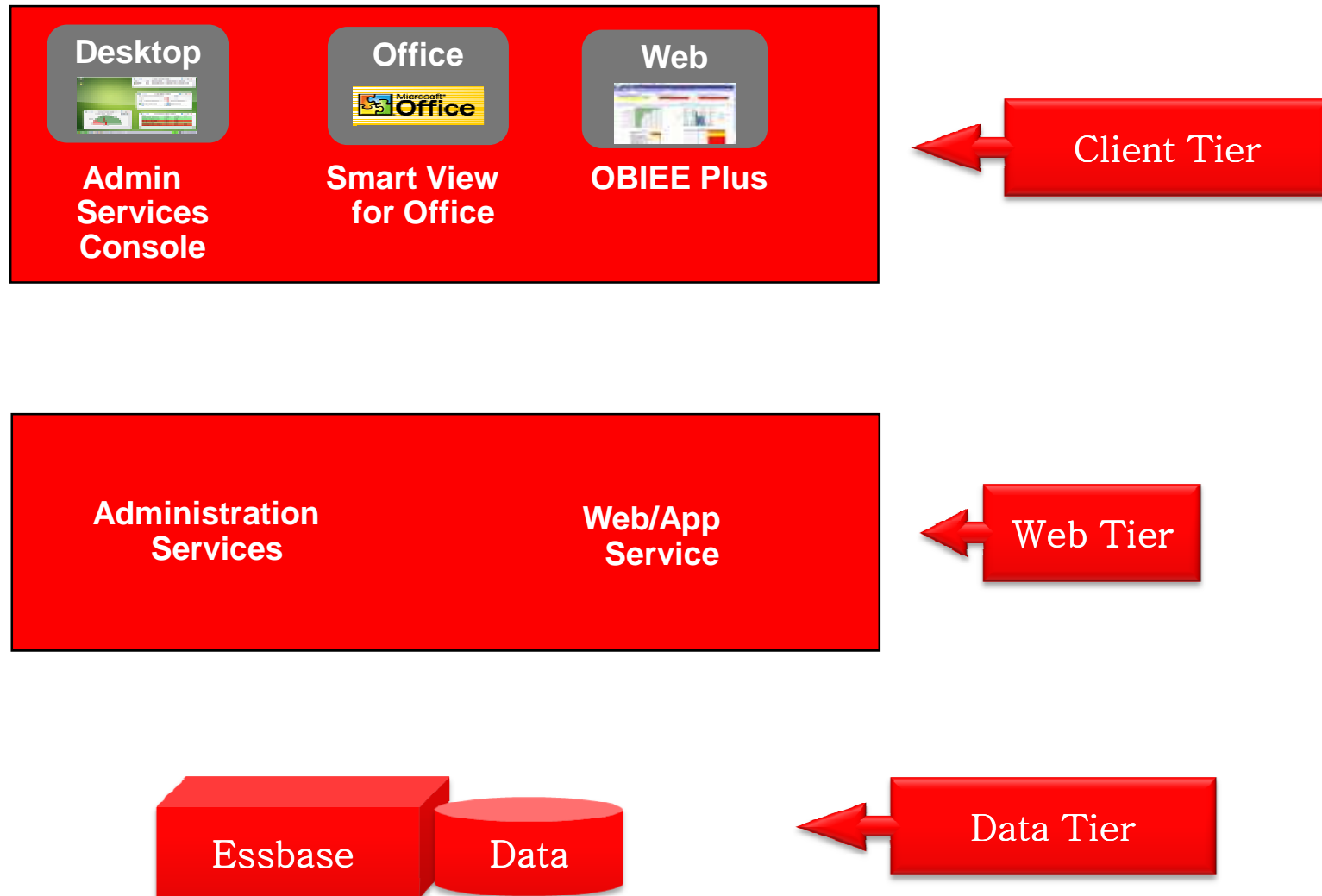
- Includes technologies and tools that support ad hoc analysis of multi-dimensional data.
- Provides multiple-user access to the analytic information.
- Supports individual data analysis.
- Provides a graphical user interface.
- Does not require knowledge of a query language or a programming language.
- Conforms to the client-server architecture.



Essbase Products: Key Features

- Integration with existing infrastructure
- Data integration
- Ease of server and database administration
- Mission-critical applications in Web-based environments
- Powerful querying
- Complex calculations
- Robust write-back and security
- Ease of development

Essbase Environment

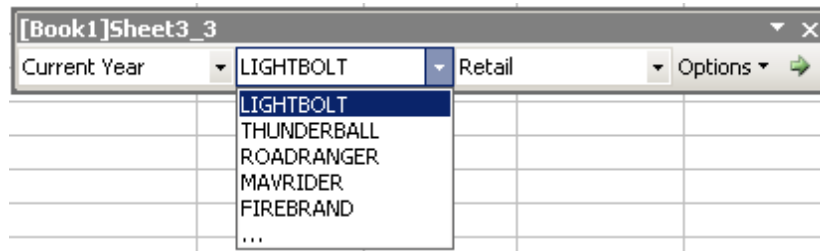




Agenda

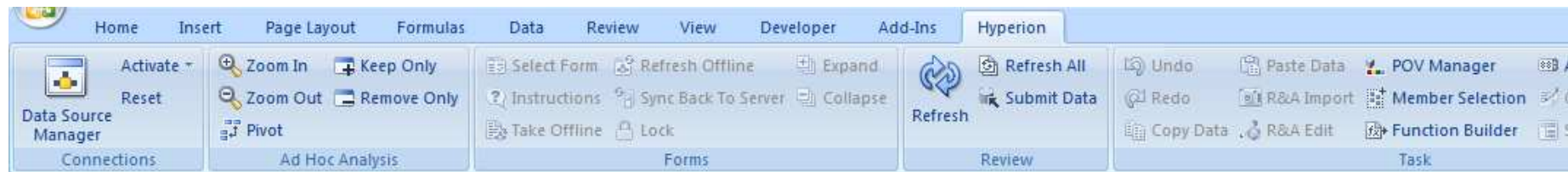
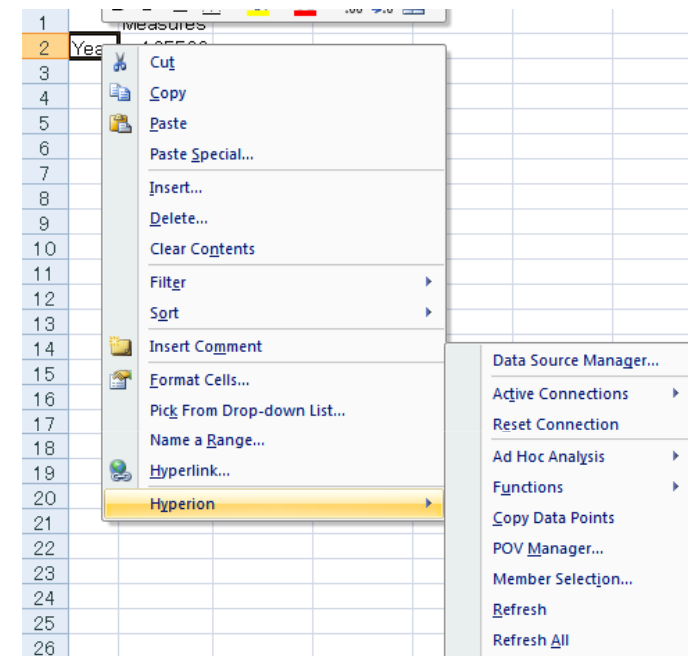
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Smart View for Office Toolbar



Point of View Bar

Context Menu



Hyperion Ribbon

Display of Multidimensional Data

- All dimensions must be represented in the spreadsheet.
- The spreadsheet layout has four sections:

POV toolbar

Column labels

Row labels

Data cells

	A	B	C	D	E
1		Qtr 1		Qtr 2	
2		Current Year	Prior Year	Current Year	Prior Year
3	OEM	910,669.50	693,986.39	356,644.00	615,973.42
4	Retail	916,392.23	802,643.67	304,764.60	748,445.99
5	Distributor	1,922,653.50	1,464,931.19	654,065.50	1,284,610.83

Navigating Through Hierarchies

Drill down

Scenario Product Customer Options						
A2 Year Tot						
	A	B	C	D	E	F
1		Accounts				
2	Year Tot	2409799.048				

