

BIWA SIG Wednesday TechCast Series

START TIME: 12 NOON Eastern

Data Visualization Best Practices Using OBIEE 11g: Improve your BI & EPM reports, dashboards, and queries

Dan Vlamis and Tim Vlamis
Vlamis Software Solutions

AUDIO DIAL-IN NUMBERS

US Toll-Free Number: 866 682 4770

Conference ID: 1683901

Security Code: 334451

International Toll-Free Numbers:

http://www.intercall.com/oracle/access_numbers.htm



BIWA SIG Wednesday TechCast Series

- Welcome to BIWA's 24rd TechCast!
- Visit www.oraclebiwa.org for updates on our future TechCasts
- Coming TechCasts will include top-rated presentations from ***BIWA Training Days*** at COLLABORATE 10 – IOUG Forum



Oracle BIWA SIG Basics

- Worldwide association of 2000 professionals interested in Oracle Database-centric business intelligence, data warehousing, and analytical products, features and options.
- Membership is FREE – join at oraclebiwa.org
- Open forum to foster success in use and development of Oracle BIWA products.
- Goals: sharing best practices and novel and interesting use cases of Oracle BIWA-centric technology.
- Mission Statement and Charter at oraclebiwa.org.
- Conferences in 2007, 2008, 2010, 2011



Latest BIWA Conference: *BIWA Training Days* at COLLABORATE 10 - IOUG Forum April 18-22, 2010 Las Vegas, NV



- COLLABORATE 10 = IOUG + OAUG + Quest
5,000 attendees, 200+ Exhibitors
- BIWA presented a conference within a conference called
“Get Analytical with BIWA Training Days”
 - Hands on Labs, BI Boot Camp, BI Deep Dives, Reception
- 60+ Sessions with topics covering
 - Data Warehousing: Optimizer, Partitioning, ETL, Exadata
 - OBIEE
 - Oracle Data Mining
 - OLAP and Essbase
 - Data Visualization and Spatial Analytics
 - BI Applications
 - BI Publisher



SUBMITTING a BIWA TechCast

- Any Oracle user or professional may submit abstracts for 45-min webcasts to IOUG Oracle BIWA SIG Community (Visit: www.oraclebiwa.org)

Speaker Session Proposal

Cancel Create

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* Presentation Title

0 of 120

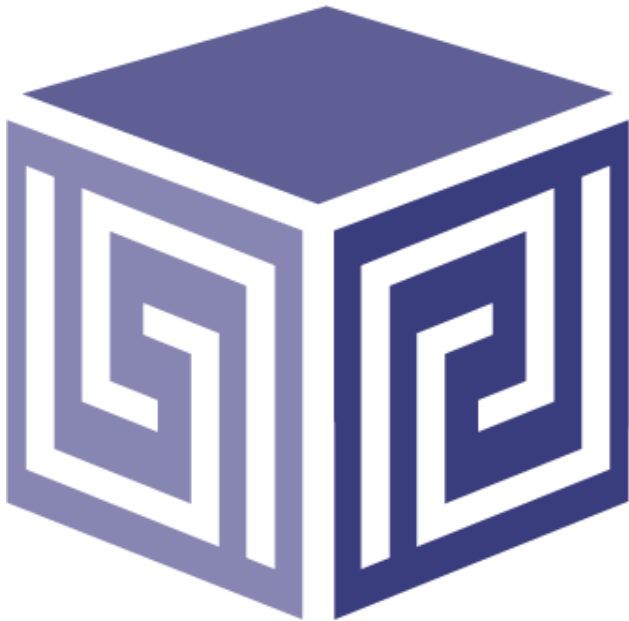
ABC

- Audience is technical**
 - Presenters are encouraged to include a significant amount of technical detail.
 - Live demos are strongly encouraged

Data Visualization Best Practices Using OBIEE 11g:

Improve BI & EPM reports, dashboards, and queries

**BIWA Techcast
July 14, 2010**



Dan Vlami

Tim Vlami

Vlami Software Solutions

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<http://www.vlami.com>



Vlami Software Solutions, Inc.

- Founded in 1992 in Kansas City, Missouri
- Oracle Partner and reseller since 1995
- Developed more than 200 Oracle BI systems
- Specializes in ORACLE-based:
 - Data Warehousing
 - Business Intelligence
 - Data Transformation (ETL)
 - Web development and portals
- Delivers
 - Design and integrated BI and DW solutions
 - Training and mentoring
- Exclusive supplier world-wide for Windows-based Oracle BIC2G BI & EPM VMs
- Expert presenter at major Oracle conferences
- www.vlami.com (blog, papers, newsletters, services)



Dan VlamiS' Bio

- Developer for IRI (former owners of Oracle OLAP).
- Founded VlamiS Software in 1992.
- Wrote portions of Oracle Sales Analyzer.
- Beta tester for Oracle products including OBIEE 11g.
- Oracle ACE.
- Expert speaker at Oracle conferences.
- Co-author of book "Oracle Essbase & Oracle OLAP".
- BI/DW/EPM Track Chair for 2010 Collaborate Conference.
- BA Computer Science Brown University.



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Tim Vlami's Bio

- 20+ years experience in business modeling and valuation, forecasting, and scenario analyses.
- Expert in principles and elements of design.
- Expert in curriculum development and pedagogical theory.
- Professional Certified Marketer (PCM) from AMA.
- Active Member of NICO (Northwestern Institute on Complex Systems).
- MBA Kellogg School of Management (Northwestern).
- BA Economics Yale University.

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Overview

- Cognition, Data Visualization, and Principles of Design
- Graphs versus Tables
- Tips for Tables
- Types of Graphs and when to use them
- Visualizations with OBIEE 11g
- BI Implementation Guidelines
- Review and Summary

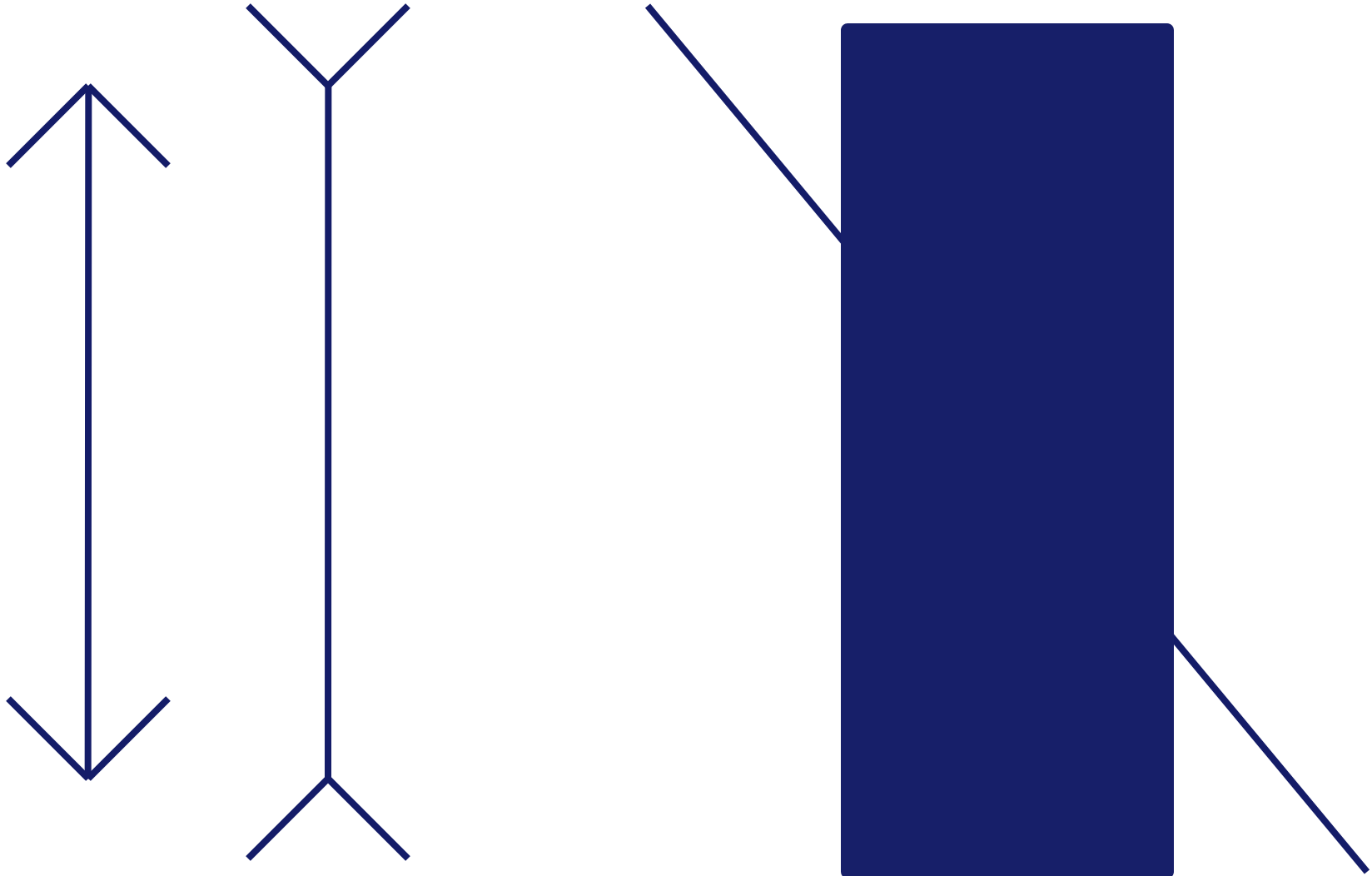


Commonly Overlooked BI Fundamentals

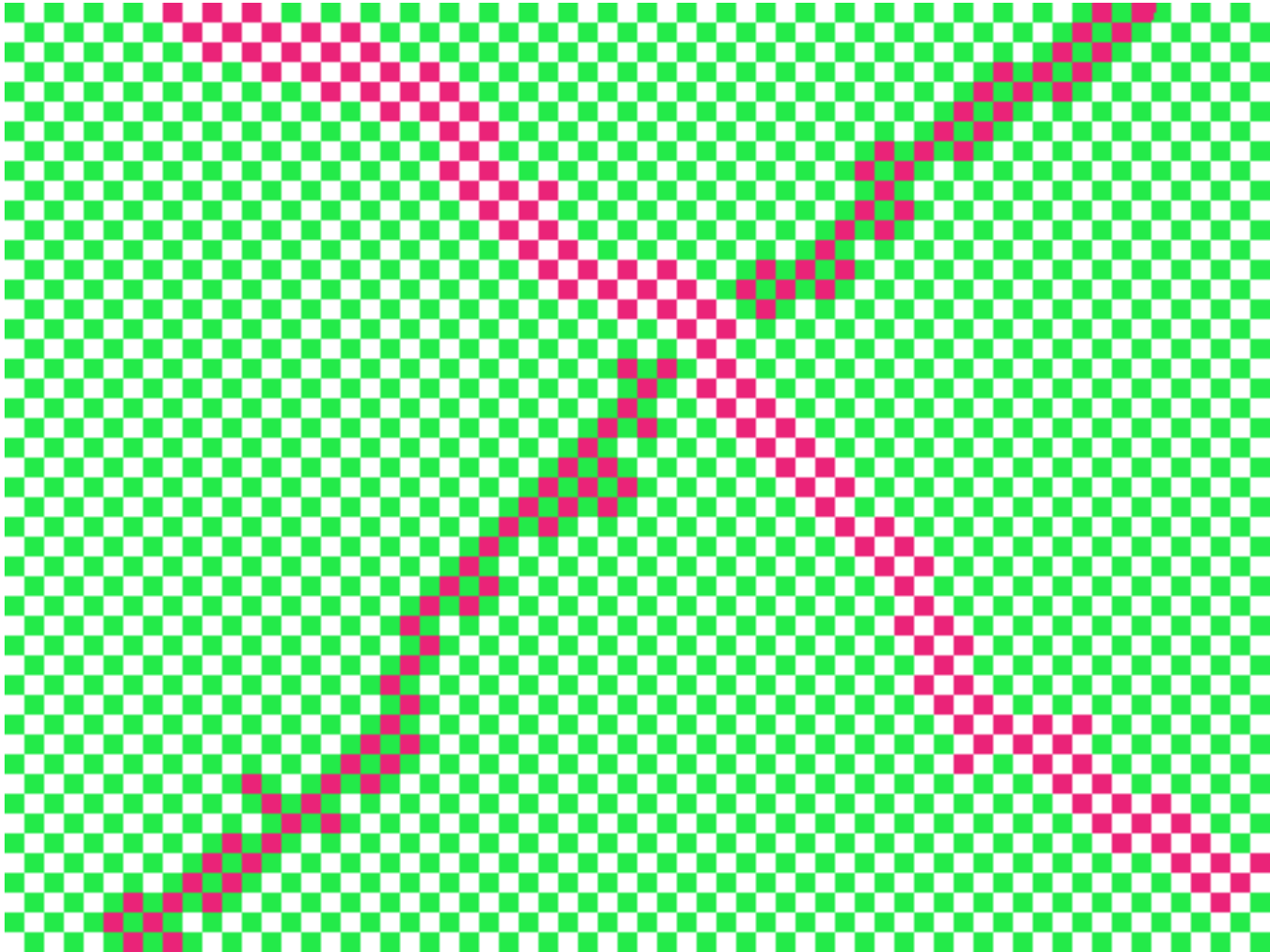
- BI reports and dashboards should be viewed primarily as communication devices.
- Both the principles of human cognition and the needs of the individual user should help guide their proper use.



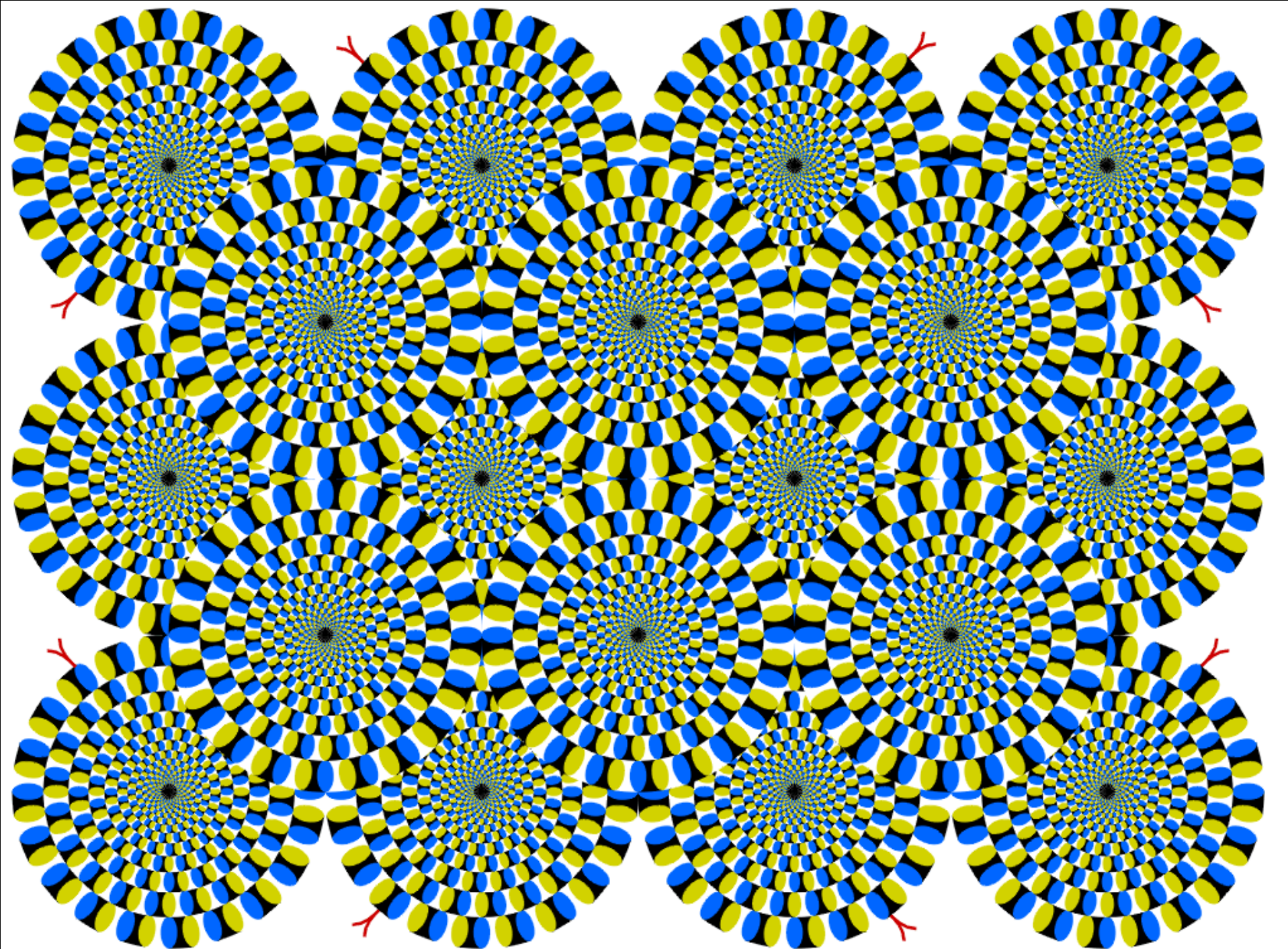
Classic Optical Illusions



How many colors do you see?



There are only 3 colors: White, green, and pink.
There seem to be two different shades of pink,
but there is only one pink.





Universal Principles of Design

- Guiding concepts or ideas that help us evaluate the relative strengths of a work.
 - Unity
 - Harmony
 - Balance
 - Rhythm
 - Proportion and Scale
 - Emphasis or Dominance
 - Variation

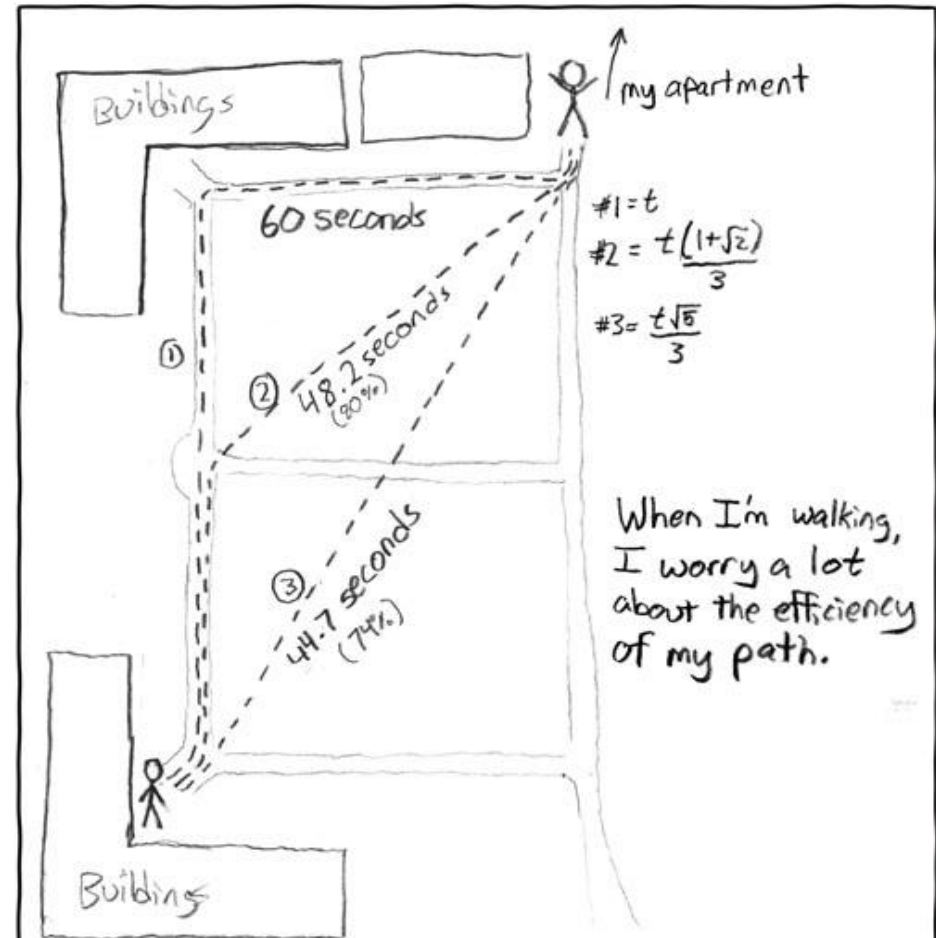
Main Uses of BI Reports & Dashboards

Exploration



xkcd.com

Explanation





Strong Foundations

- It's much easier to misuse BI tools than to use them well.
- Do a few things well and build from there.
- Think through your BI visualizations
(don't automatically assume that default settings are fine.)



Tufte's 5 Principles

- Above all else show the data.
- Maximize the data to ink ratio.
- Erase non-data ink.
- Erase redundant data ink.
- Revise and edit.



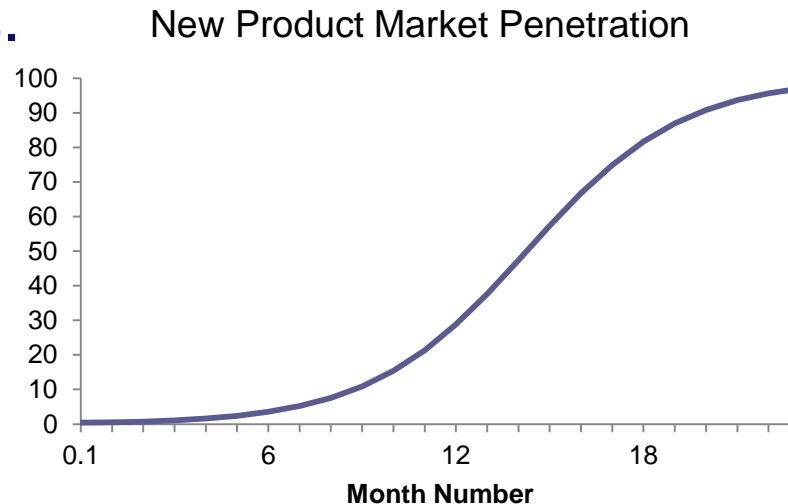
Vlami's 5 Principles

- Maximize data to ink ratio.
- Match data format with viewer needs, explain or explore.
- Match data scale with data precision.
- Don't misrepresent data.
- Use color carefully.



Graphs and Tables

- Graphs and Charts depict visual representations and relationships.



- Tables show data organized for lookup of specific, precise values or items.

District	Month	Dollars	WB Forecast Dollars	% Forecast
ATLANTA DISTRICT	03/01/2008	595,232.0	535,185.0	111.2
BOSTON DISTRICT	03/01/2008	1,882,036.0	1,954,736.7	96.3
CHARLOTTE DISTRICT	03/01/2008	215,360.0	204,592.0	105.3
CHICAGO DISTRICT	03/01/2008	1,381,552.0	1,236,574.0	111.7
CINCINNATI DISTRICT	03/01/2008	827,162.0	742,869.0	111.3
DALLAS DISTRICT	03/01/2008	1,060,316.0	897,654.0	118.1
DENVER DISTRICT	03/01/2008	955,876.0	1,050,735.4	91.0
DETROIT DISTRICT	03/01/2008	961,026.0	1,249,333.8	76.9
JACKSONVILLE DISTRICT	03/01/2008	1,827,434.0	1,892,779.4	96.5



Keys to Effective Tables

- Provide a search interface.
- Avoid scrolling if possible.
- Lock headers and titles if use scrolling.
- Display significant figures.
 - Don't imply precision that doesn't exist.
- Judiciously use conditional formatting for data exploration.
- Avoid putting text in color.
- Alignment, proximity, contrast.



Bad Table

	PERIOD	WIDGETS TO GADGETS RATIO CALCULATED USING CHECK LEVEL DETAIL					
		ELECTROMECHANICAL			PNEUMATIC		
		IN-STORE	WEBSITE	DISTRIBUTOR	IN-STORE	WEBSITE	DISTRIBUTOR
INCLUDES ONLY DATES FROM JANUARY THRU OCT 2007	PERIOD 1	22.36%	11.37%	83.00%	85.34%	20.90%	46.80%
	PERIOD 2	21.22%	15.25%	81.00%	81.31%	18.01%	35.39%
	PERIOD 3	21.64%	13.22%	82.00%	78.29%	29.94%	41.28%
	PERIOD 4	20.89%	13.44%	82.00%	47.82%	16.30%	39.46%
	PERIOD 5	21.90%	13.24%	81.00%	84.58%	17.19%	20.52%
	PERIOD 6	25.09%	14.78%	80.00%	59.93%	31.08%	35.14%
	PERIOD 7	26.23%	14.98%	79.00%	36.35%	32.85%	22.52%
	PERIOD 8	26.83%	13.08%	80.00%	82.10%	30.41%	36.10%
	PERIOD 9	23.79%	14.27%	81.00%	43.40%	25.17%	23.81%
	PERIOD 10	24.39%	12.61%	82.00%	38.21%	17.70%	40.30%



Better Table

Widgets to Gadgets Ratio

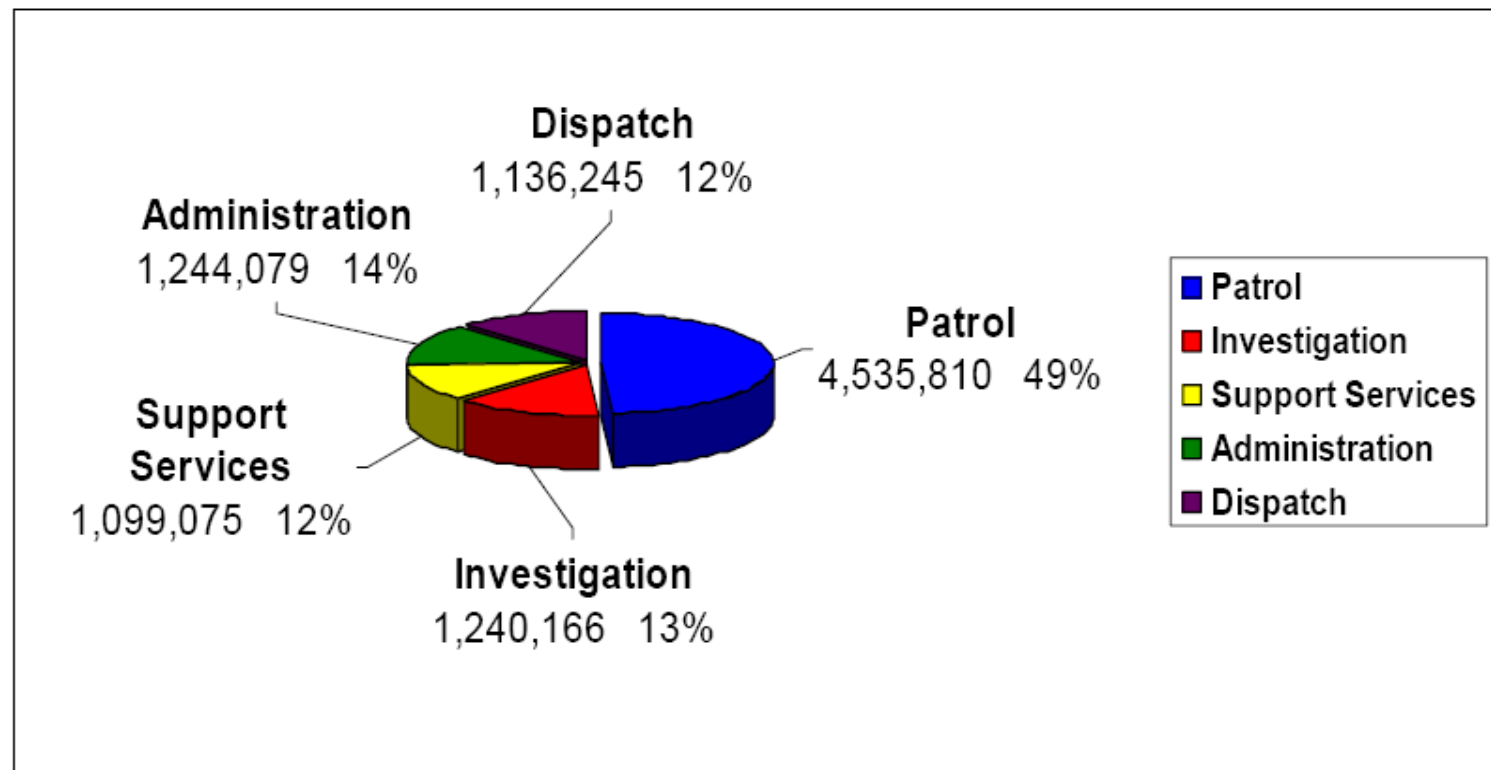
Period	Electromechanical			Pneumatic		
	In-store	Website	Distributor	In-store	Website	Distributor
1	22%	11%	83%	51%	21%	40%
2	21%	15%	81%	74%	21%	32%
3	22%	13%	82%	48%	22%	23%
4	21%	13%	82%	58%	31%	30%
5	22%	13%	81%	52%	19%	28%
6	25%	15%	80%	87%	15%	22%
7	26%	15%	79%	51%	23%	20%
8	27%	13%	80%	44%	22%	45%
9	24%	14%	81%	54%	17%	31%
10	24%	13%	82%	75%	31%	29%

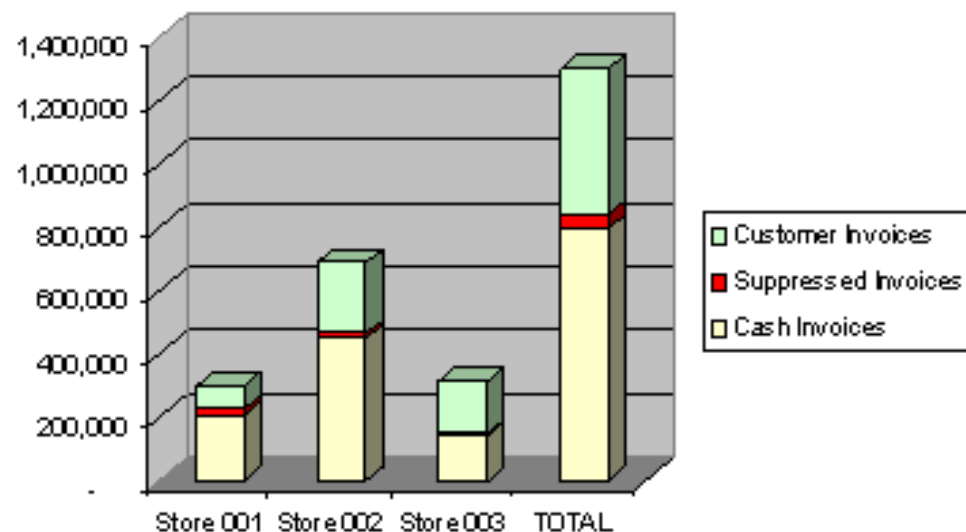
Ratios calculated using check level detail.