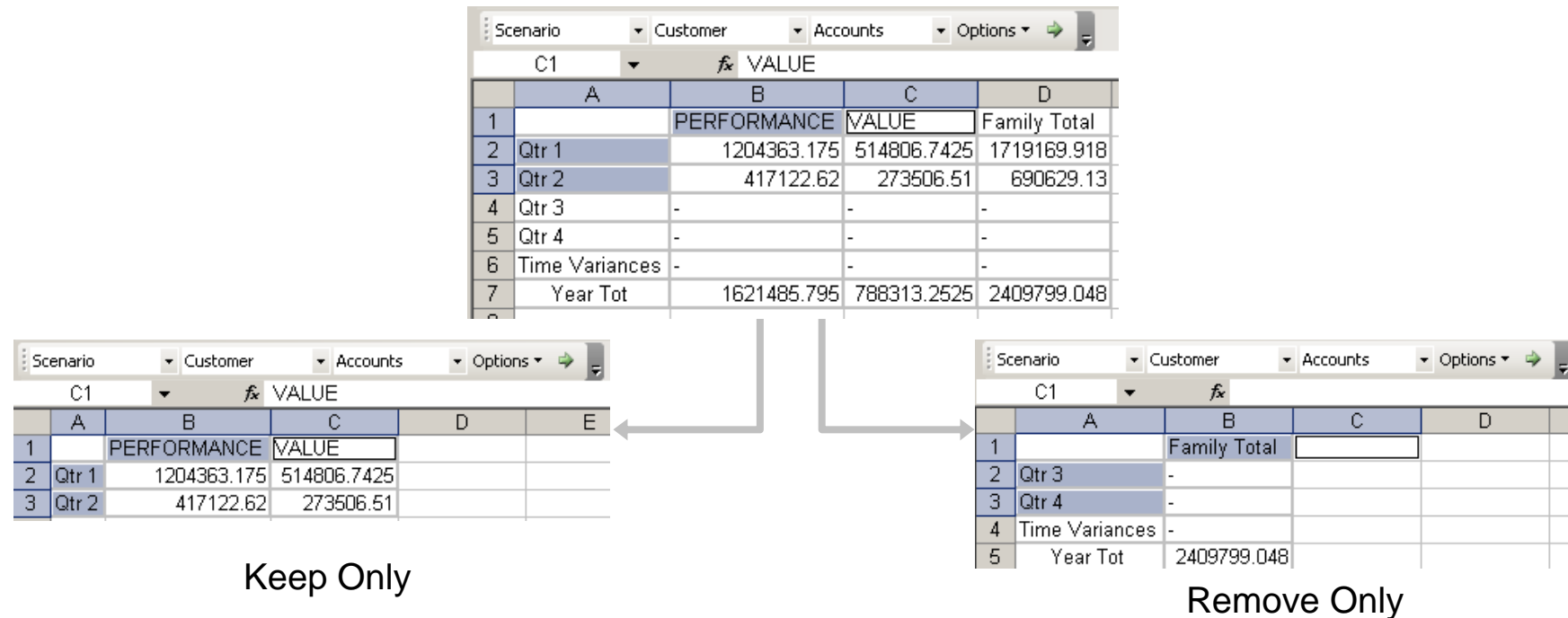
Scenario Product Customer Options						
A2 Qtr 1						
	A	B	C	D	E	
1		Accounts				
2	Qtr 1	1719169.918				
3	Qtr 2	690629.13				
4	Qtr 3	-				
5	Qtr 4	-				
6	Time Variances	-				
7	Year Tot	2409799.048				

Drill up

Scenario Product Customer Options						
A2 Qtr 1						
	A	B	C	D	E	
1		Accounts				
2	Qtr 1	1719169.918				
3	Qtr 2	690629.13				
4	Qtr 3	-				
5	Qtr 4	-				
6	Time Variances	-				
7	Year Tot	2409799.048				

Scenario Product Customer Options						
A2 Year Tot						
	A	B	C	D	E	F
1		Accounts				
2	Year Tot	2409799.048				

Retaining and Removing Data Subsets



Free Form Reporting

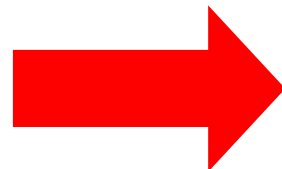
You can do this in two ways

- All dimensions represented

A4		fx	Actual		
	A	B	C	D	E
1			Market		
2			Product		
3			Sales		
4	Actual	Qtr1	95820		
5		Qtr2	101679		
6		Qtr3	105215		
7		Qtr4	98141		
8		Year	400855		

- Incomplete dimensions (typed onto grid)

A3		
	A	B
1		Actual
2	Jan	
3		
4		



C1		fx	
	A	B	C
1			Product
2			Market
3			Actual
4	Measures	Jan	8024
5			

Pivoting Data

Row Dimensions

Product Accounts Options				
B2		Current Year		
	A		C	D
1			OEM	Retail
2	Qtr 1	Current Year	414303.25	471800.8175
3		Prior Year	370420.0044	473494.6201
4	Qtr 2	Current Year	173221.15	174343.03
5		Prior Year	368003.4063	465615.9328
6	Qtr 3	Current Year	-	-
7		Prior Year	349006.774	469705.1217
8	Qtr 4	Current Year	-	-
9		Prior Year	351801.0503	408167.8464
10	Time Variances	Current Year	-	-
11		Prior Year	-	-
12	Year Tot	Current Year	587524.4	646143.8475
13		Prior Year	1439231.235	1816983.521

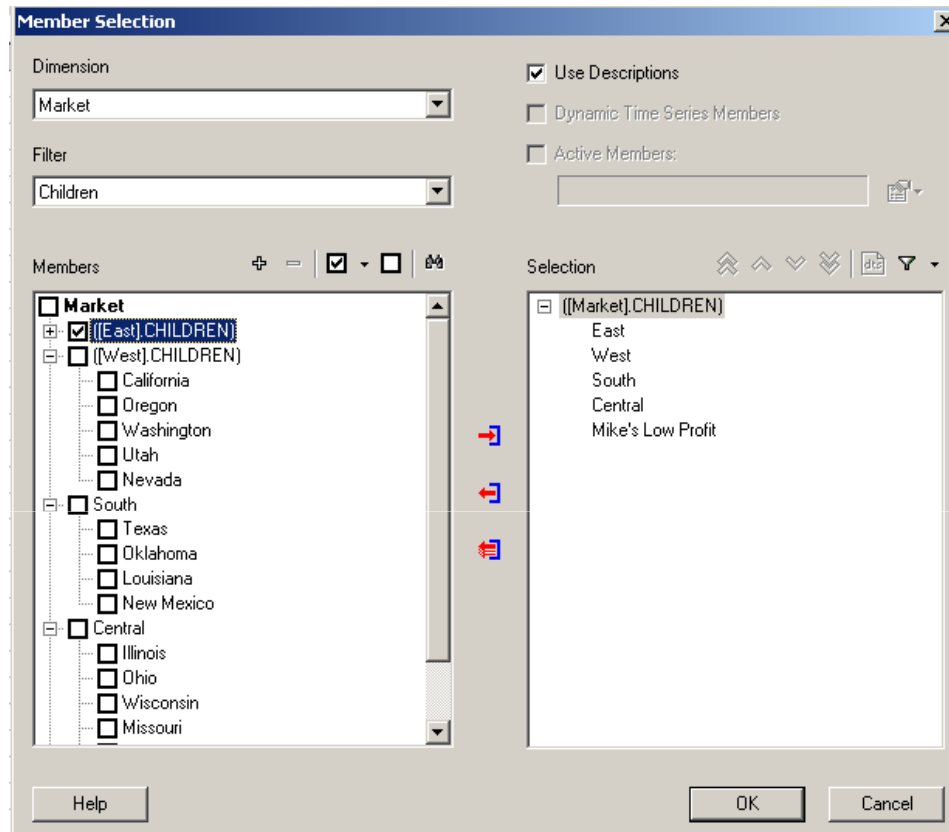
Product Accounts Options				
A2		Current Year		
		B	C	D
1			OEM	Retail
2	Current Year	Qtr 1	414303.25	471800.8175
3		Qtr 2	173221.15	174343.03
4		Qtr 3	-	-
5		Qtr 4	-	-
6		Time Variances	-	-
7		Year Tot	587524.4	646143.8475
8	Prior Year	Qtr 1	370420.0044	473494.6201
9		Qtr 2	368003.4063	465615.9328
10		Qtr 3	349006.774	469705.1217
11		Qtr 4	351801.0503	408167.8464
12		Time Variances	-	-
13		Year Tot	1439231.235	1816983.521

Column Dimensions

Product Accounts Options					
B1		Current Year			
	A	B	C	D	E
1		Current Year		Prior Year	
2		OEM	Retail	OEM	Retail
3	Qtr 1	414303.25	471800.8175	370420.0044	473494.6201
4	Qtr 2	173221.15	174343.03	368003.4063	465615.9328
5	Qtr 3	-	-	349006.774	469705.1217
6	Qtr 4	-	-	351801.0503	408167.8464
7	Time Variances	-	-	-	-
8	Year Tot	587524.4	646143.8475	1439231.235	1816983.521

Product Accounts Options					
B2		Current Year			
	A	B	C	D	E
1		OEM		Retail	
2		Current Year	Prior Year	Current Year	Prior Year
3	Qtr 1	414303.25	370420.0044	471800.8175	473494.6201
4	Qtr 2	173221.15	368003.4063	174343.03	465615.9328
5	Qtr 3	-	349006.774	-	469705.1217
6	Qtr 4	-	351801.0503	-	408167.8464
7	Time Variances	-	-	-	-
8	Year Tot	587524.4	1439231.235	646143.8475	1816983.521