Periods include Jan - Oct 2007

2004 - 2005 Budget

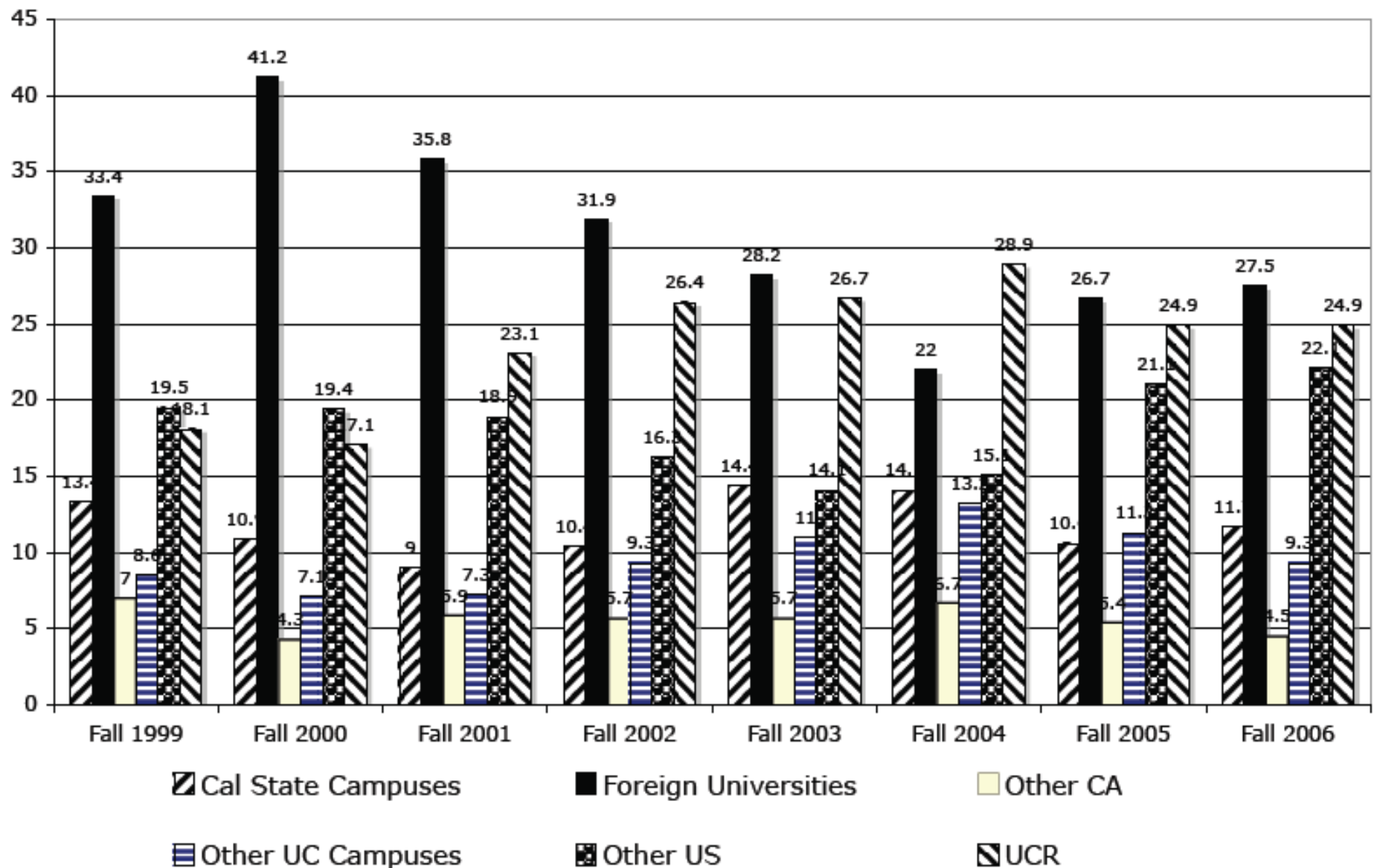
Budget By Division



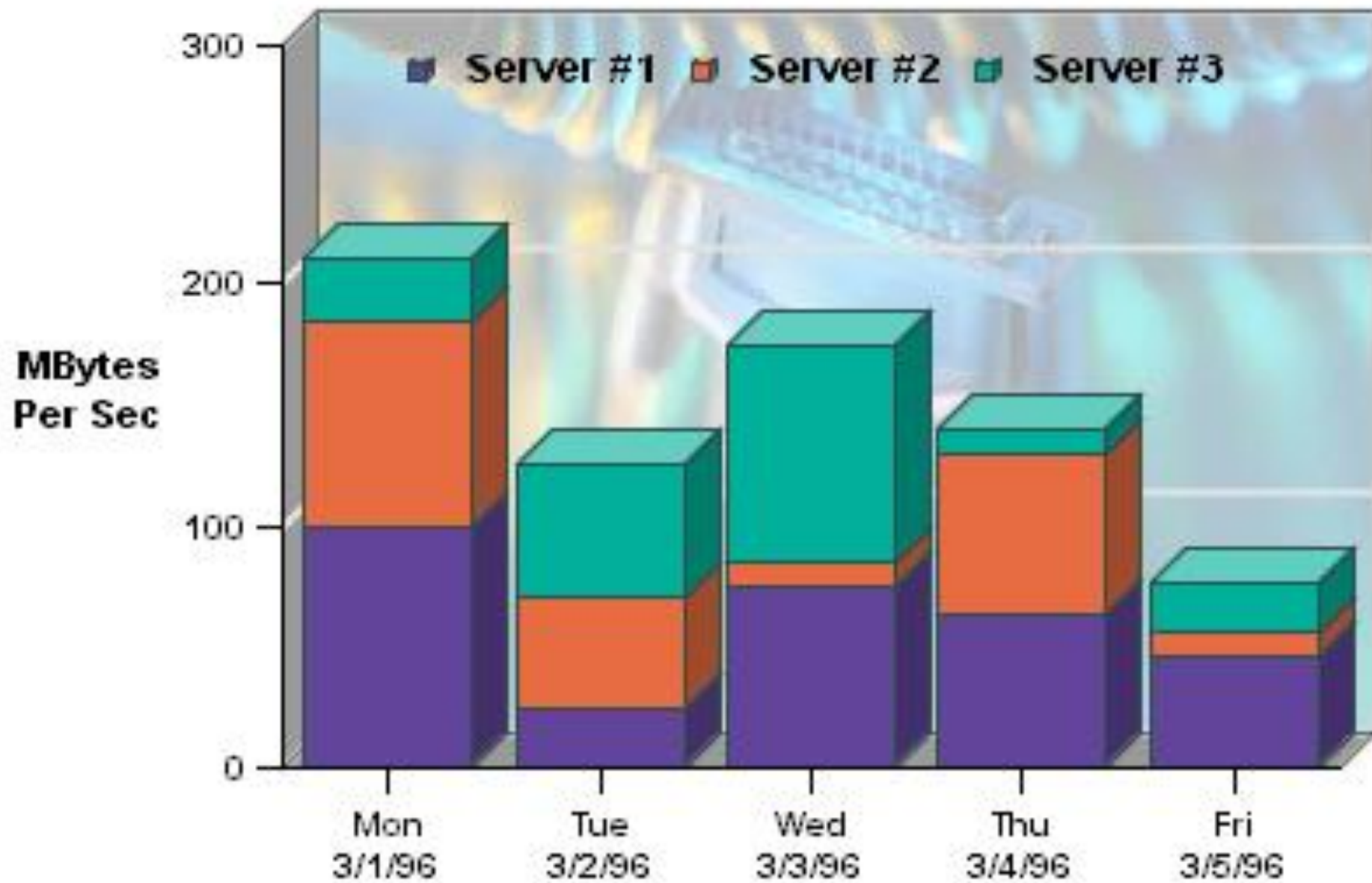


	Store 001	Store 002	Store 003	TOTAL
Total Invoices	298,943	687,091	313,140	1,299,174
<i>less</i>				
Cash Invoices	207,256	449,064	141,305	797,625
<i>leaves</i>				
Non-cash Invoices	91,687	238,027	171,835	501,549
<i>consisting of</i>				
Suppressed Invoices	18,888	15,527	6,501	40,916
<i>and</i>				
Customer Invoices	72,799	222,500	165,334	460,633
<i>for purchases from</i>				
Suppressed Customer Names	2,123	4,306	870	7,299
<i>and</i>				
Active Customer Names	2,103	14,747	8,342	25,192
<i>which include</i>				
Duplicate Customer Names	70	693	619	1,382
<i>leaving</i>				
Unique Customer Names	2,033	14,054	7,723	23,810
<i>which include</i>				
Bad Addresses	1,055	5,759	2,406	9,220
<i>leaving</i>				
Mailable Customer Names	978	8,295	5,317	14,590

Baccalaureate Degree Institutions of New Graduate Students- Fall Quarters- Percentages from Type of Institution



Weekday Server Load



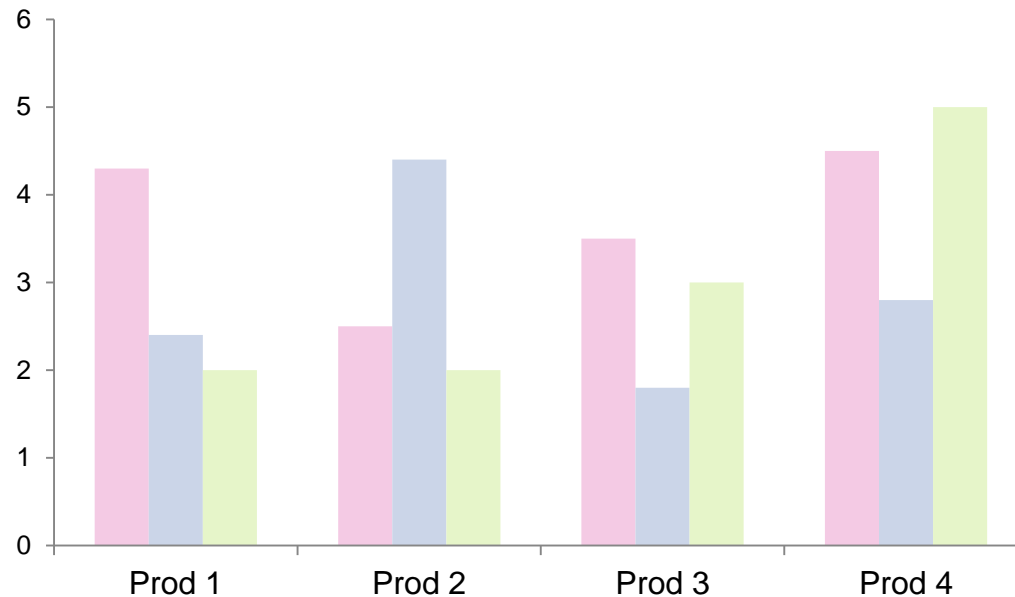


"With great power comes great responsibility."

Uncle Ben to Peter Parker, Spiderman 2002



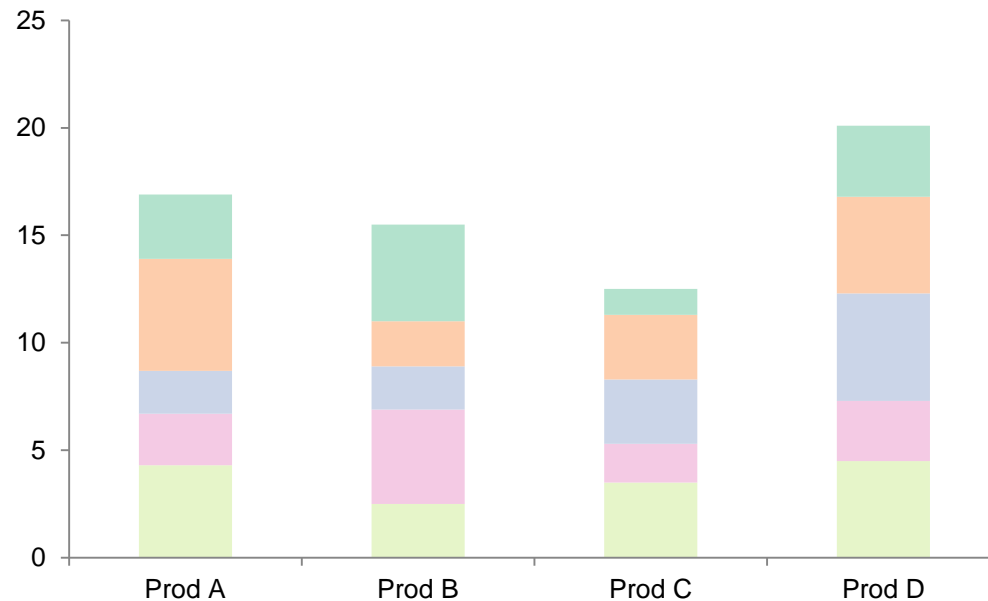
Bar Charts



- Show nominal data values in comparison to one another.
- Start with zero.
- If use a logarithmic scale, clearly notate.



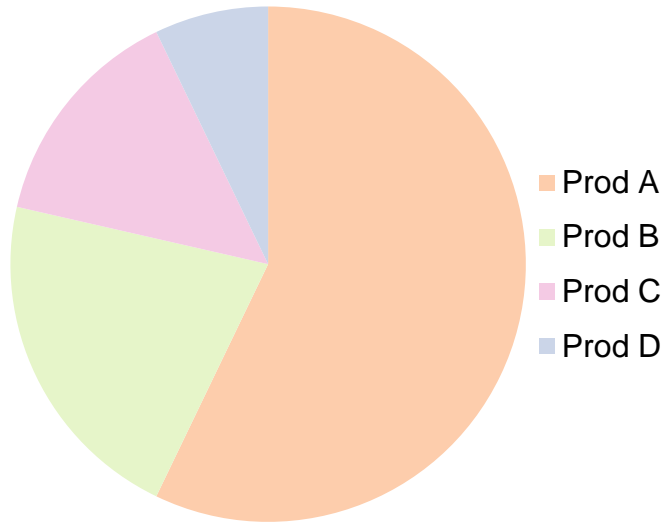
Stacked Bar Chart



- Somewhat confusing, not great for representing change.
- Total is most clearly represented number.
- Typically stack with largest values on the bottom.
- Single scale can make for interesting intra-bar comparisons.



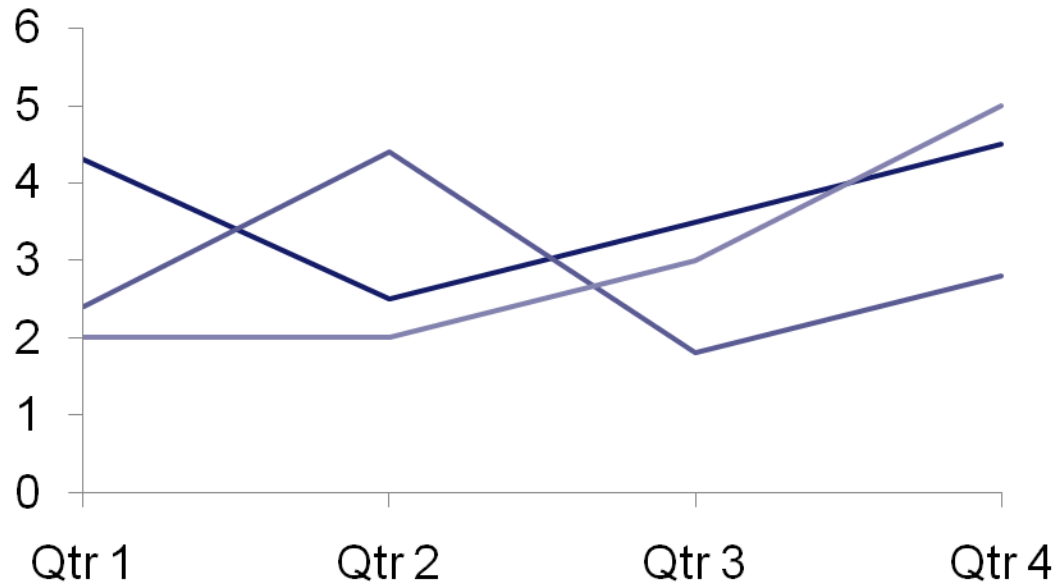
Pie Charts



- Typically used for showing parts of whole by percentage.
- Not great for piece to piece comparisons.
- Limit number of pieces.
- Can be interesting to show lots of pies together if significant differences exist.
- Stephen Few hates them.
- Do not use 3-D.



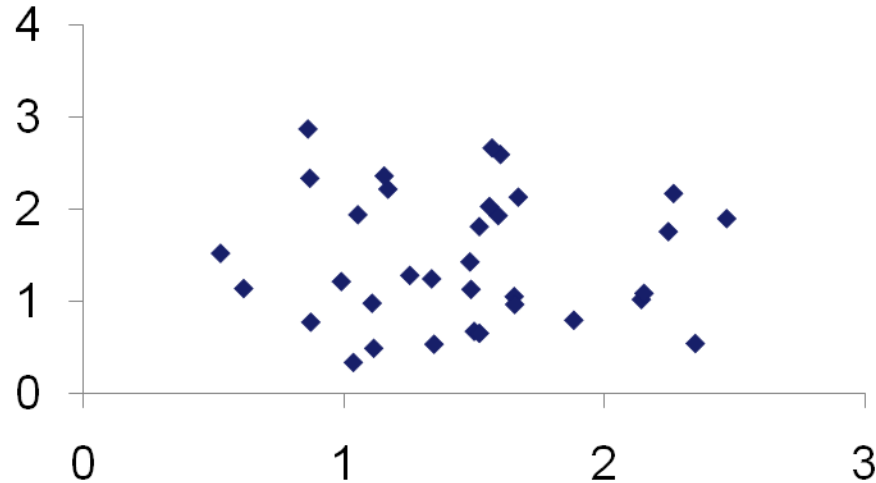
Line Chart



- Show a pattern or progression over a continuous range or period.
- Can be valued within a range to highlight a particular pattern (careful!).
- Maintain a rectangular shape close to golden proportion.



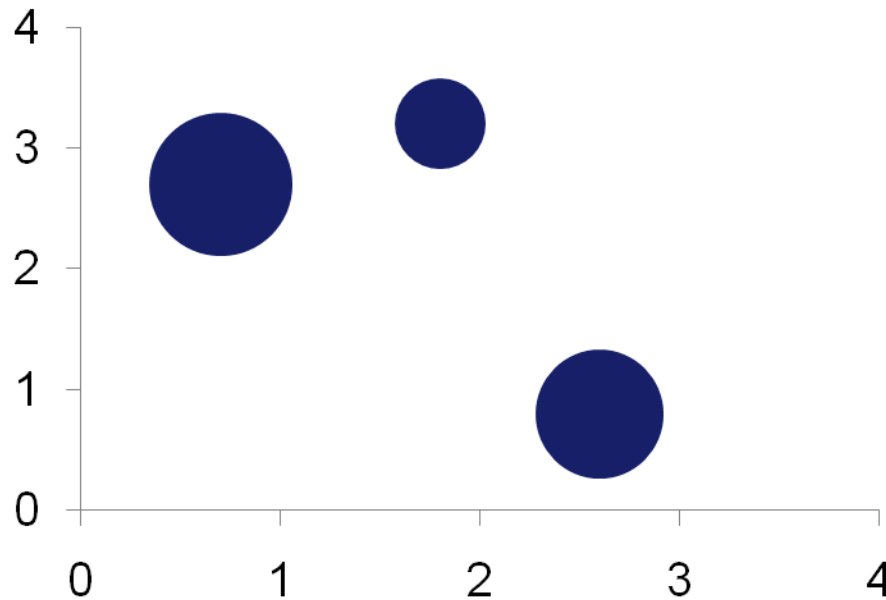
Scatter Plot



- Shows single data points at the intersection of two values.
- Often depict a large number of discrete data points (hundreds or thousands).
- Useful comparisons of two variables.
- Trend lines are often added.
- Clearly notate if use logarithmic scale(s).






Bubble Chart



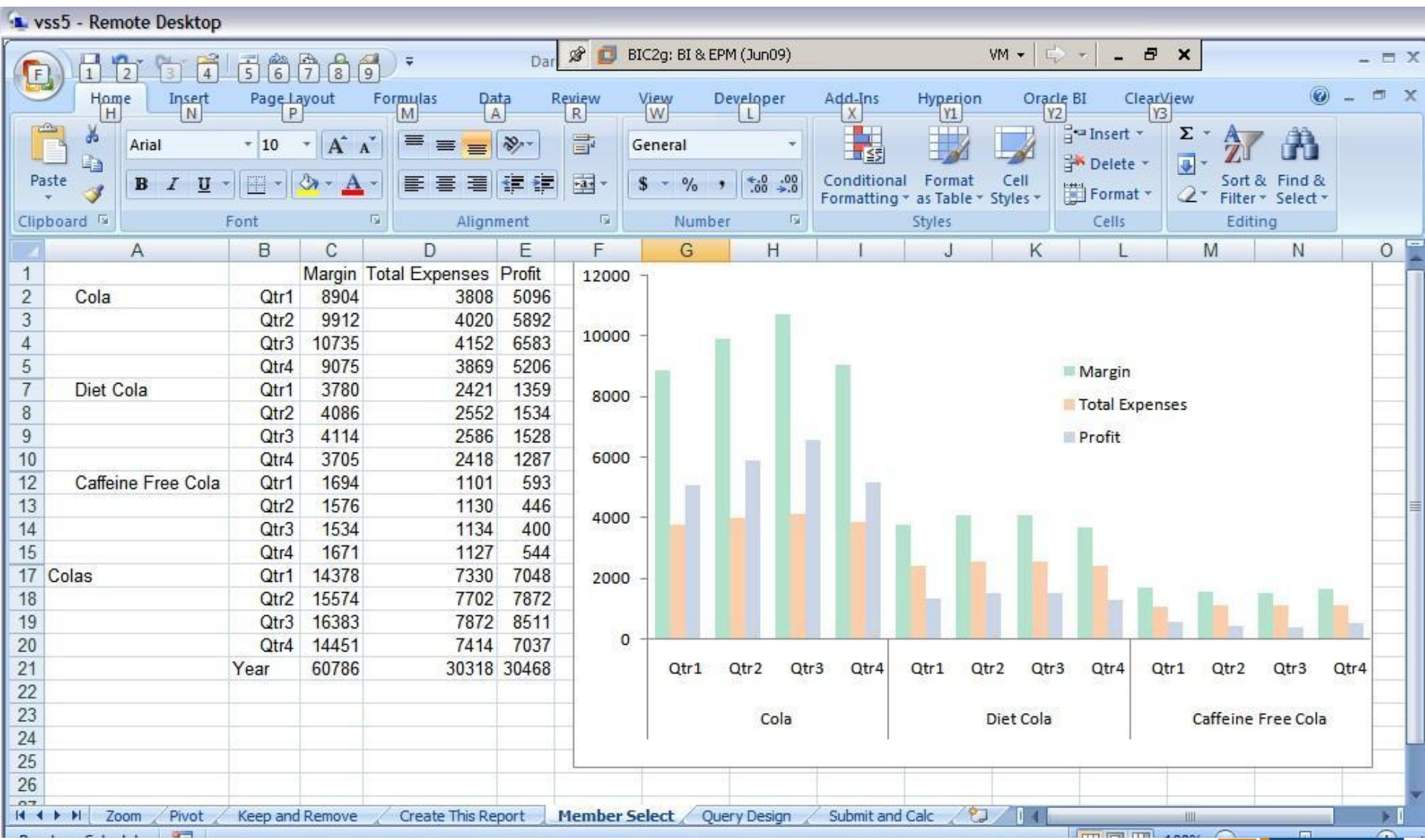
- Special type of scatter plot.
- Size of bubble is related to a third variable.
- Greatly reduces number of points that can be depicted.
- Best for depicting approximate values and comparisons.



Using Color Effectively

- Consciously choose a color palate.
- ColorBrewer2.org
 - Sequential schemes 
 - Designed for ordered data that progresses from low to high.
 - Divergent schemes 
 - Place equal emphasis on mid-range values and extremes at both ends of the data range.
 - Qualitative schemes 
 - Used for nominal and categorical data where magnitude differences between classes should not be emphasized.

Tables & Graphs Communicate Differently



Quarter Product Hierarchy 1 Name

Opportunity Revenue (000)	14,544	
Expected Revenue (000)	1156	
Total Ordered Amount (000)	1,246	

Recognized Revenue (000)	471	
% Revenue Lag	62.2%	
# of Orders	29	

% Order Discount	14.6%	
Ordered COGS (000)	1,122	
Order Gross Profit (000)	123	

Orders to Booking Close Rate	48.3%	
Average Order Size (000)	43	
Total Return Amount (000)	35	



Pipeline, Forecast and Actuals

Select View

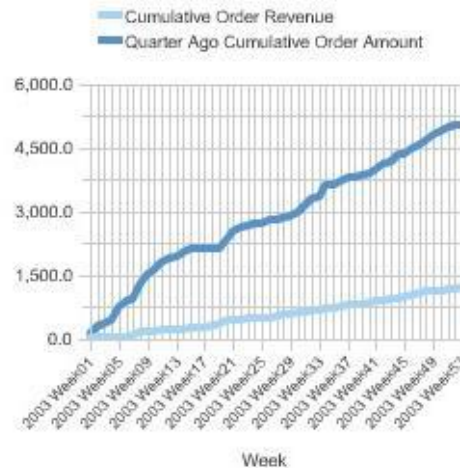


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Cumulative Order Revenue versus Last Quarter

Select View



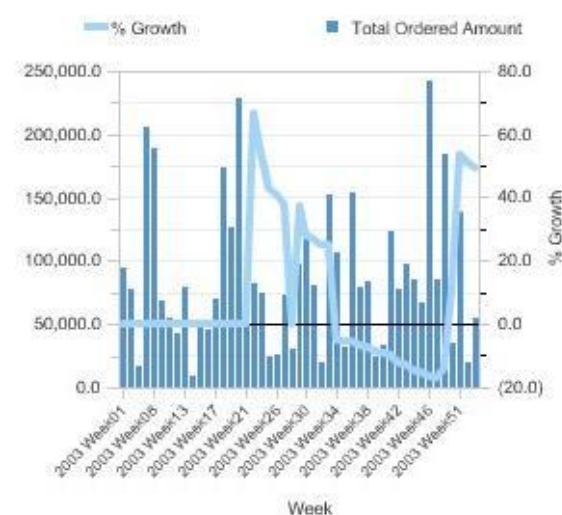
Year is equal to 2003

[Modify](#) - [Refresh](#)



Order Revenue Growth Over Previous Year

Select View



[Modify](#) - [Refresh](#)

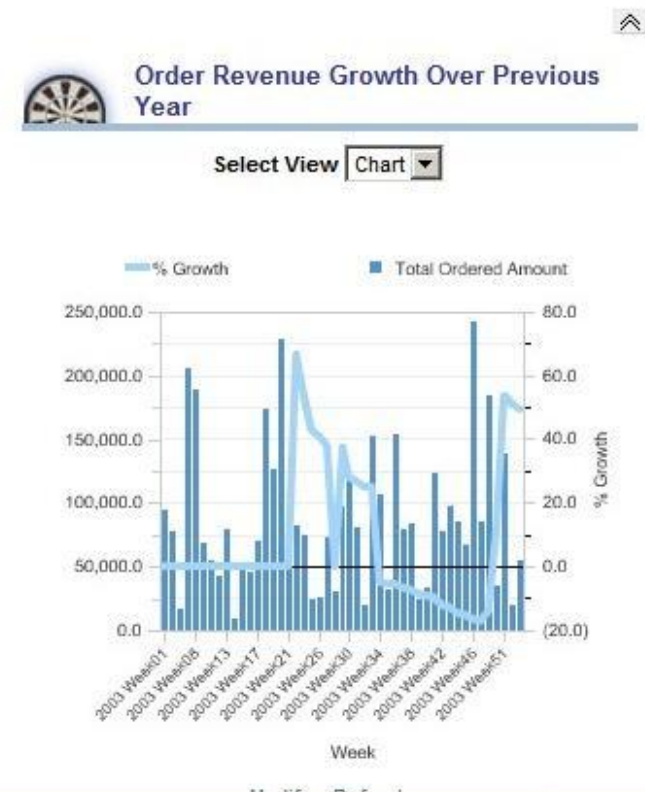
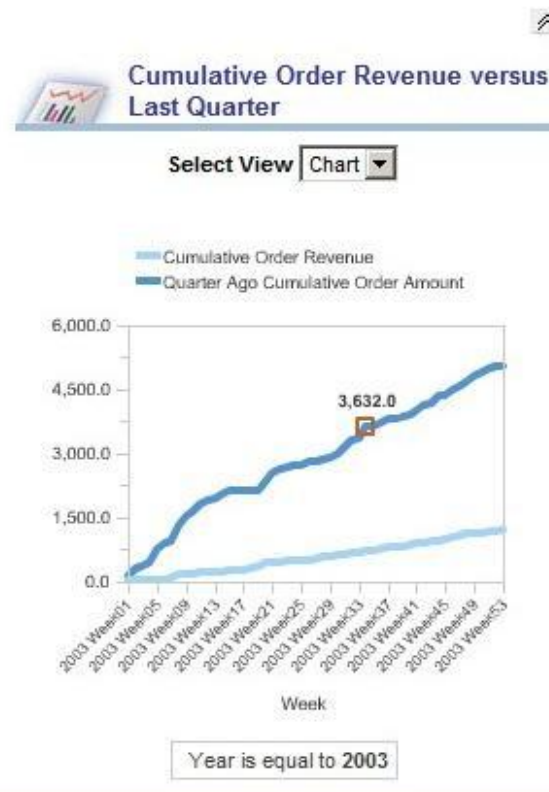
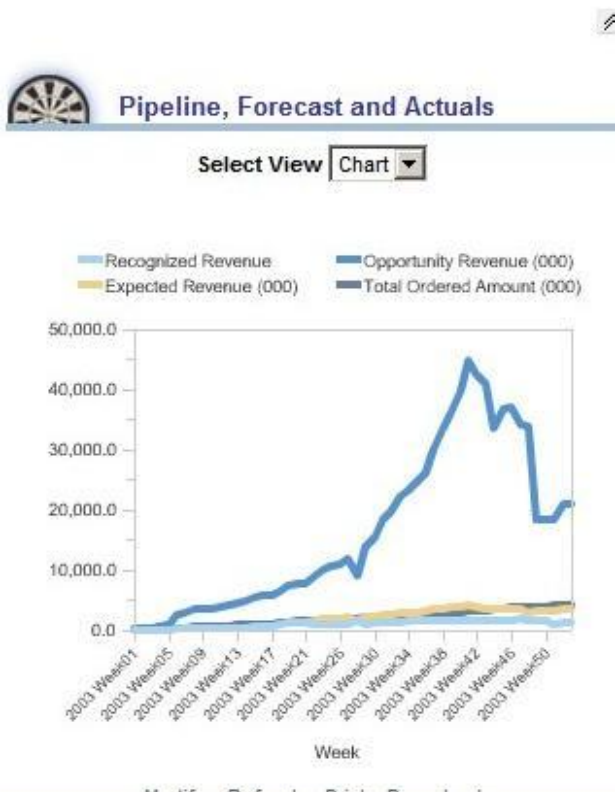
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Profit & Loss - Quarterly

	2005 Q 1	2005 Q 2	2005 Q 3	2005 Q 4
Revenue	\$11,078,583,759	\$12,956,966,463	\$21,256,939,680	\$128,287
Cost of Goods Sold	\$7,378,739,645	\$6,456,696,510	\$11,069,679,847	\$5,534,023,222
Gross Profit	\$3,699,844,114	\$6,500,269,953	\$10,187,259,833	(\$5,533,894,935)
Gross Margin %	33.4%	50.2%	47.9%	(4,313,691.7%)
Sales & Marketing Expenses	\$513,880,300	\$6,118,303	\$4,691,190,391	\$416,600
R&D Expenses	\$0	\$0	\$2,590,056,700	\$0
Other Operating Expenses	\$0	\$112,548	\$607,734	\$0
Operating Profit	\$3,185,963,814	\$6,494,039,103	\$2,905,405,009	(\$5,534,311,536)
Operating Margin %	29%	50%	14%	(4,314,016%)
Depreciation Expenses	\$0	\$112,548	\$0	\$0
Other Income	(\$345,057)	(\$297,161)	(\$62,734)	(\$35)
EBIT	\$3,185,618,757	\$6,493,629,394	\$2,905,342,275	(\$5,534,311,571)
EBIT Margin %	28.8%	50.1%	13.7%	(4,314,016.5%)
Interest Expense	\$129,519	\$176,415	\$25	\$0
EBT	\$3,185,489,238	\$6,493,452,979	\$2,905,342,250	(\$5,534,311,571)
EBT Margin %	28.8%	50.1%	13.7%	(4,314,016.5%)
Income Tax Expense	\$0	\$206,600	\$0	\$0
Net Income	\$3,185,489,238	\$6,493,246,379	\$2,905,342,250	(\$5,534,311,571)
Net Income Margin %	28.8%	50.1%	13.7%	(4,314,016.5%)

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Profit & Loss - Quarterly YTD

	2005 Q 1	2005 Q 2	2005 Q 3	2005 Q 4
Revenue YTD	11,078,583,758.7	24,035,550,222.1	45,292,489,901.8	45,292,618,188.5
Cost of Goods Sold YTD	7,378,739,645.1	13,835,436,155.0	24,905,116,001.8	30,439,139,223.9
Gross Profit YTD	3,699,844,113.7	10,200,114,067.1	20,387,373,900.0	14,853,478,964.6
Gross Margin YTD %	33%	42%	45%	33%
Sales & Marketing Expense YTD	513,880,300.0	519,998,602.9	5,211,188,993.5	5,211,605,593.9
R&D Expense YTD	\$0	\$0	\$2,590,056,700	\$2,590,056,700
Other Operating Expense YTD	0.0	112,548.0	720,281.5	720,281.5
Operating Profit YTD	3,185,963,813.7	9,680,002,916.2	12,585,407,925.0	7,051,096,389.2
Operating Margin YTD %	29%	40%	28%	16%
Depreciation Expenses YTD	0.0	112,548.0	112,548.0	112,548.0
Other Income YTD	(\$345,057)	(\$642,218)	(\$704,951)	(\$704,986)
EBIT YTD	3,185,618,756.7	9,679,248,150.7	12,584,590,426.0	7,050,278,855.2
EBIT YTD Margin %	29%	40%	28%	16%
Interest Expense YTD	129,519.0	305,934.0	305,959.0	305,959.0
EBT YTD	3,185,618,756.7	9,679,248,150.7	12,584,590,426.0	7,050,278,855.2
EBT Margin %	29%	40%	28%	16%
Income Tax Expense YTD	0.0	206,600.0	206,600.0	206,600.0
Net Income YTD	\$3,185,489,238	\$9,678,735,617	\$12,584,077,867	\$7,049,766,296
Net Income Margin %	29%	40%	28%	16%



Which is easier to read?



Profit & Loss - Quarterly

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Gross Profit YTD	3,699,844,113.7	10,200,114,067.1	20,387,373,900.0	14,853,478,964.6
Gross Margin YTD %	33%	42%	45%	33%
Sales & Marketing Expense YTD	513,880,300.0	519,998,602.9	5,211,188,993.5	5,211,605,593.9
R&D Expense YTD	\$0	\$0	\$2,590,056,700	\$2,590,056,700
Other Operating Expense YTD	0.0	112,548.0	720,281.5	720,281.5
Operating Profit YTD	3,185,963,813.7	9,680,002,916.2	12,585,407,925.0	7,051,096,389.2
Operating Margin YTD %	29%	40%	28%	16%
Depreciation Expenses YTD	0.0	112,548.0	112,548.0	112,548.0
Other Income YTD	(\$345,057)	(\$642,218)	(\$704,951)	(\$704,986)
EBIT YTD	3,185,618,756.7	9,679,248,150.7	12,584,590,426.0	7,050,278,855.2
EBIT YTD Margin %	29%	40%	28%	16%
Interest Expense YTD	129,519.0	305,934.0	305,959.0	305,959.0
EBT YTD	3,185,618,756.7	9,679,248,150.7	12,584,590,426.0	7,050,278,855.2
EBIT Margin %	29%	40%	28%	16%
Income Tax Expense YTD	0.0	206,600.0	206,600.0	206,600.0
Net Income YTD	\$3,185,489,238	\$9,678,735,617	\$12,584,077,867	\$7,049,766,296
Net Income Margin %	29%	40%	28%	16%

Month 01/01/2008

[Modify](#) - [Refresh](#) - [Print](#) - [Download](#)

Region	Units	Dollars
CENTRAL REGION	1,340,558.0	4,990,504.0
EASTERN REGION	2,899,502.0	9,885,568.0
SOUTHERN REGION	1,183,690.0	4,407,744.0
WESTERN REGION	1,647,962.0	6,601,288.0
Grand Total	7,071,712.0	25,885,104.0

[Modify](#) - [Download](#)[Top & Bottom Performing Districts](#)[Top 5 Performing Markets](#)[Bottom 5 Performing Markets](#)[Top 5 Products](#)

Regional Revenue

Current vs Prior Period

Measure 1 Measure 2 [Modify](#) - [Print](#) - [Download](#)