Member Selection and Query Design



Refining the Query

	A	B	C	D	E	F	G
1			Profit	Margin	Sales	COGS	Total Expenses
2		([Market].CHILDREN)	Qtr1				
3			Qtr2				
4			Qtr3				
5			Qtr4				
6			Year				
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							



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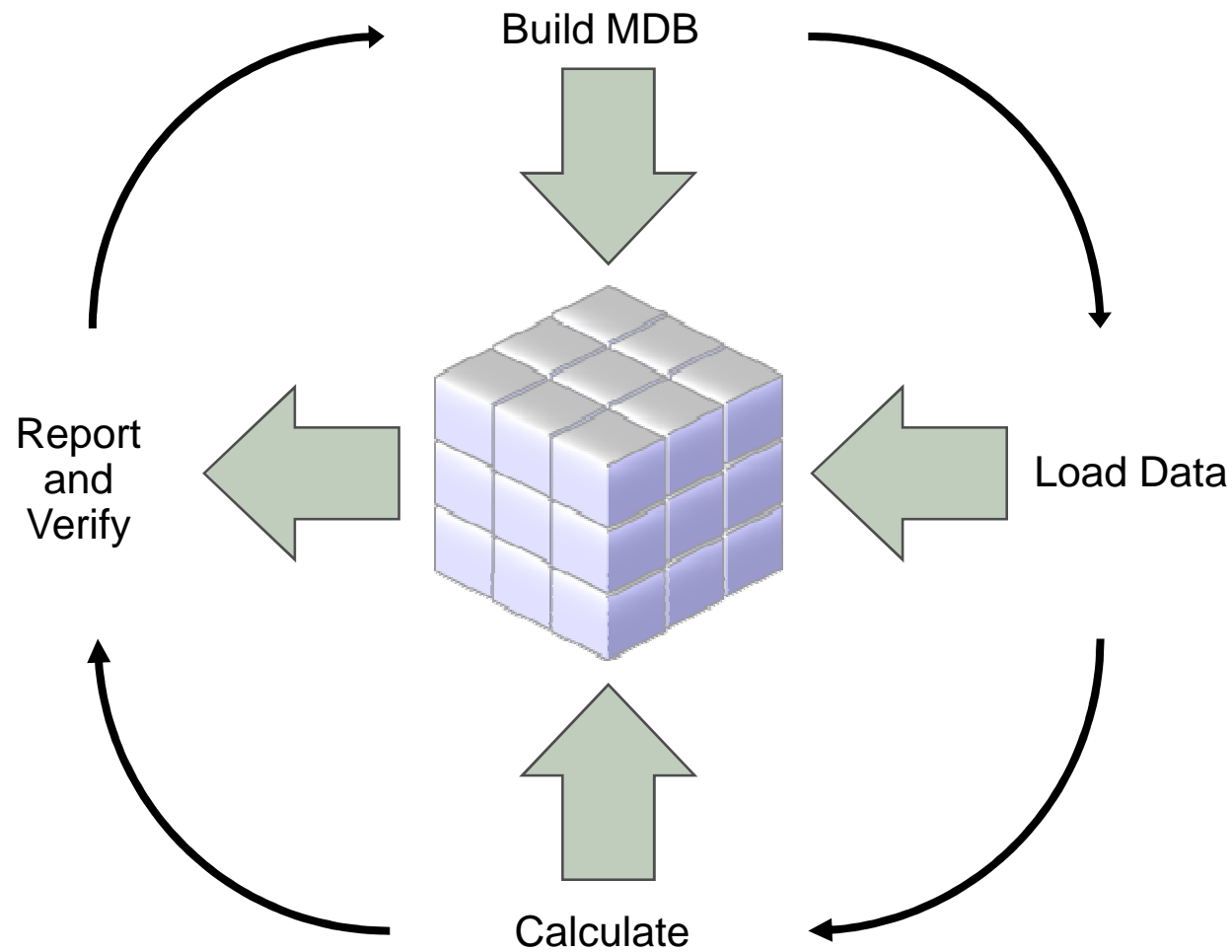
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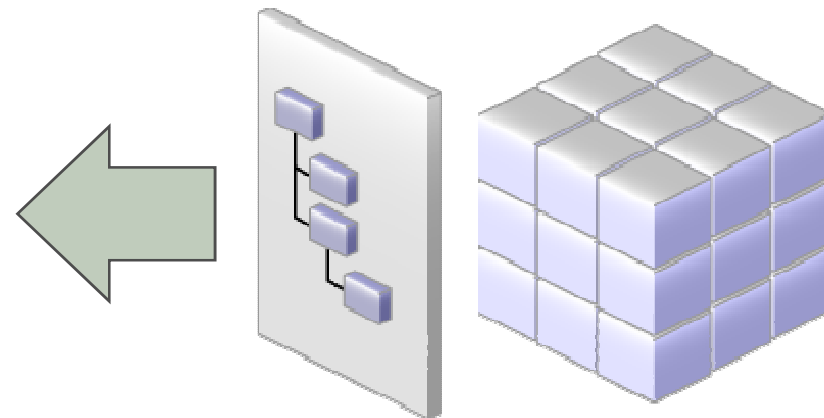
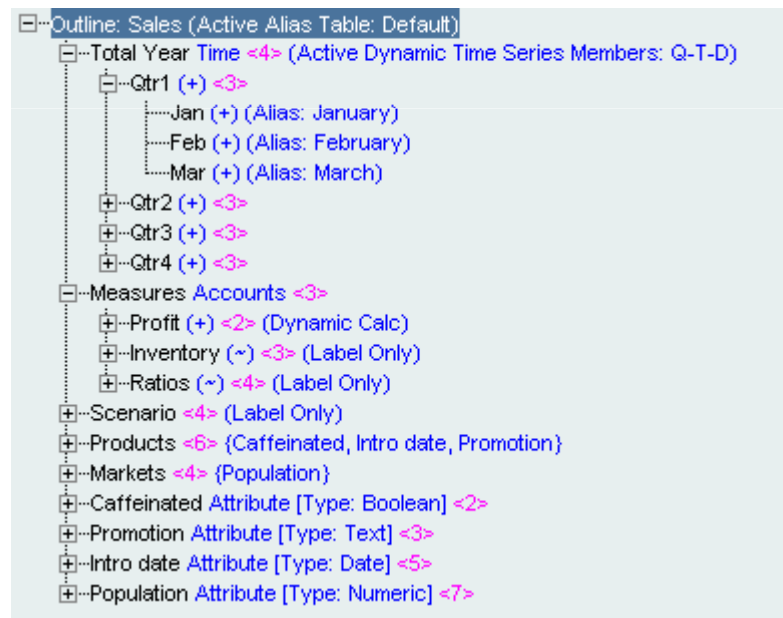
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Life Cycle of Essbase Database Design



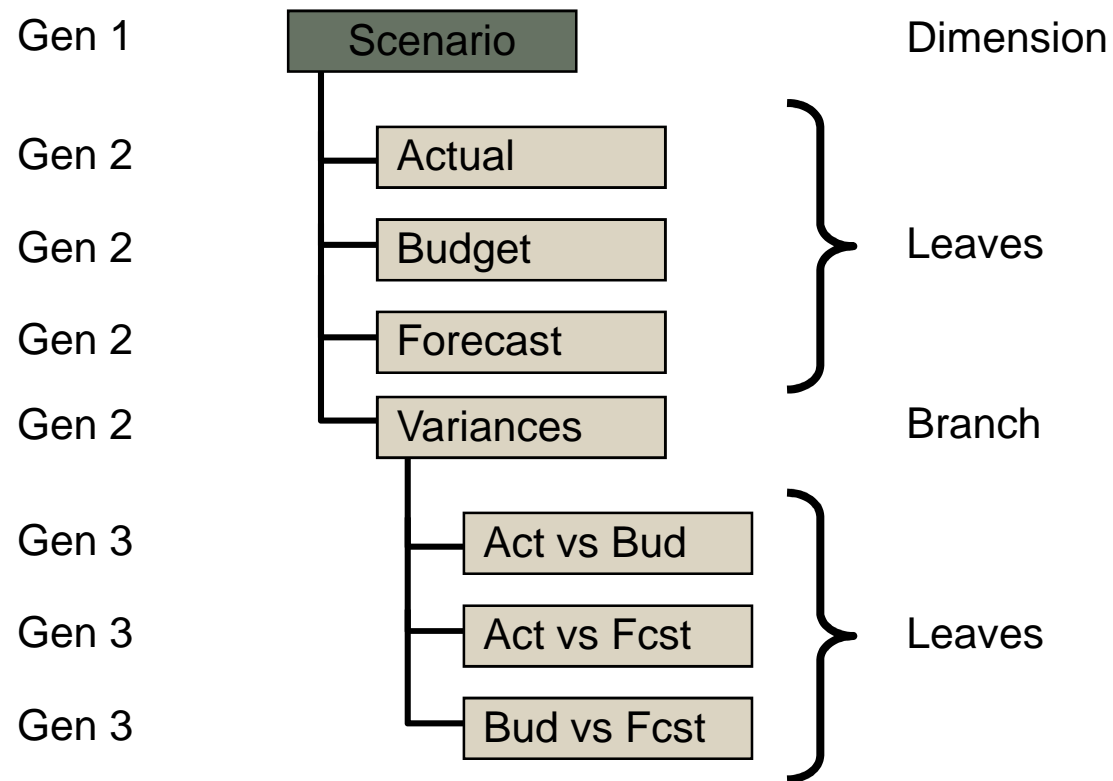
Database Outline

- Tree structure for dimension hierarchies
- Consolidations and mathematical relationships between members
- Outline Editor



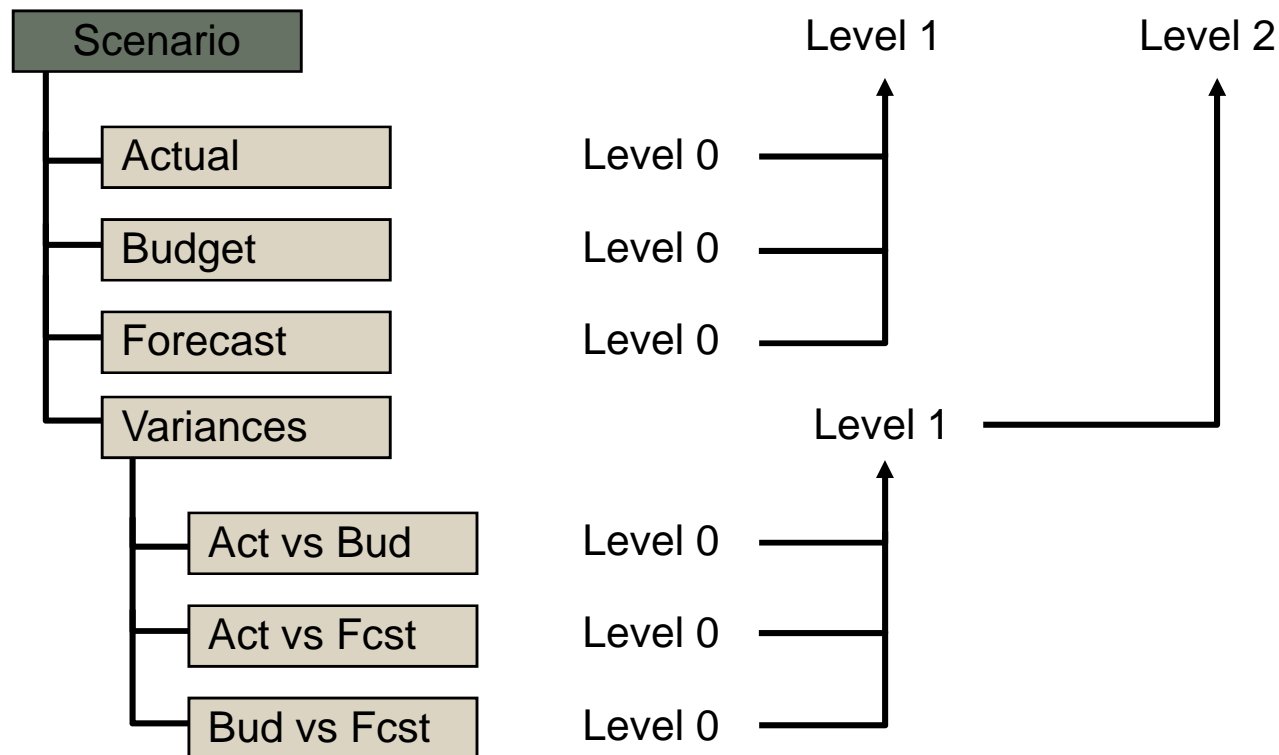
Outline Terms: Generations

- **Generation** defines a member's location within the outline hierarchy from the top of the dimension.

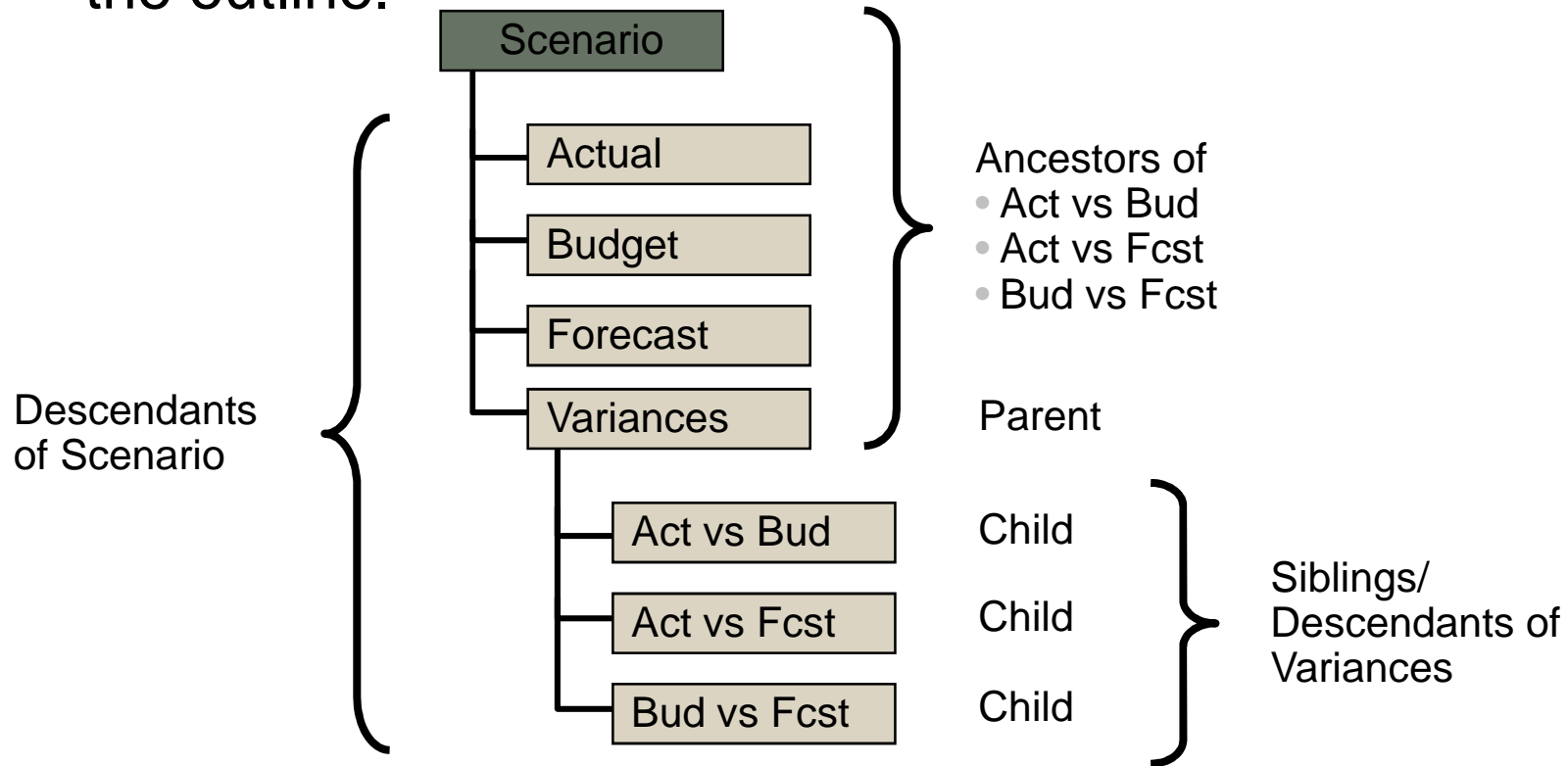


Outline Terms: Levels

- **Level** defines a member's location within the outline hierarchy from the bottom of the dimension.



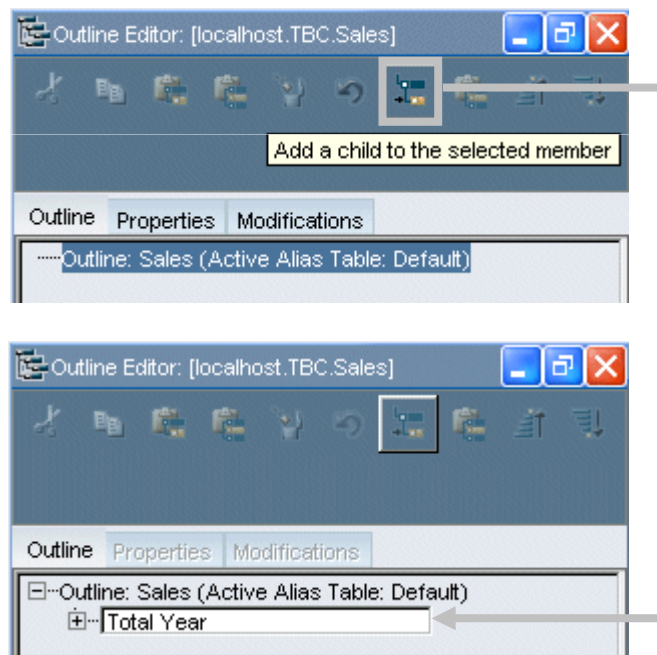
- **Genealogy** names relationships between members in the outline.