Market Share Summary

Price Per Unit 

Colors by Region

Color

District	Units	Percentile	Price Per Unit
ATLANTA DISTRICT	21,528	13%	\$3.89
BOSTON DISTRICT	429,778	76%	\$3.84
CHARLOTTE DISTRICT	13,884	10%	\$3.80
CHICAGO DISTRICT	235,946	60%	\$3.74
CINCINNATI DISTRICT	156,158	49%	\$3.87
DALLAS DISTRICT	41,830	21%	\$3.94
DENVER DISTRICT	19,040	12%	\$3.75
DETROIT DISTRICT	340,560	70%	\$3.92
JACKSONVILLE DISTRICT	169,260	51%	\$3.91
KANSAS CITY DISTRICT	128,746	43%	\$3.82
LOS ANGELES DISTRICT	266,464	64%	\$3.96
MEMPHIS DISTRICT	14,420	11%	\$3.95
MINNEAPOLIS DISTRICT	49,366	23%	\$3.69
NEW YORK DISTRICT	723,362	86%	\$3.90
PHILADELPHIA DISTRICT	691,540	85%	\$3.79
PORTLAND DISTRICT	94,012	35%	\$3.88
SAN FRANCISCO DISTRICT	85,318	34%	\$3.95
YOUNGSTOWN DISTRICT	204,596	57%	\$3.85

[Modify](#) - [Download](#)



Colors by Region

Color Cherry Red

District	Units	Percentile	Price Per Unit
ATLANTA DISTRICT	21,528	13%	\$3.89
BOSTON DISTRICT	429,778	76%	\$3.84
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Colors by Region

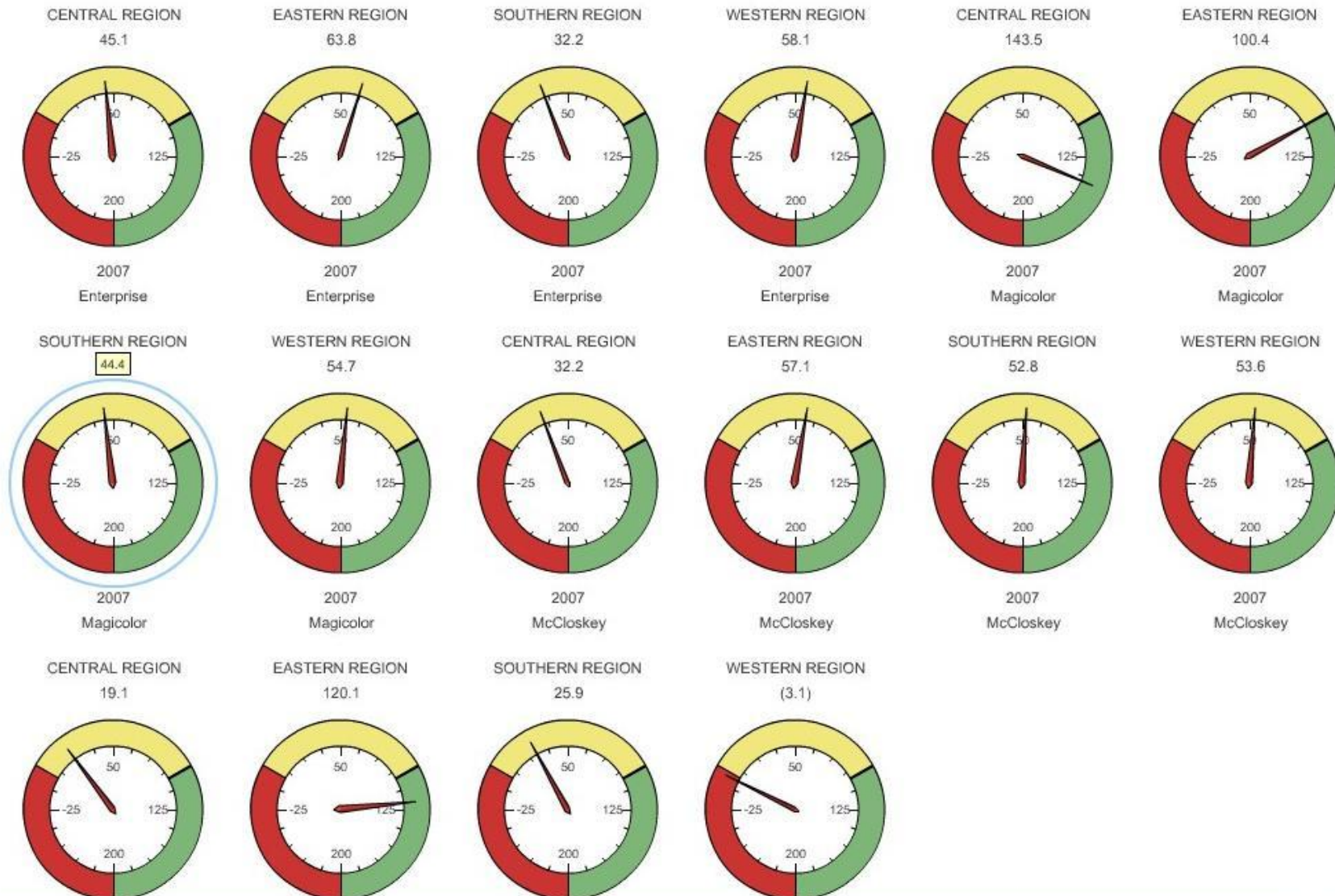
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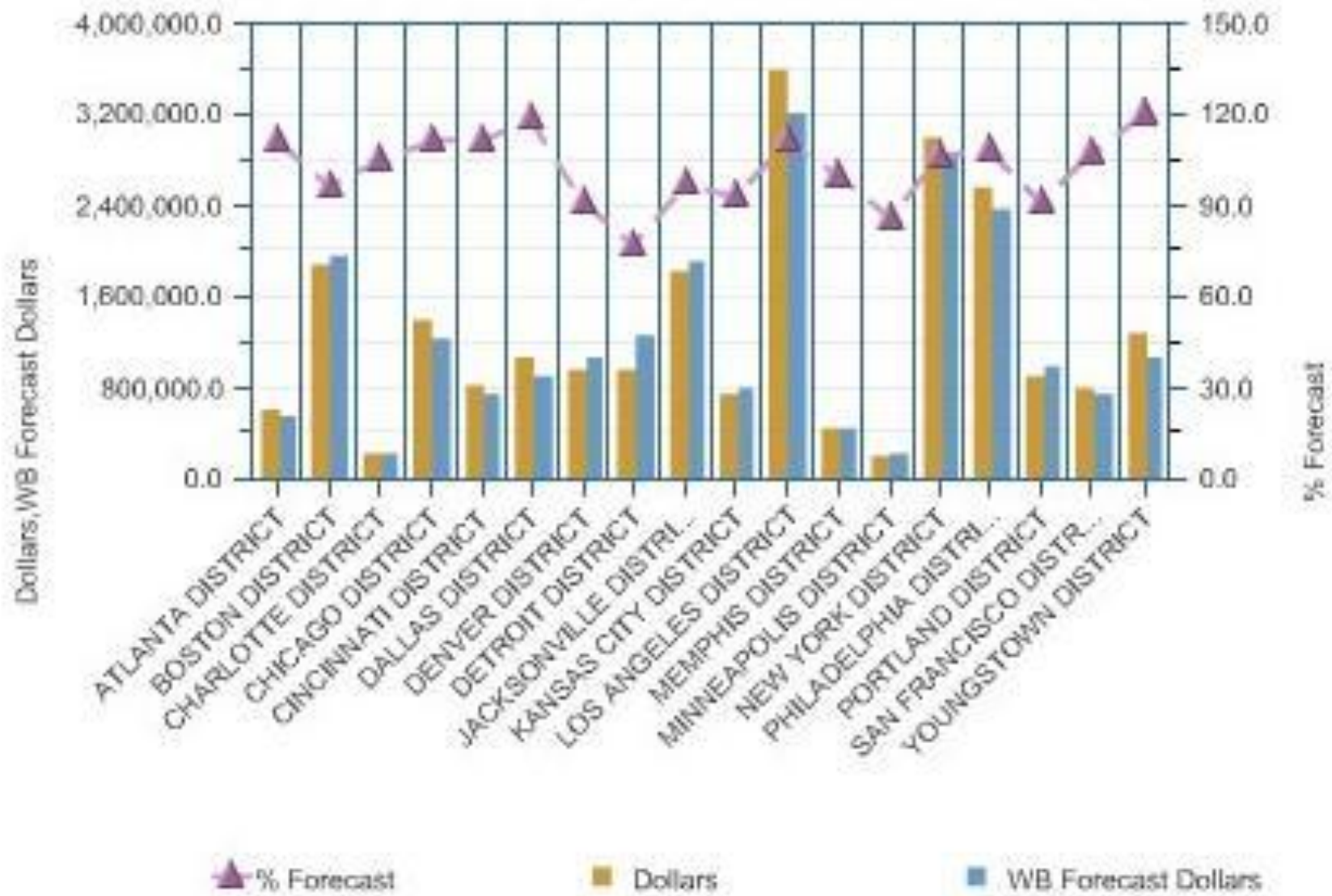
District	Units	Percentile	Price Per Unit
ATLANTA DISTRICT	641,762	84%	\$4.10
BOSTON DISTRICT	2,839,882	99%	\$3.21
CHARLOTTE DISTRICT	247,398	61%	\$4.52
CHICAGO DISTRICT	1,136,362	91%	\$4.45
CINCINNATI DISTRICT	770,156	88%	\$4.36
DALLAS DISTRICT	1,120,302	91%	\$4.22
DENVER DISTRICT	982,344	90%	\$4.18
DETROIT DISTRICT	995,148	90%	\$5.16
JACKSONVILLE DISTRICT	2,069,562	97%	\$3.32
KANSAS CITY DISTRICT	600,320	82%	\$4.80
LOS ANGELES DISTRICT	7,332,318	100%	\$3.41
MEMPHIS DISTRICT	636,976	84%	\$3.90
MINNEAPOLIS DISTRICT	103,578	38%	\$5.55
NEW YORK DISTRICT	4,373,086	100%	\$3.31
PHILADELPHIA DISTRICT	3,090,688	99%	\$3.68
PORTLAND DISTRICT	746,920	87%	\$5.14
SAN FRANCISCO DISTRICT	1,183,880	92%	\$3.92
YOUNGSTOWN DISTRICT	1,644,042	95%	\$4.40

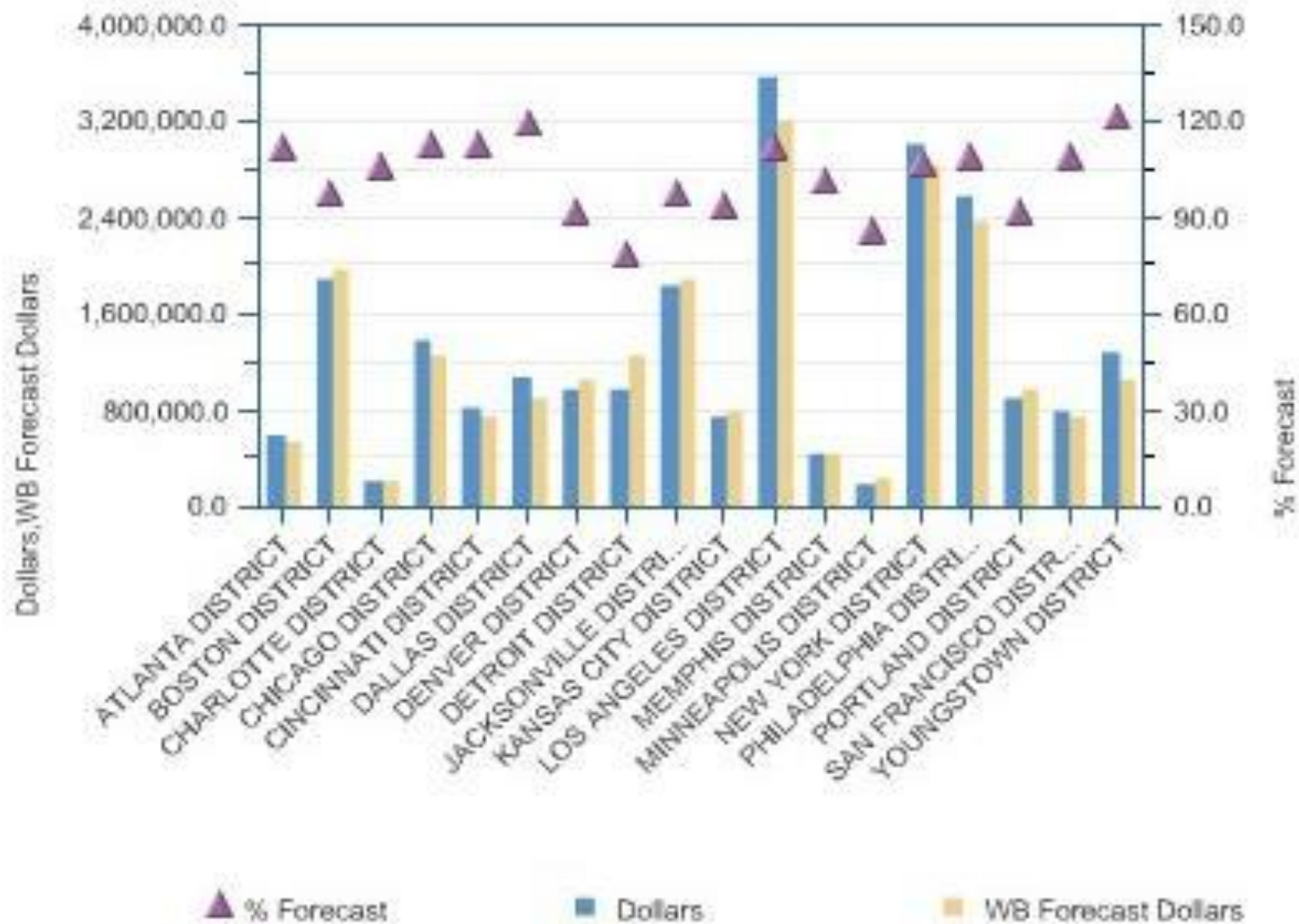


% Chg Year Ago Units

■ Poor ■ Warning ■ Good







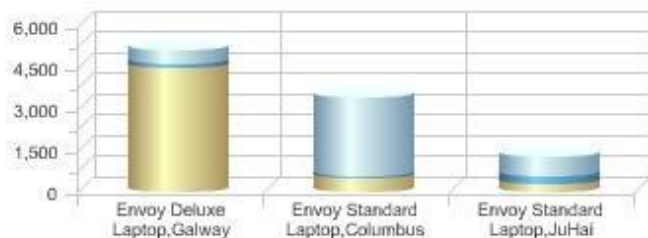


Inventory Snapshot - Available

(To see corresponding valuation information, please drill on Plant Location value in the chart or table.)

Select Dimension **Plant Location Name**

Available Quantity In Transit Quantity Inspection Quantity



Product Name ^	Plant Location Name	Available Quantity	In Transit Quantity	Inspection Quantity
Envoy Deluxe Laptop	Galway	500	150	4,500
Envoy Deluxe Laptop Total		500	150	4,500
Envoy Standard Laptop	Columbus	2,800	60	500
Envoy Standard Laptop	JuHai	700	250	300
Envoy Standard Laptop Total		3,600	310	800

Report Legend

■ Excess Inventory ■ At Safety Stock

Product Name is equal to Envoy Deluxe Laptop, Envoy Standard Laptop

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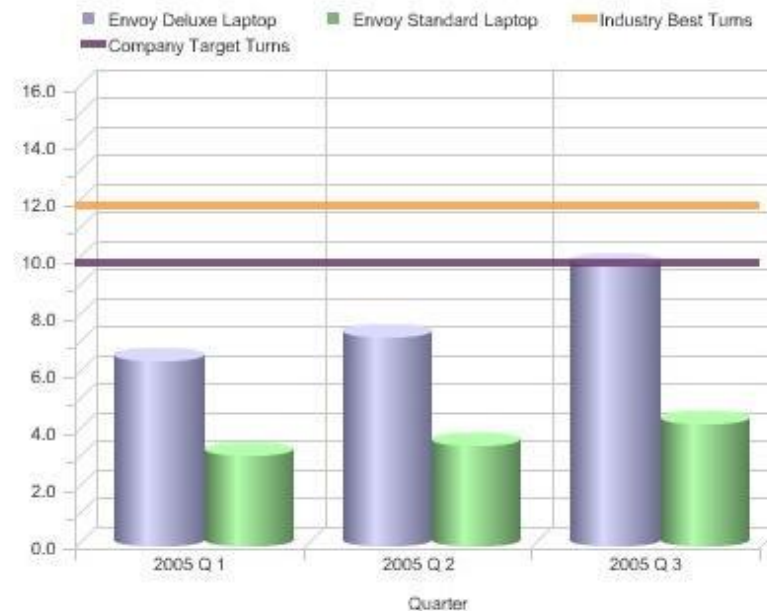
In addition to looking at the Inventory Snapshot by Plant that details information on a Quantity basis, it is very important to also understand the dollar value of these quantities. In order to obtain this information please click on the link below.

[Top 10 Inventory Valuation Report By Plant Or Product Type](#)



Inventory Turns Compared to Industry

Select View **Chart**



[Modify](#) - [Refresh](#) - [Print](#) - [Download](#) - [Add to Briefing Book](#)

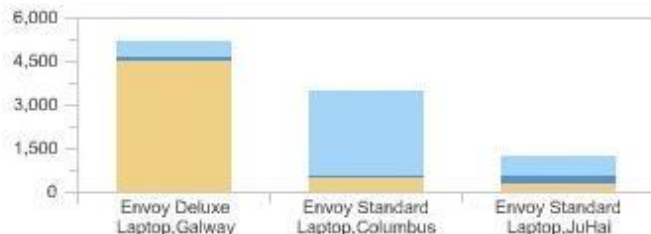


Inventory Snapshot - Available

(To see corresponding valuation information, please drill on Plant Location value in the chart or table.)