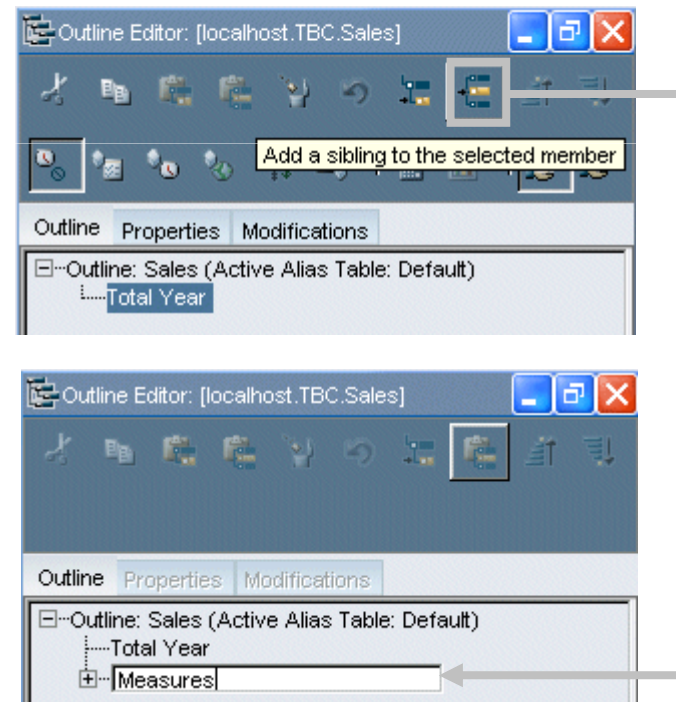
Adding Dimensions and Members

- You can add dimensions and members to the outline manually or dynamically.

Adding a child



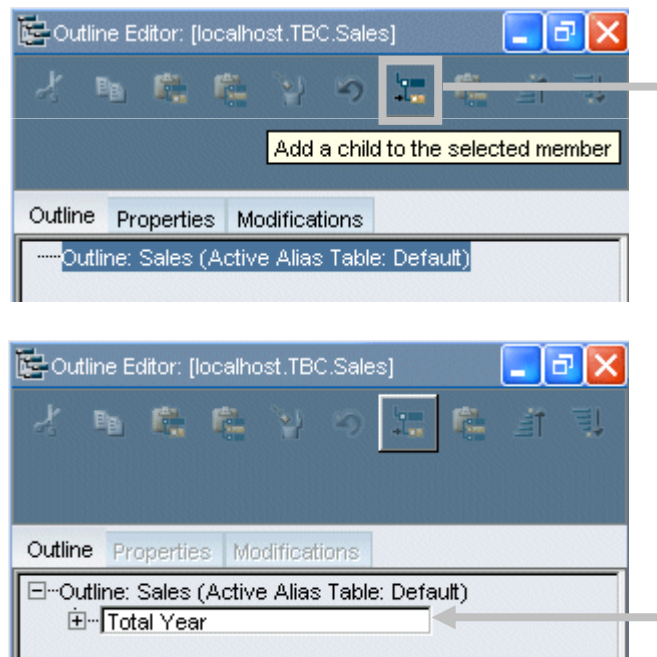
Adding a sibling



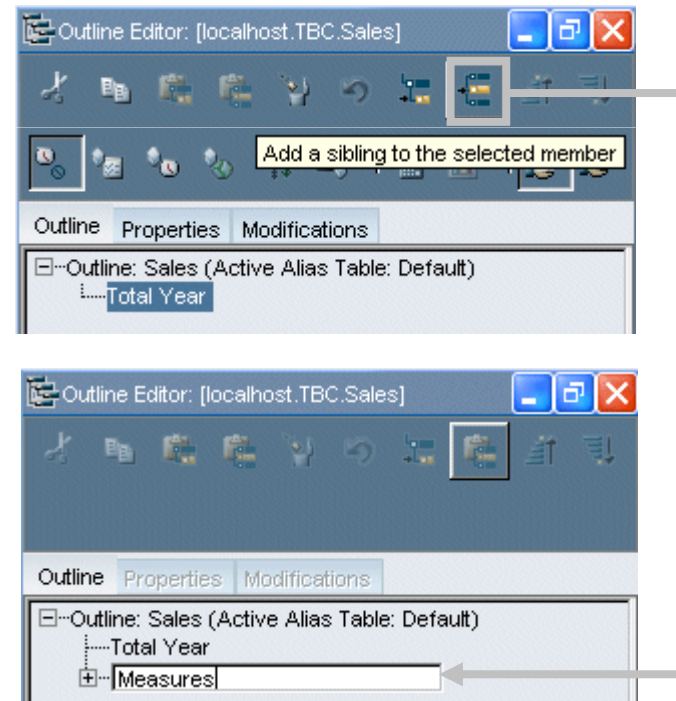
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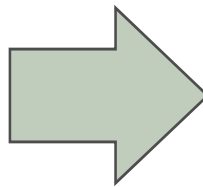
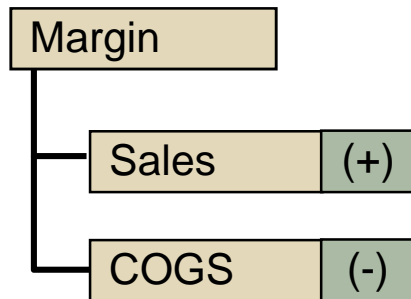


Adding a sibling

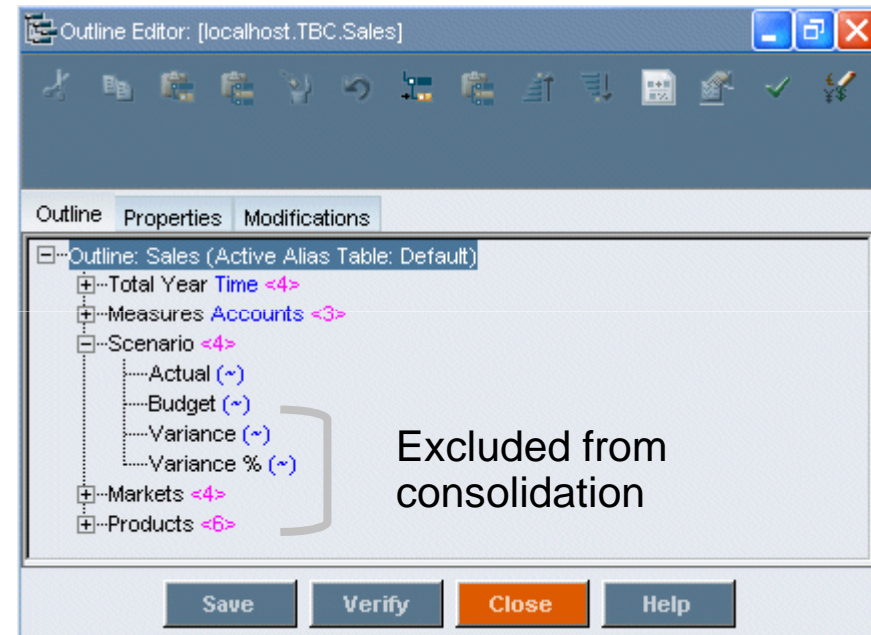


Consolidation Property and Operators

- Consolidation property defines how the member rolls up to its parent.
- Consolidation operators:
 - Addition (+)
 - Subtraction (-)
 - Multiplication (*)
 - Division (/)
 - Percent (%)
 - Ignore (~)

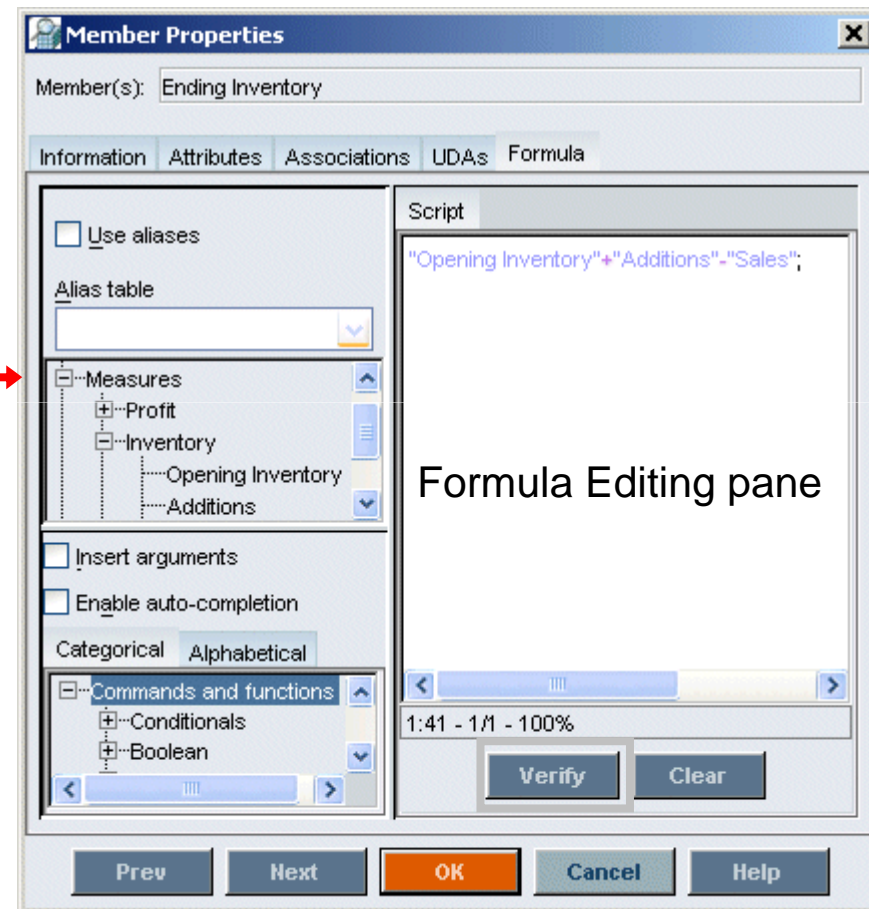
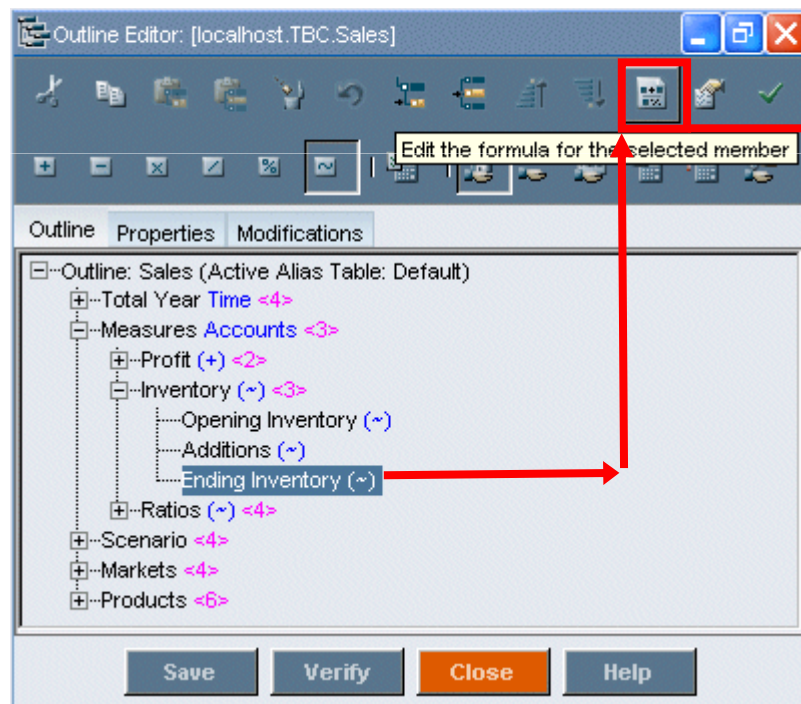


Margin = Sales - COGS



Creating Member Formulas

- Create the member formula in Formula Editor



Variance Reporting Calculation

- Essbase provides two variance reporting functions:
 - @VAR(mbrName1, mbrName2)
 - @VARPER(mbrName1, mbrName2)
- Example:

	Actual	Budget	Variance	Variance %
Sales	100	120	-20	-16.67
COGS (Expense Reporting)	100	120	20	16.67

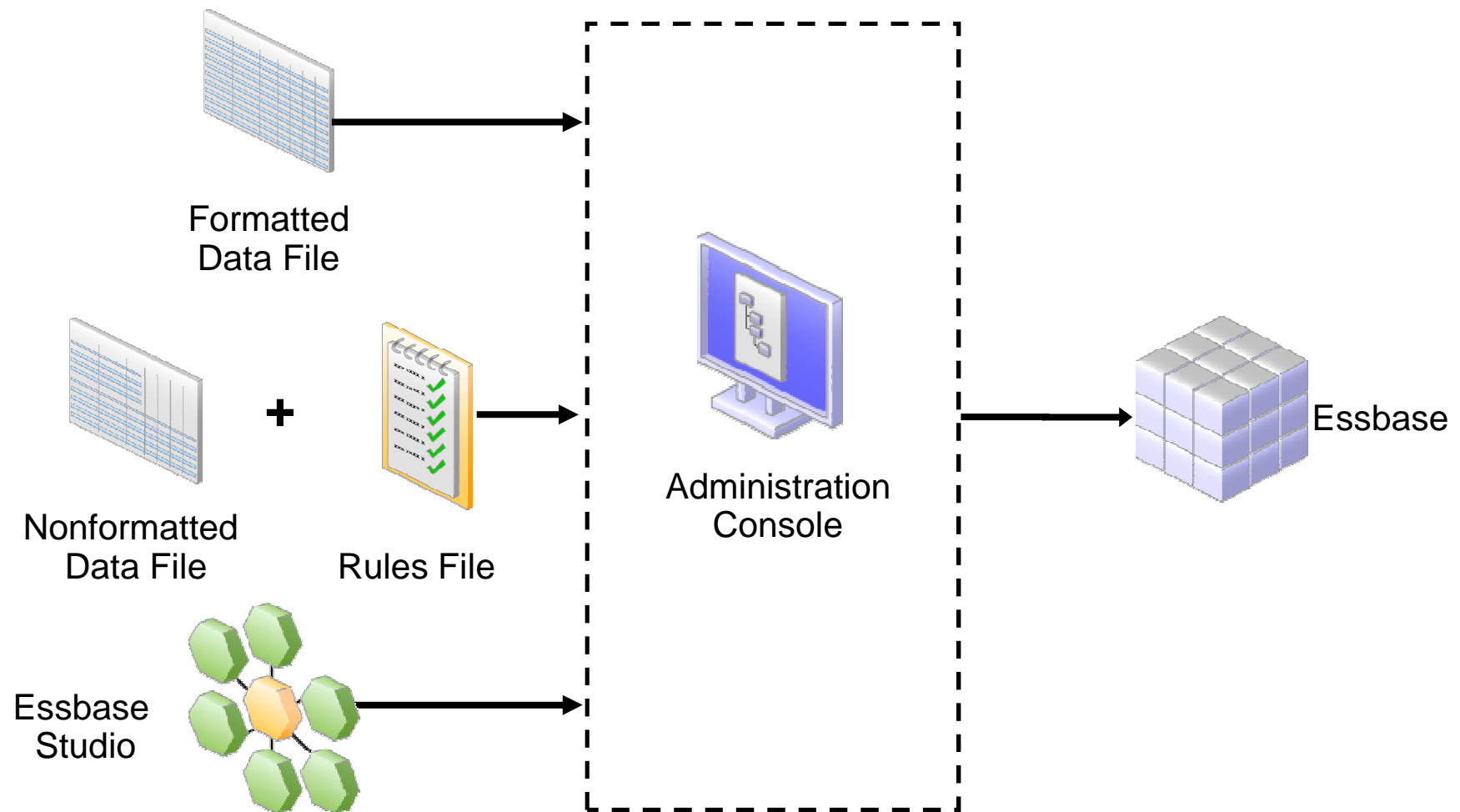
- Variance equals Actual minus Budget.

```
Variance = @VAR(Actual, Budget);
```

- Variance % equals Actual minus Budget as a percentage of Budget.