Select Dimension

Available Quantity In Transit Quantity Inspection Quantity



Product Name ^	Plant Location Name	Available Quantity	In Transit Quantity	Inspection Quantity
Envoy Deluxe Laptop	Galway	500	150	4,500
Envoy Deluxe Laptop Total		500	150	4,500
Envoy Standard Laptop	Columbus	2,900	60	500
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Envoy Standard Laptop Total		3,600	310	800

Report Legend

■ Excess Inventory ■ At Safety Stock

Product Name is equal to Envoy Deluxe Laptop, Envoy Standard Laptop

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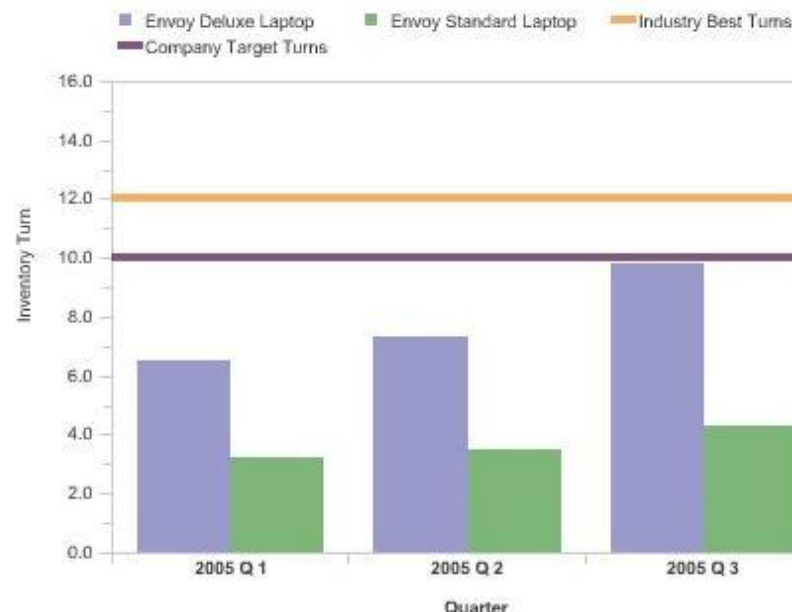
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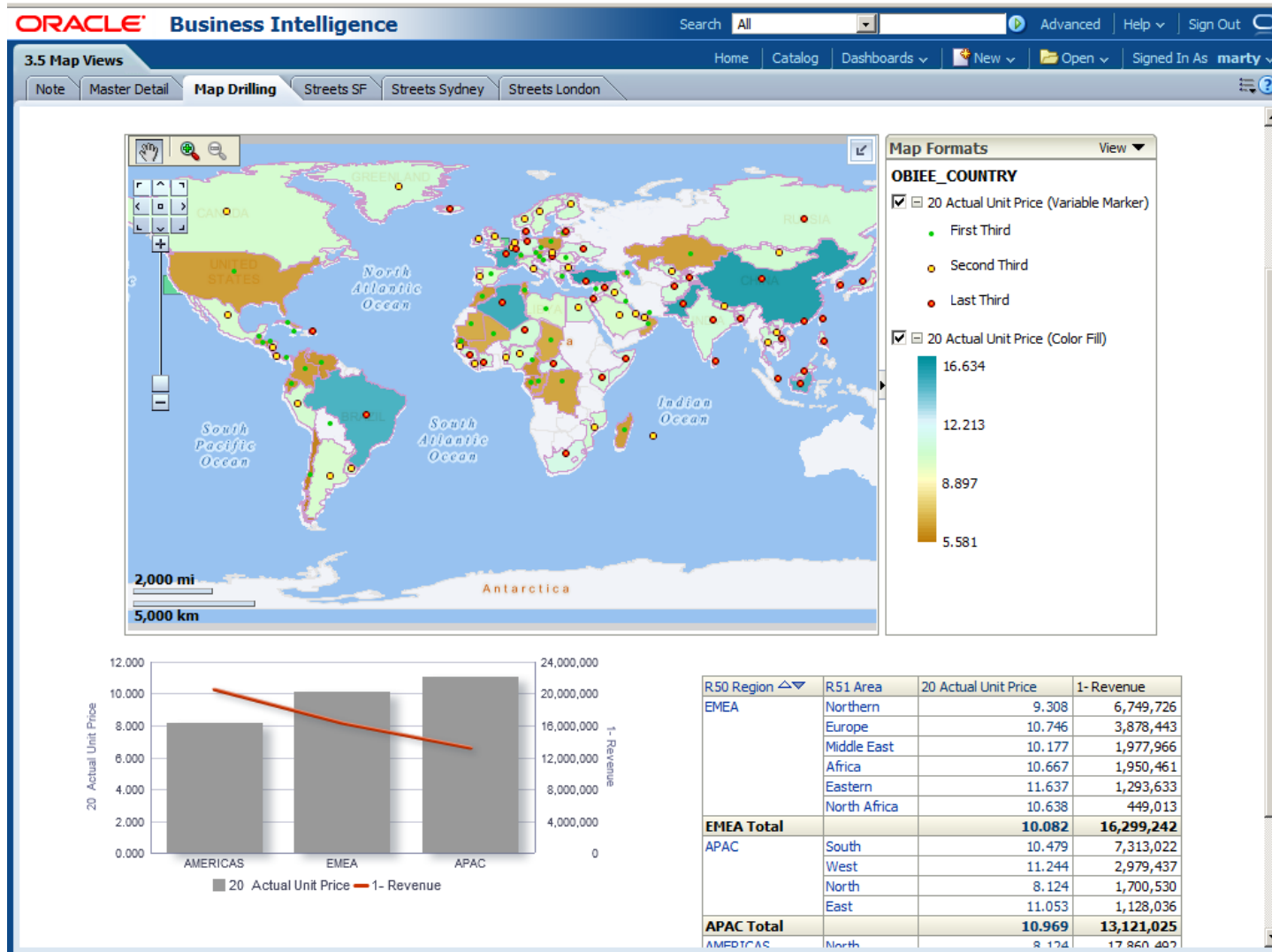
Inventory Turns Compared to Industry

Select View



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Demo of OBIEE 11g Visualizations





BI Implementation Guidelines

- Proper visualizations encourage usage.
- Poor visualizations mislead and frustrate and ultimately lead to misuse, mistrust, or abandonment of the BI system.
- BI implementations typically require tremendous time and money, but also offer the potential for huge ROIs.
- Most executives lack training in visualizing data and analysis and are unlikely to do it properly by chance.
- “Finish the project” with a small percentage of resource stretched over the first year of the system’s use.



Summary

- Don't use defaults.
- Use color very sparingly.
- Favor pastels. (Check out www.ColorBrewer2.org)
- Don't use 3-D graphs.
- Eliminate gridlines.
- Eliminate other non-data ink as much as possible.
- Use the appropriate graph or table style.
- Determine if users are exploring or explaining.
- Finish the project. Don't stop at installation.

Wednesday TechCast Series

Example topics of particular interest to BIWA summit attendees include, but are not limited to the following:

Data Access and Data Integration

- Data quality
- Extract, transform, load (ETL)
- Accessing distributed data
- SOA integration

Data Warehouses

- Data Governance
- Master Data Management
- Partitioning
- Tuning warehouse
- Faster cubes for faster information
- Managing images

Reporting and BI Dashboards

- Better reports & better information
- Custom BI environments
- Real-time analytics
- Interactive dashboards & EPM
- OBI EE, Essbase & Oracle Database

Advanced Analytics

- Predictive analytics and modeling
- Data mining and text mining
- SQL Statistical functions
- Fraud detection
- Market basket analysis
- Churn and retention strategies
- Building & using OLAP “cubes”
- What if? Analysis
- Leveraging spatial data
- Time series and forecasting
- Harvesting more insight from data “Best practices”

Case Studies

Tips & Tricks



Q&A and More Information

dvlamis@vlamis.com

tvlamis@vlamis.com

www.vlamis.com

www.vlamis.com/blog

816-781-2880

www.oraclebiwa.org

www.oracle.com/businessintelligence11g

2.1 Simple Demo Dashboard

Brand Analysis Product Details Usage Maps

Currency

* Select Language

- ☒ en
☐ fr
☐ es
☐ it

* Set Source DB Table

- ☒ SAMP_PRODUCTS_D
☐ SAMP_PRODUCTS_D2

Apply

Reset



Commentary

2010/03/16 07:28:24

User: 42,800

It seems that our married customers are more fickle than our single customers.

2010/04/19 07:42:14

User: 113,485

We have a lot of customers who are divorced.

2010/04/23 01:48:54

User: 109,404

We have a lot of single customers who have been with us for some time.

[Dashboard Commentary](#)

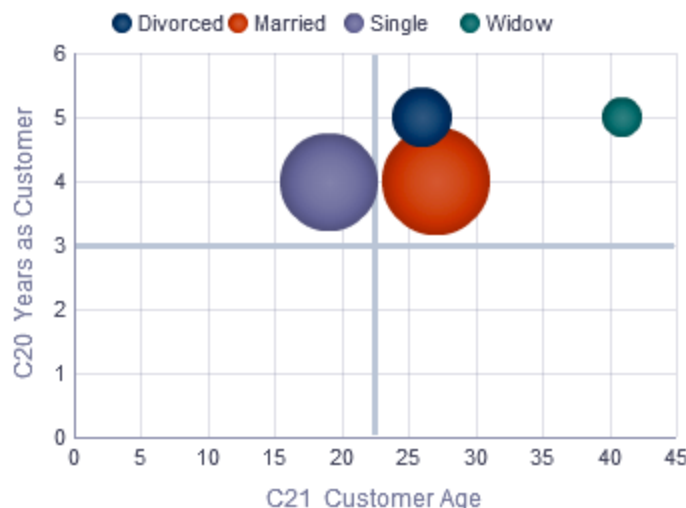
[Archive Orders](#)



Revenue Demographics

Size of Bubble indicates Revenue Value

Time run: 7/14/2010 10:04:05 AM



Product Details

Time run: 7/14/2010 10:04:05 AM

	Converted Revenue	# of Orders
Total Products	\$54,391,233	20,000
BizTech	\$22,795,240	8,424
FunPod	\$19,073,389	7,046
Digital	\$8,418,082	3,132
Games	\$10,655,308	3,914
HomeView	\$12,522,604	4,530
Services	\$1,108,237	400
TV	\$11,414,367	4,130
My Preferred Products	\$54,391,233	20,000



Order Status

Time run: 7/14/2010 10:04:05 AM

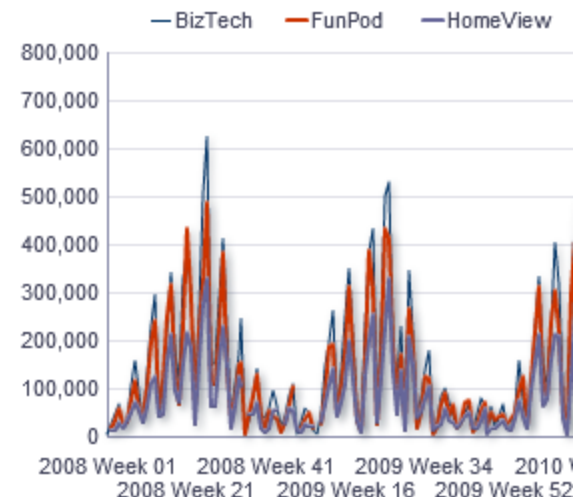
	Secure		Standard
	# of Orders	1- Revenue	# of Orders
BizTech	3,736	9,323,082	3,100
FunPod	2,083	5,177,283	3,300
HomeView	2,100	5,278,501	1,625
Grand Total	7,919	19,778,866	8,025



Chart Zoom

Time run: 7/14/2010 10:04:05 AM

120 Converted Rev (Indexcol)




Order Status
Time run: 7/14/2010 10:05:18 AM

			# of Orders	1- Revenue
Secure	FunPod	Digital	812	1,997,956
		Games	1,271	3,179,327
Standard	FunPod	Digital	1,566	3,842,734
		Games	1,734	4,337,007
Grand Total			5,383	13,357,024

[Return](#) - [Create Bookmark Link](#)

2.1 Simple Demo Dashboard

Home Catalog Dashboards v New v Open v Signed In As

Brand Analysis Product Details Usage Maps

Currency

* Select Language

- ☒ en
☐ fr
☐ es
☐ it

* Set Source DB Table

- ☒ SAMP_PRODUCTS_D
☐ SAMP_PRODUCTS_D2

Apply

Reset



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[Dashboard Commentary](#)

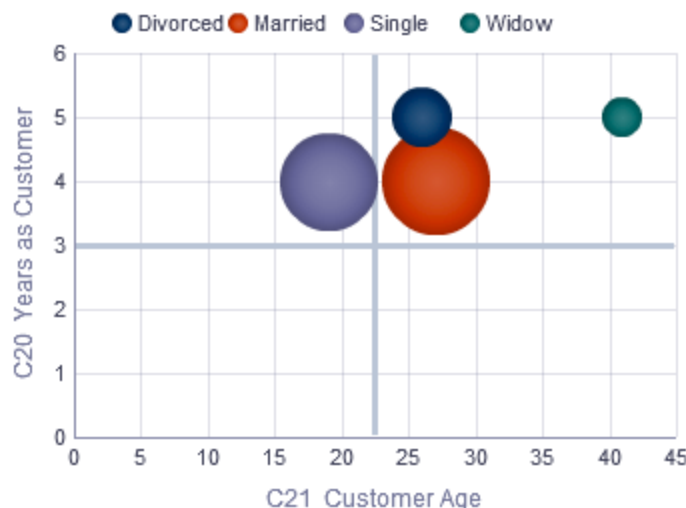
Condition cannot be evaluated.



Revenue Demographics

Size of Bubble indicates Revenue Value

Time run: 7/14/2010 10:04:05 AM



Product Details

Time run: 7/14/2010 10:04:05 AM

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Total Products	\$54,391,233	20,000
BizTech	\$22,795,240	8,424
FunPod	\$19,073,389	7,046
Digital	\$8,418,082	3,132
Camera	\$8,418,082	3,132
MPEG4 Camcorder	\$4,344,857	1,604
7 Megapixel Digital Camera	\$4,073,225	1,528
Games	\$10,655,308	3,914
HomeView	\$12,522,604	4,530
Services	\$1,108,237	400



Order Status

Time run: 7/14/2010 10:04:05 AM

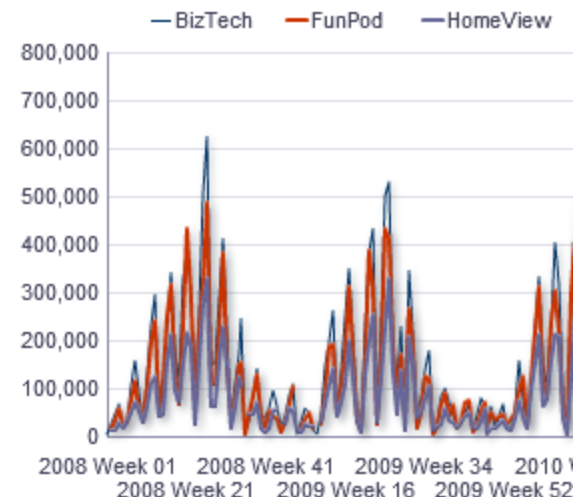
	Secure		Standard
	# of Orders	1- Revenue	# of Orders
BizTech	3,736	9,323,082	3,100
FunPod	2,083	5,177,283	3,300
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2.1 Simple Demo Dashboard

Home Catalog Dashboards v New v Open v Signed In As

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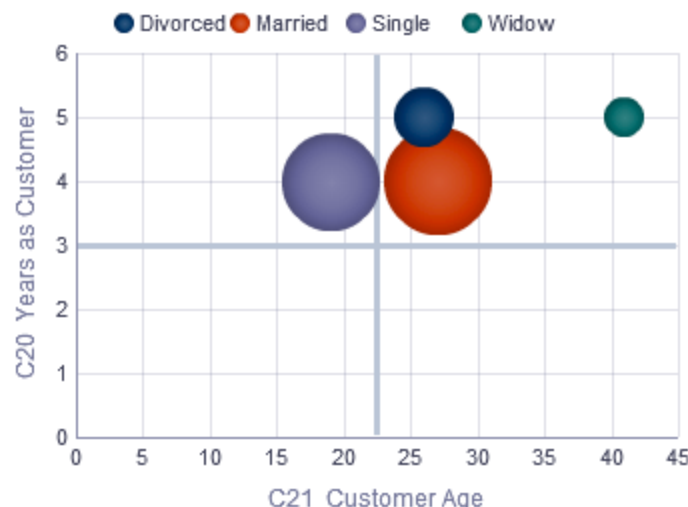
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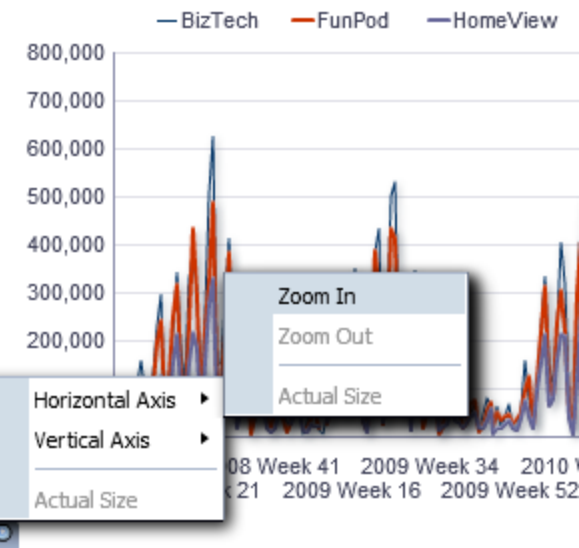
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2.1 Simple Demo Dashboard

Home Catalog Dashboards v New v Open v Signed In As

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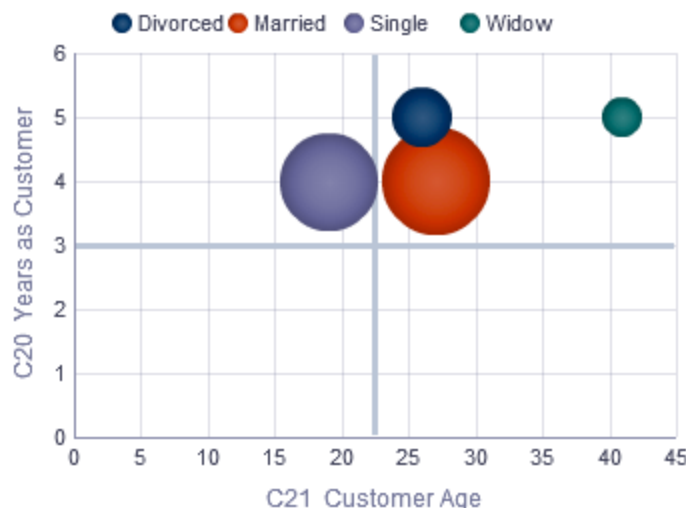
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Order Status

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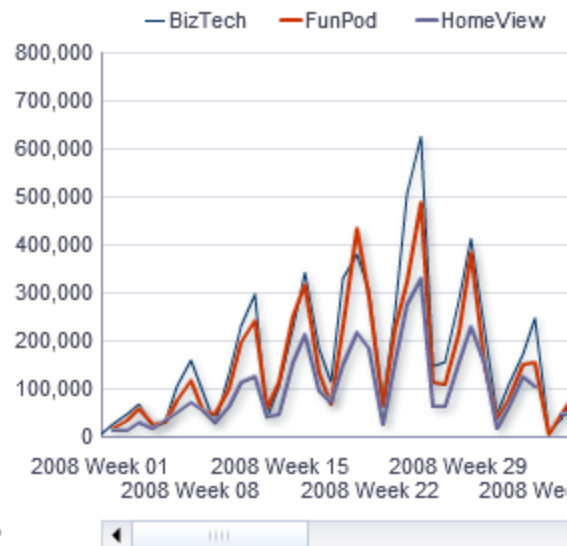
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Grand Total	7,919	19,778,866	8,025



Chart Zoom

Time run: 7/14/2010 10:04:05 AM

120 Converted Rev (Indexcol)



3.3 Charting

Chart Legends Chart Slider Chart Zoom



Chart Slider & Prompt

Time run: 7/14/2010 10:07:39 AM

D4 Company

 2008 / 01

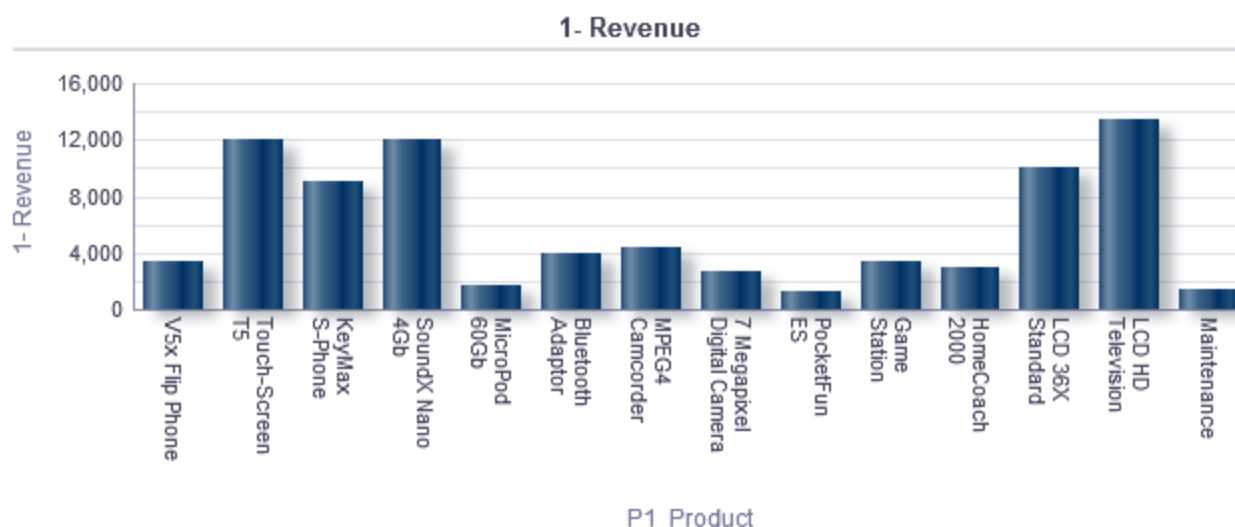


Chart Slider :

[Return to Index page](#)

► **Description :** A column can be displayed as a prompt. Any column can be displayed as a slider of values in the view.

► **Usage :** The prompt can be used to select a specific value from a list of items and view the graph for that item. The slider can be used to slide through a list of values and view the graph for a specific value.

► **Setup :** A column can be placed in the 'Chart Prompt' region within a Chart view using the Answers Analysis. To add a slider to the chart, place the column in the 'Chart Prompt' region and check the 'Display as Slider' option within the view.

[Link to Oracle.com](#)

3.3 Charting

Chart Legends Chart Slider Chart Zoom



Chart Slider & Prompt

Time run: 7/14/2010 10:08:06 AM

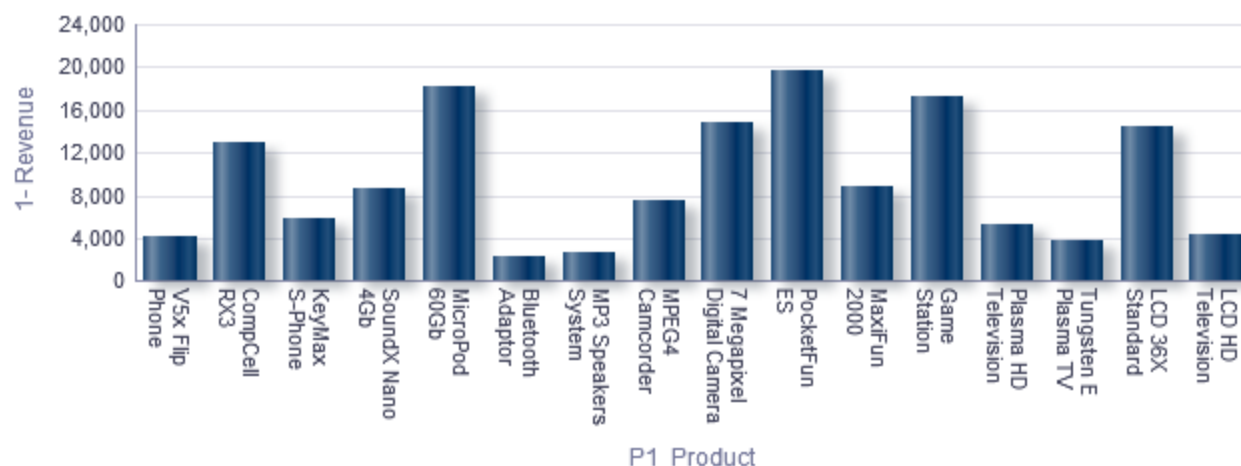
D4 Company

Tescare Ltd.



2008 / 01

1- Revenue



[Link to Oracle.com](#)

Chart Slider :

[Return to Index page](#)

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3.3 Charting

Chart Legends Chart Slider Chart Zoom



Chart Slider & Prompt

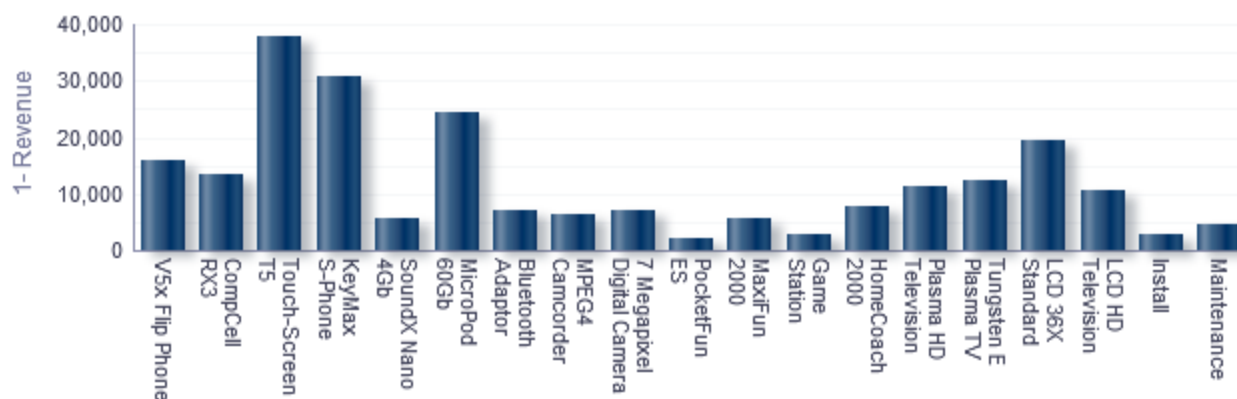
Time run: 7/14/2010 10:07:39 AM

D4 Company

Stockplus Inc.



1- Revenue



P1 Product

[Link to Oracle.com](#)

Chart Slider :

[Return to Index page](#)

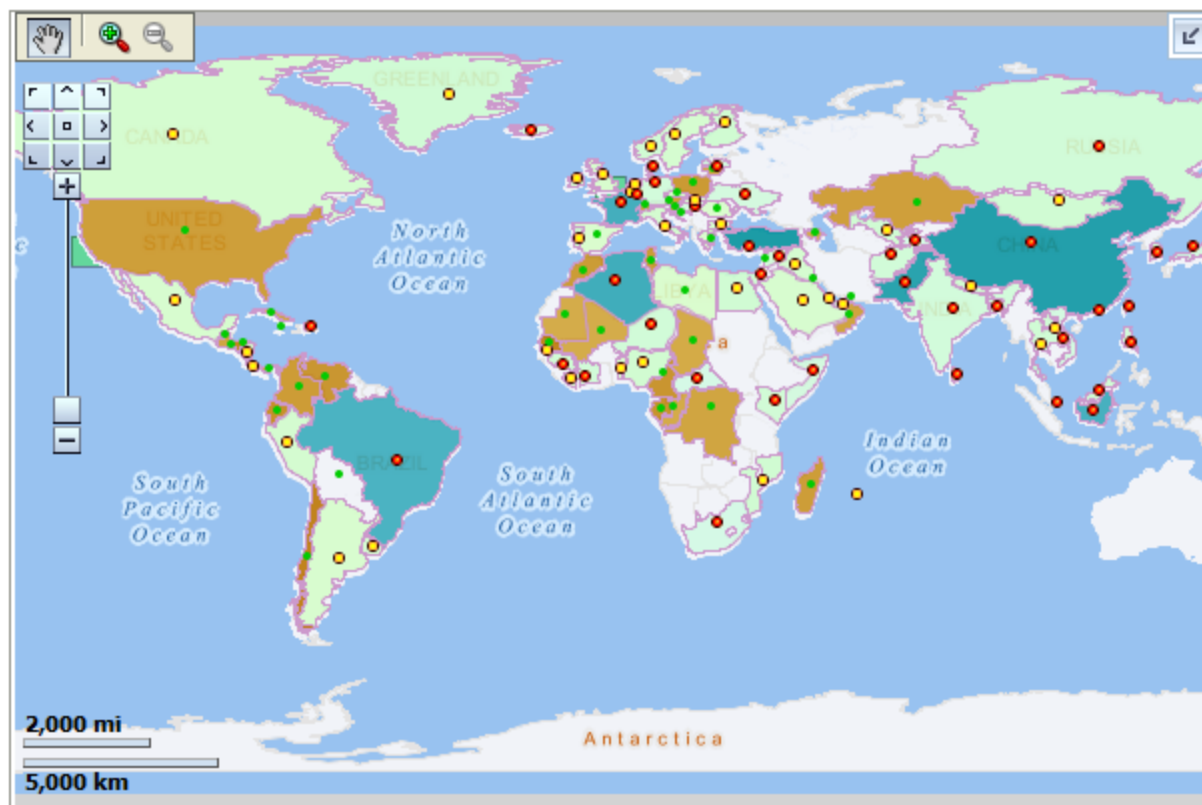
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3.5 Map Views

Note Master Detail Map Drilling Streets SF Streets Sydney Streets London



Map Formats View

OBIEE_COUNTRY

☒ 20 Actual Unit Price (Variable Marker)

- First Third
- Second Third
- Last Third

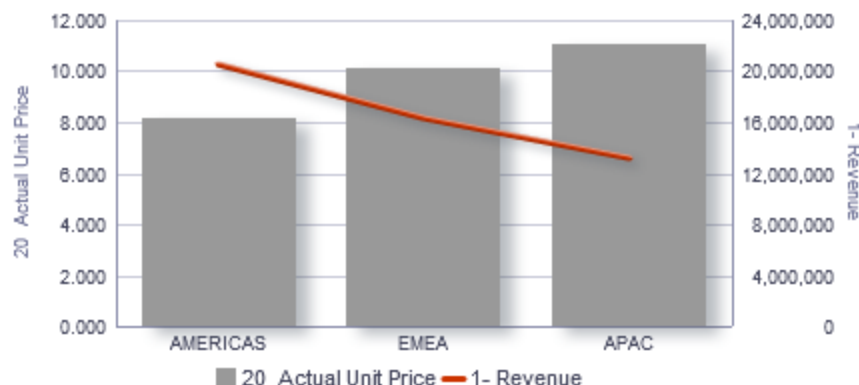
☒ 20 Actual Unit Price (Color Fill)