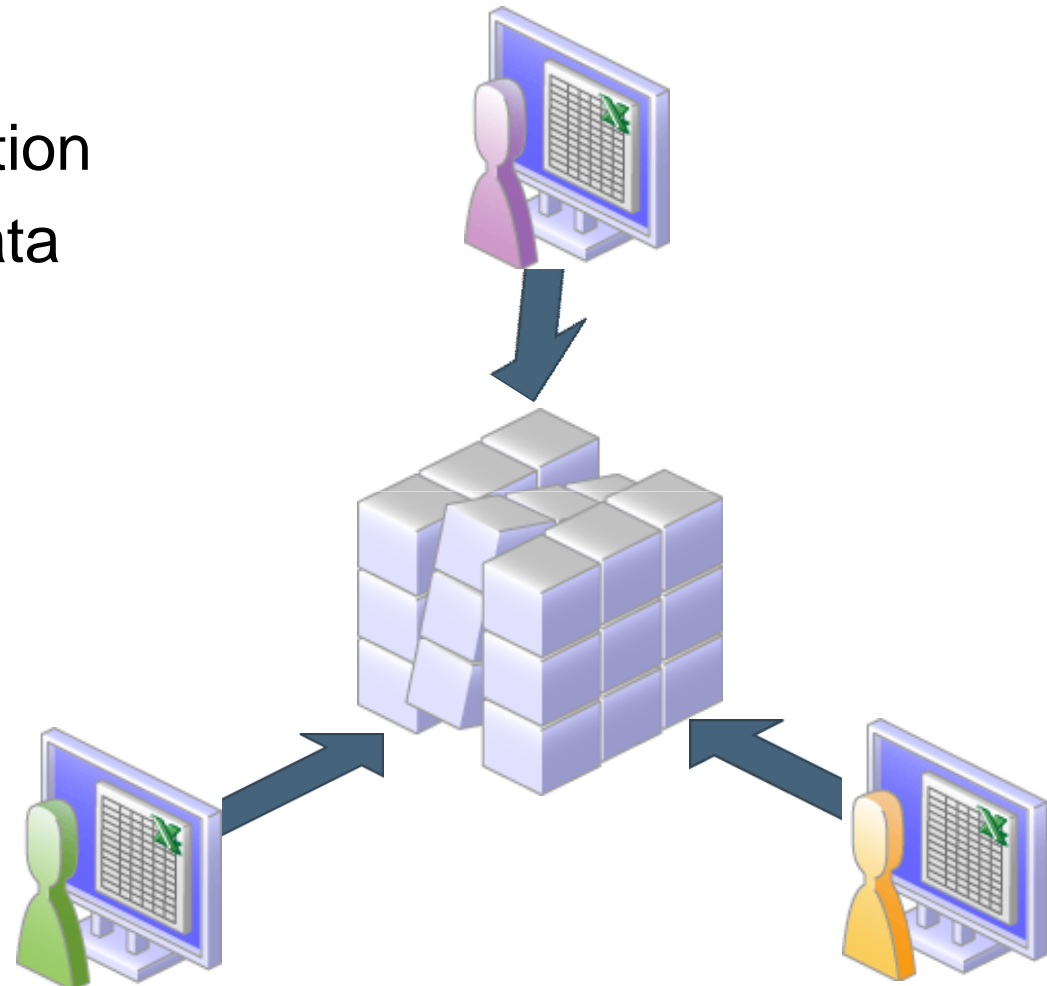
```
Variance % = @VARPER(Actual, Budget);
```

Loading Data and Metadata



Write-Back

1. Choose the intersection
2. Type the updated data value
3. Click submit



Structured Data Loading with Rules

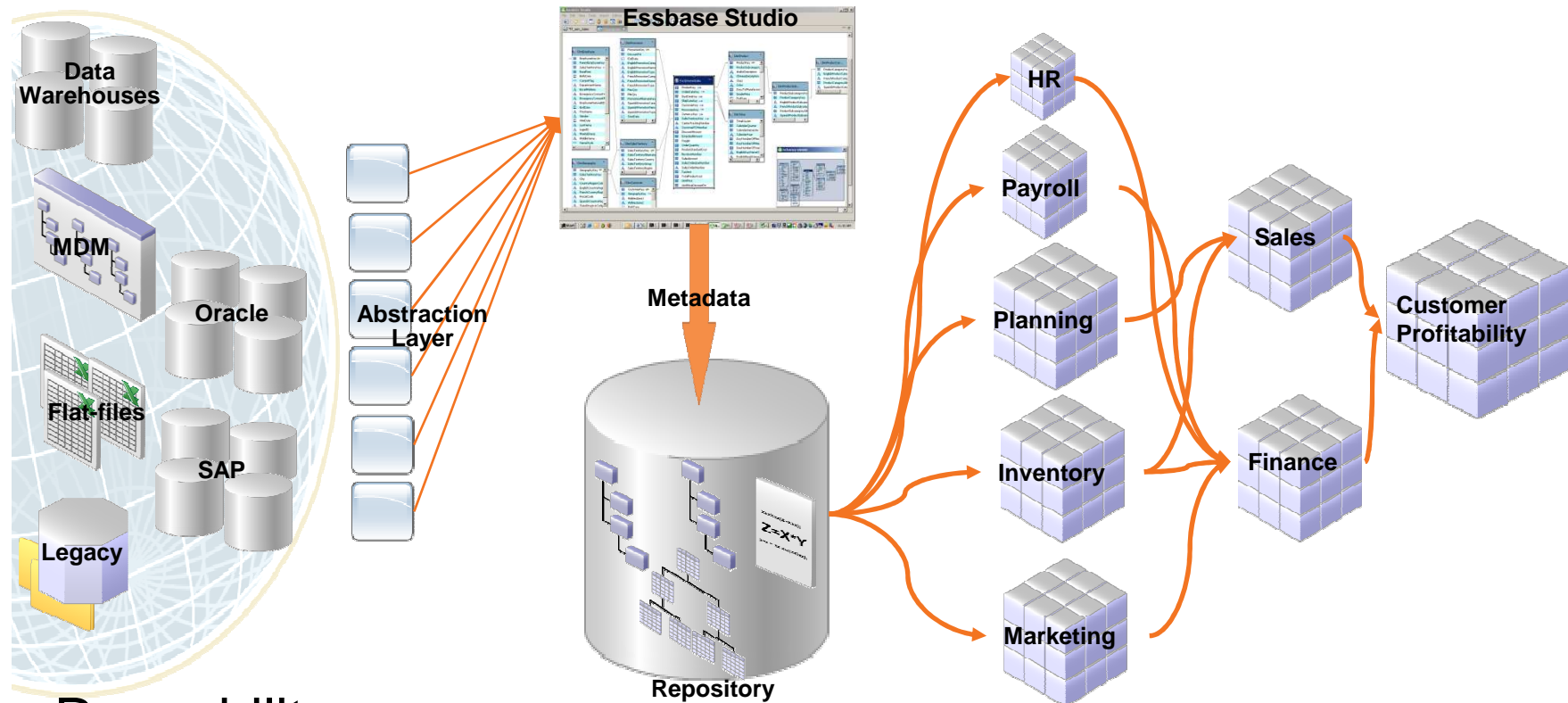
- You can format the data source to map its data to the database.
- You can store the rules in a rules file.
- You can apply the rules to many data sources.

Map fields to Markets, Products, and Measures dimensions.

Map the header to Budget in the Scenario dimension.

1st quarter Budget Data					
			Jan	Feb	Mar
Aspen	Diet Cola	Sales	150	160	150
Denver	Kool Cola	COGS	60	60	60
Manchester	C-Free Cola	Marketing	20	20	20

Essbase Studio Simplifies the Process



- Reusability
- Traceability
- Dynamic discovery of related content



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Answers and Dashboards

- 100% thin client
- Ad-hoc report creation
- Packaged and customized dashboards
- Combining relational and OLAP data
- Consistent semantic definition across reports



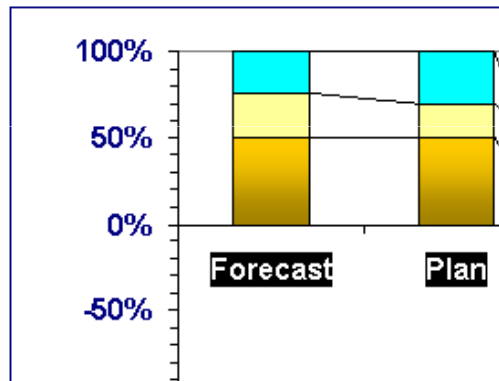
Dynamic Data Points

Financial Metrics – Forecast to Plan

	Forecast	Budget	Variance
Margin	\$54,387	\$214,140	(\$159,753)
Tot. Exp.	\$28,587	\$84,760	\$56,173
Profit	\$25,800	\$129,380	(\$103,580)
Margin %	55.42%	57.40%	-1.98%

Change POV

Refresh



Connection:
Server - bisummit
Application - TBC
Cube - TBC
URL - http://localhost:13080/aps/SmartView
Provider - Analytic Services Smart View Provider

POV:
Measures - Margin %
Scenario - Budget
Market - Market
Product - Product
Year - Year

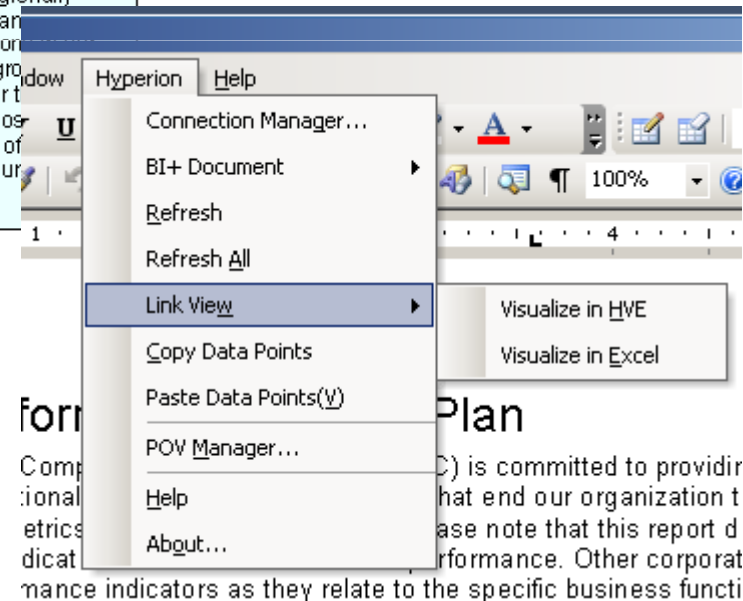
Alias Table:
none

Visualize to:

- Excel
- Visual Explorer

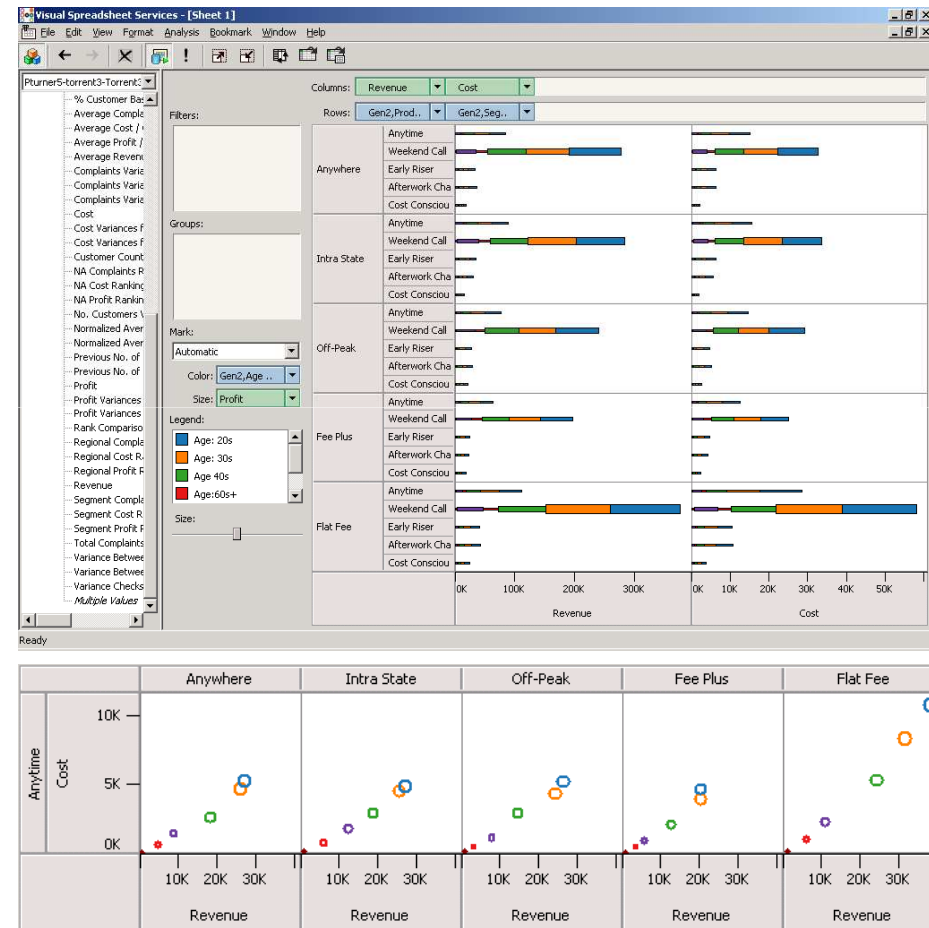
Move data with context:

- Word
- PPT
- Outlook

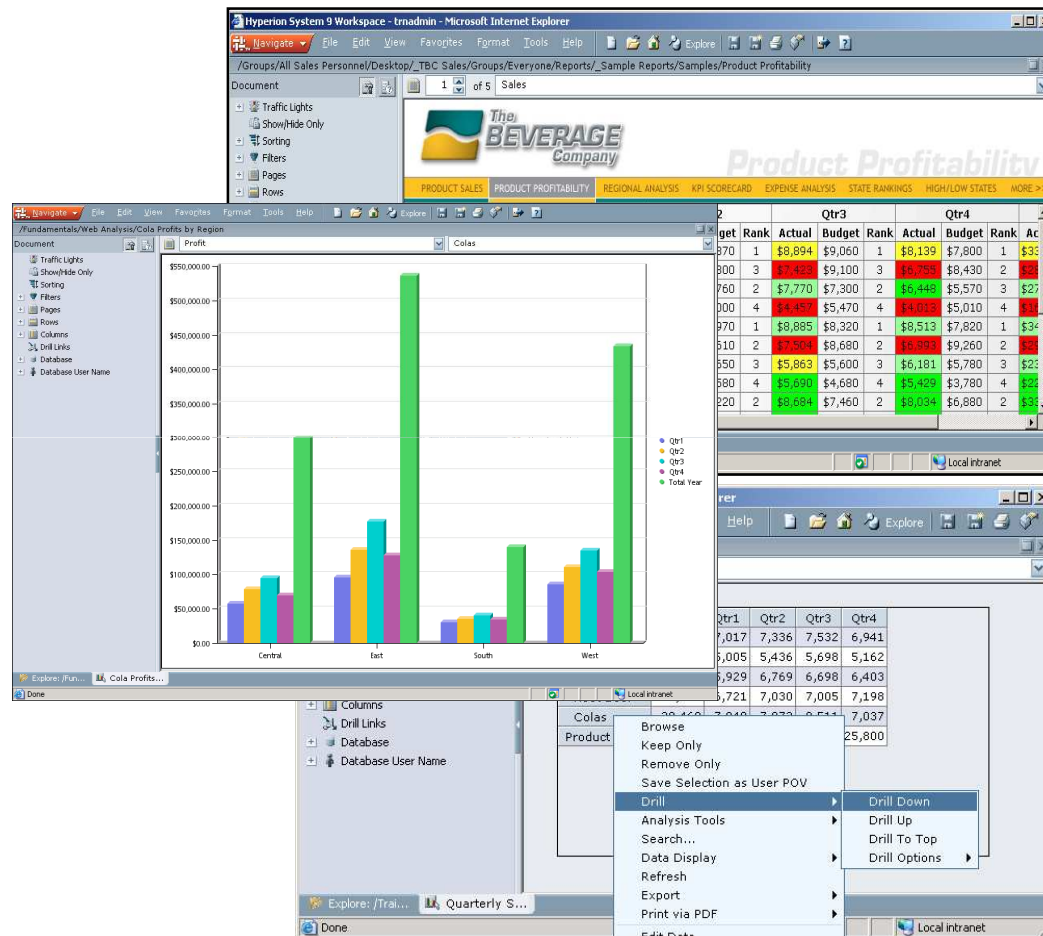


Visual Exploration - Best in Class

- Dynamic, adaptive visualization of data
- Advanced insight through drag-and-drop
- Maintain insight with increasing business dimensions
- Statistical Analysis
- Dashboard Display
- Customizable UI



Web Analysis Overview



Pinboarding



Traffic lighting



Ad hoc querying and reporting

Financial Reporting

Eden Corporation
Statement of Income
Total Geography
Jun
Report Run Date: 05-Sep-06 5:10:01 PM by demoadmin

Jun			Y-T-D(Jun)		
Actual	Plan	Var %	Actual	Plan	Act vs Plan %
\$ 157,041,183	\$ 138,812,611	13.13%	\$ 704,561,434	\$ 572,074,131	23.16%
106,377,180	87,998,695	20.88%	453,630,288	360,620,118	25.79%
50,664,003	50,813,916	-0.30%	250,931,146	211,454,013	18.67%
32.3%	36.6%	-	35.6%	37.0%	-
365,186	394,898	2.46%	2,336,748	2,378,807	1.77%
639,593	641,522	0.30%	3,553,351	3,563,630	0.29%
495,964	495,507	-0.09%	2,697,474	2,695,019	-0.09%
959,598	960,989	0.15%	4,661,379	4,671,018	0.21%
2,346,756	2,344,359	-0.10%	10,944,073	10,931,568	-0.11%
6,661,324	6,668,507	0.11%	34,096,432	34,131,530	0.13%
2,114,102	2,115,227	0.05%	9,540,486	9,542,946	0.03%
342,200	343,360	0.34%	1,590,949	1,596,340	0.34%
3,011,415	3,042,316	1.02%	13,092,188	13,292,477	1.51%
0	0	0.00%	0	0	0.00%
16,956,098	17,006,685	0.30%	82,503,079	82,803,335	0.36%
33,707,905	33,807,231	-0.29%	168,428,067	128,650,678	30.92%
-3,790,603	-3,833,059	-1.11%	-15,205,672	-15,376,953	-1.11%
\$ 29,917,302	\$ 29,974,172	\$ -0.19%	\$ 153,222,395	\$ 113,273,725	\$ 35.27%



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