16.634

12.213

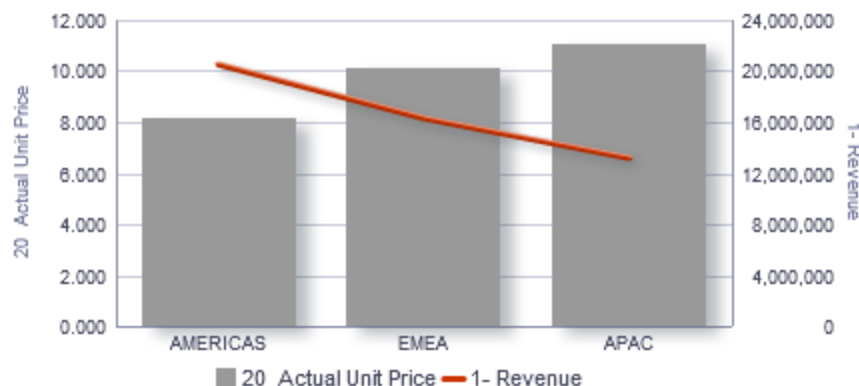
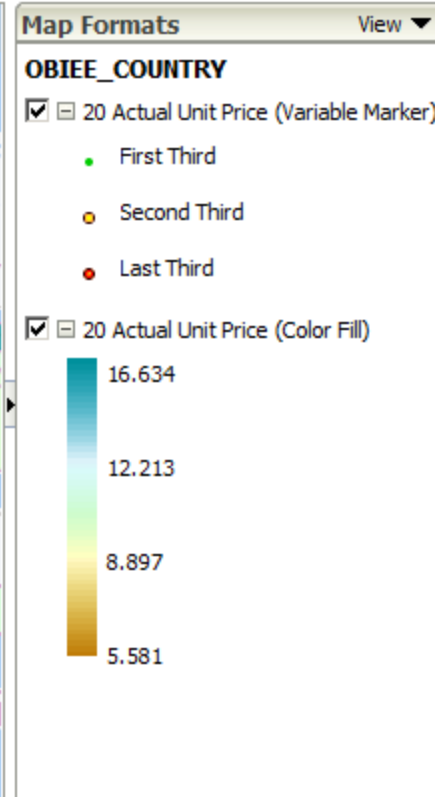
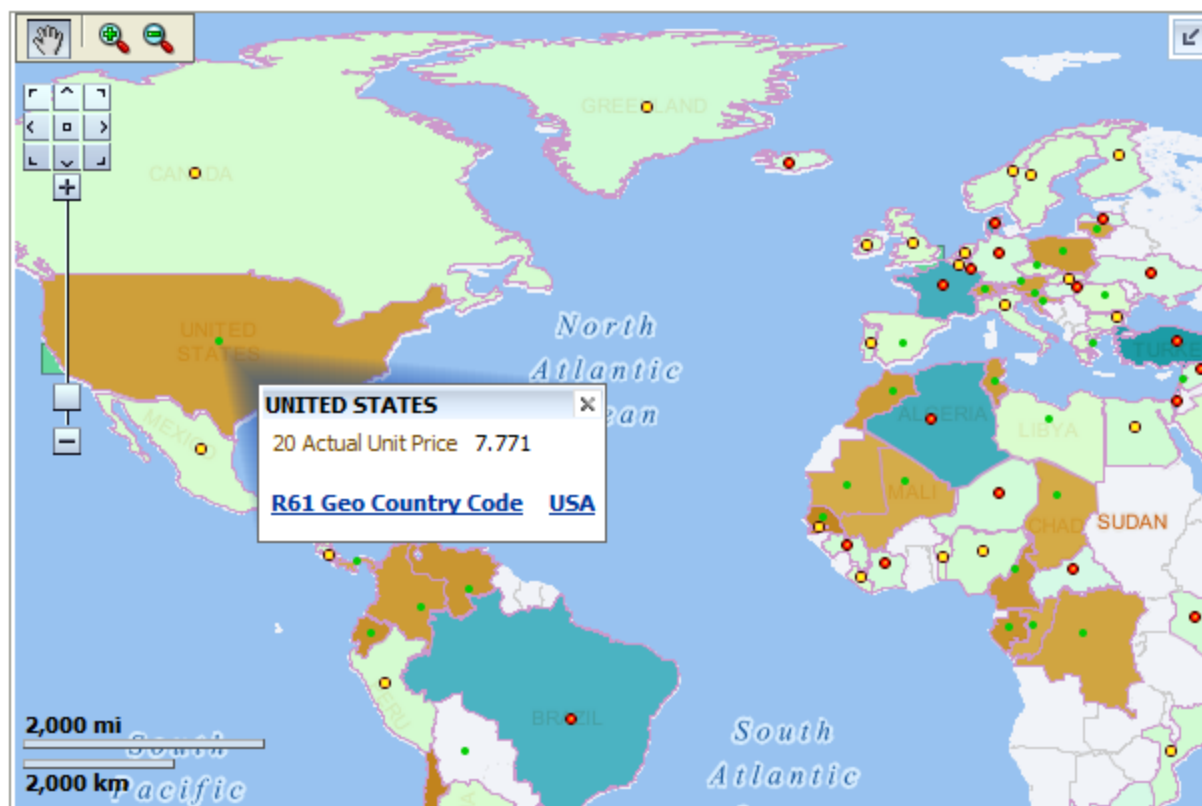
8.897

5.581

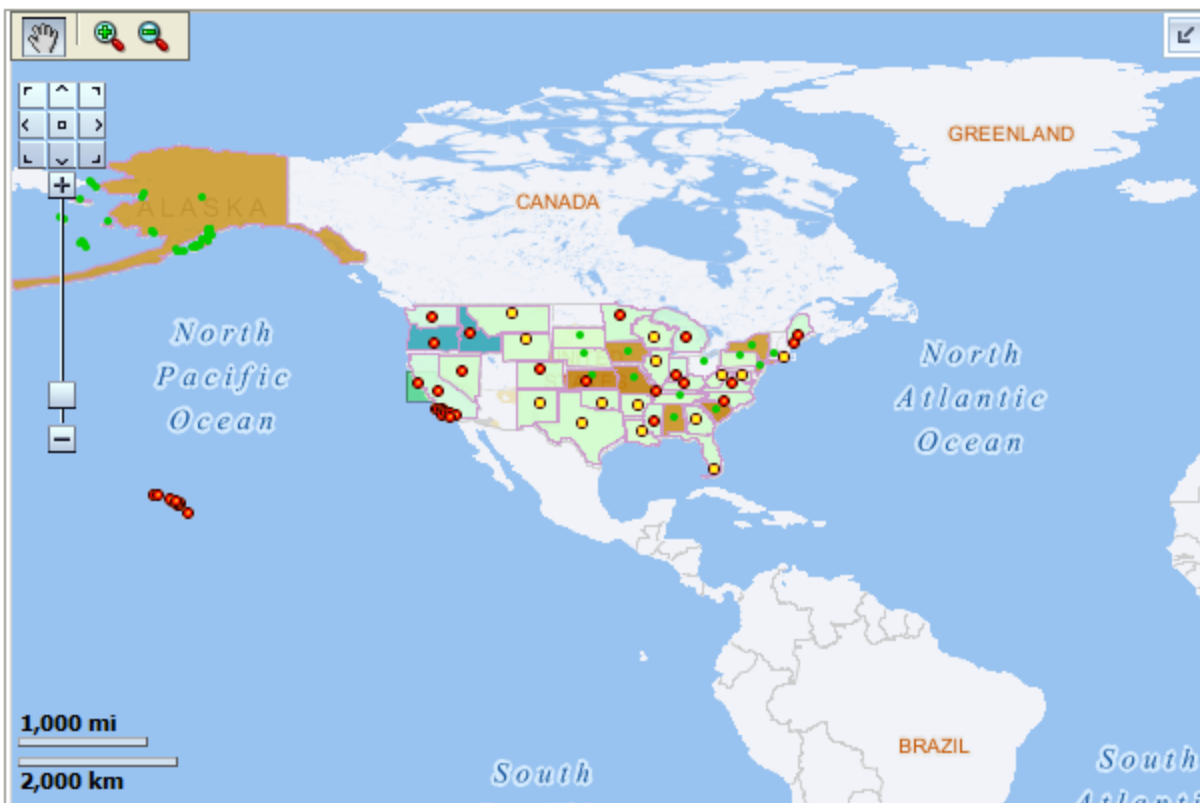


R50 Region	R51 Area	20 Actual Unit Price	1- Revenue
EMEA	Northern	9.308	6,749,726
	Europe	10.746	3,878,443
	Middle East	10.177	1,977,966
	Africa	10.667	1,950,461
	Eastern	11.637	1,293,633
	North Africa	10.638	449,013
EMEA Total		10.082	16,299,242
APAC	South	10.479	7,313,022
	West	11.244	2,979,437
	North	8.124	1,700,530
	East	11.053	1,128,036

3.5 Map Views



R50 Region	R51 Area	20 Actual Unit Price	1- Revenue
EMEA	Northern	9.308	6,749,726
	Europe	10.746	3,878,443
	Middle East	10.177	1,977,966
	Africa	10.667	1,950,461
	Eastern	11.637	1,293,633
	North Africa	10.638	449,013
EMEA Total		10.082	16,299,242
APAC	South	10.479	7,313,022
	West	11.244	2,979,437
	North	8.124	1,700,530
	East	11.053	1,128,036



Map Formats

View ▾

OBIEE_COUNTRY

☒ 20 Actual Unit Price (Variable Marke

• Tile 0

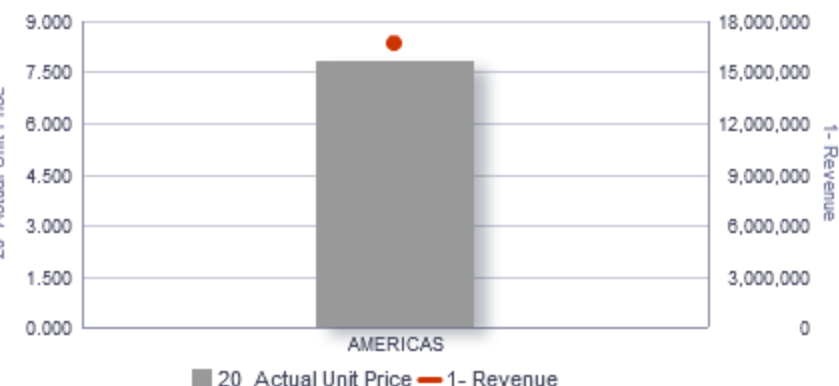
☐ 20 Actual Unit Price (Color Fill)

OBIEE_STATE

☒ 20 Actual Unit Price (Variable Marke

• First Third

• Second Third



R50 Region ▴▾	R51 Area	20 Actual Unit Price	1- Revenue
AMERICAS	North	7.771	16,681,135
AMERICAS Total		7.771	16,681,135
Grand Total		7.771	16,681,135

Simple Thematic Map

Home Catalog Dashboards v New v Open v

Criteria Results Prompts Advanced

Subject Areas



- A - Sample Sales
 - Time
 - Products
 - Offices
 - Sales Person
 - Customers
 - Orders
 - Base Facts
 - Calculated Facts

Catalog



List All

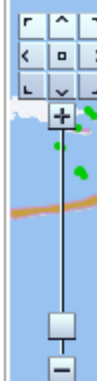
- My Folders
- Shared Folders

Views

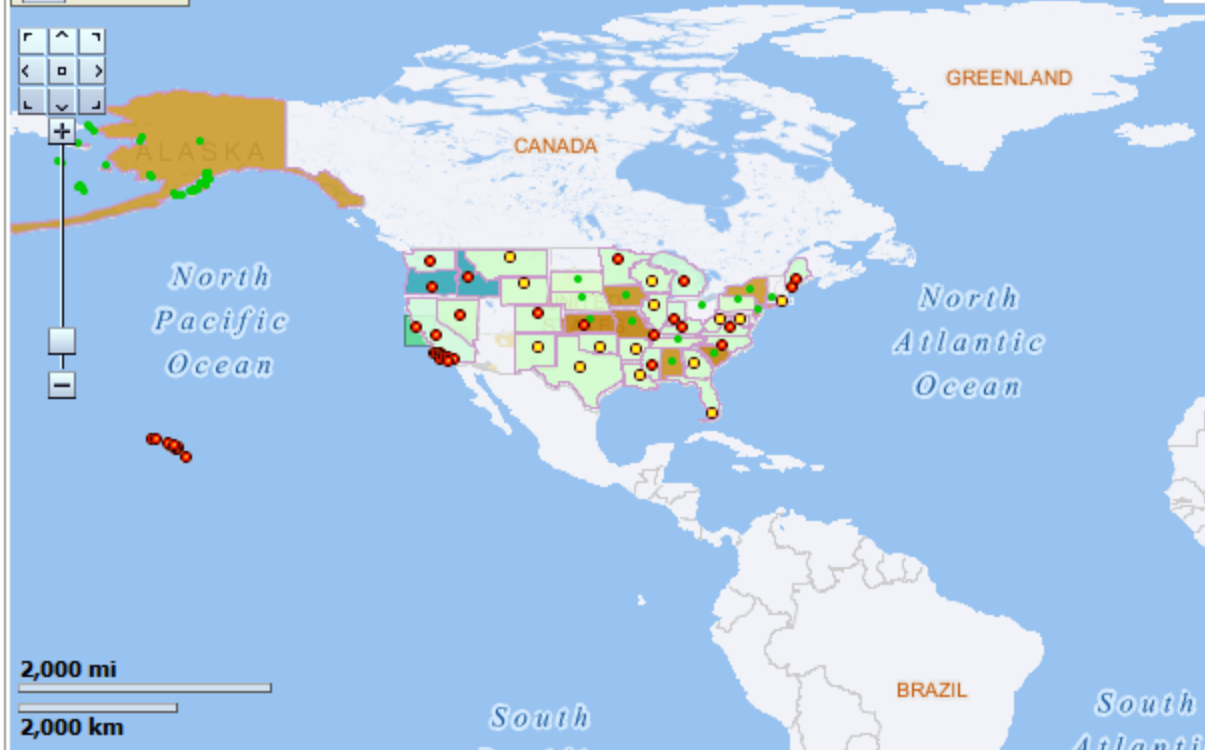
- Map
- Graph

Compound Layout

Map



2,000 mi
2,000 km



Map Formats

OBIEE_COUNTRY

☒ 20 Actual Unit

Tile 0

☐ 20 Actual Unit



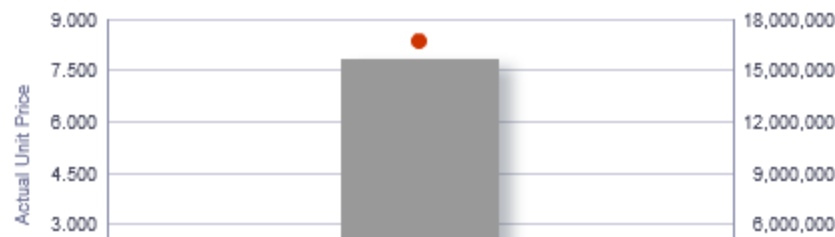
OBIEE_STATE

☒ 20 Actual Unit

First Third

Second Third

Graph



Table

R50 Region	R51 Area	20 Actual Unit Price
AMERICAS	North	7.77
AMERICAS Total		7.77
Grand Total		7.77

Subject Areas

- A - Sample Sales
- Time
- Products
- Offices
- Sales Person
- Customers
- Orders
- Base Facts
- Calculated Facts

Catalog

- All
- My Folders
- Shared Folders

Views

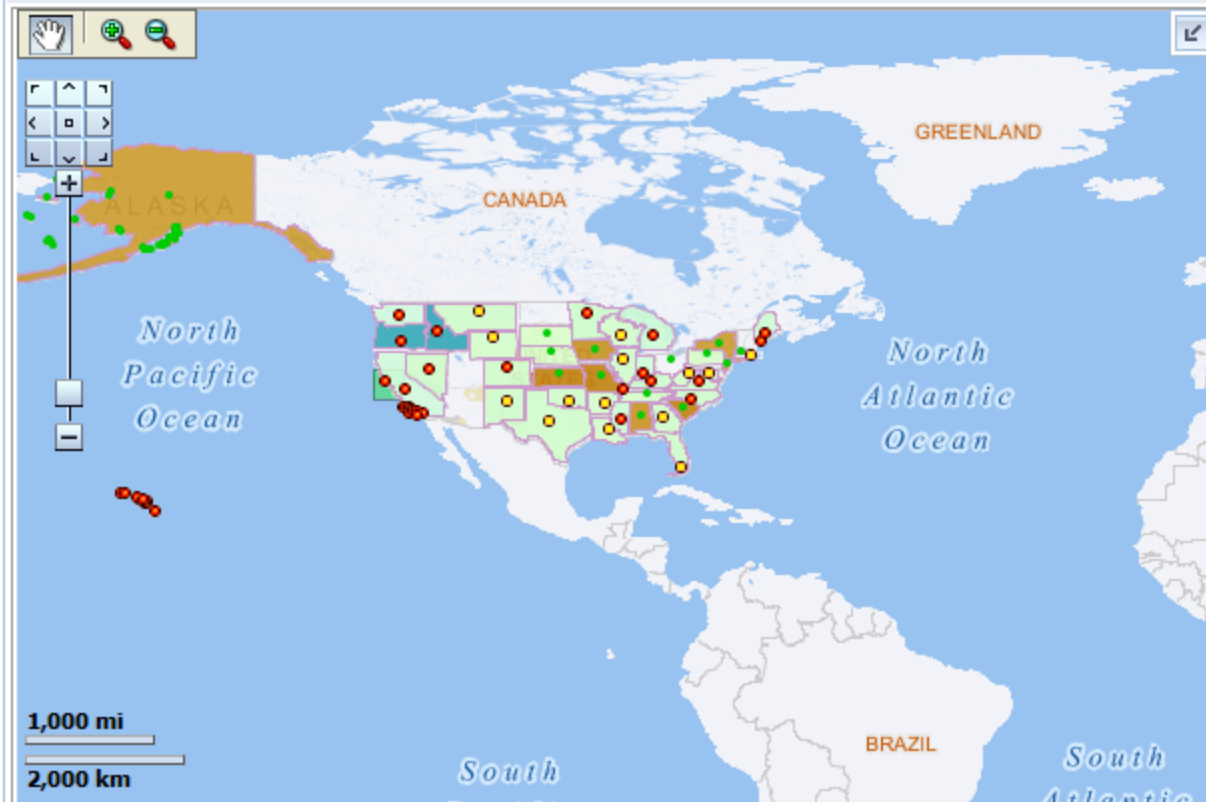
Map

Graph

Table

Compound Layout

Map



Map Formats

OBIEE_COUNTRY

☐ 20 Actual Unit Price

Tile 0

☐ 20 Actual Unit Price



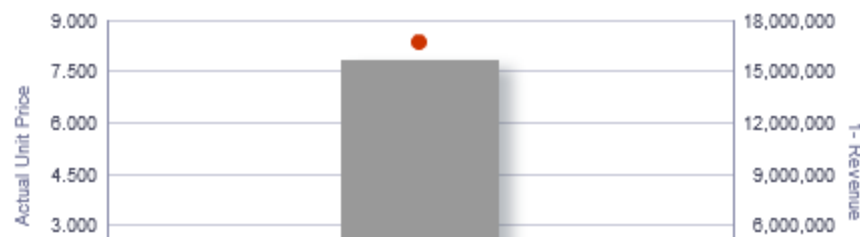
OBIEE_STATE

☒ 20 Actual Unit Price

First Third

Second Third

Graph



Table

R50 Region	R51 Area	20 Actual Unit Price	1-Revenue
AMERICAS	North	7.771	
AMERICAS Total		7.771	
Grand Total		7.771	

Simple Thematic Map

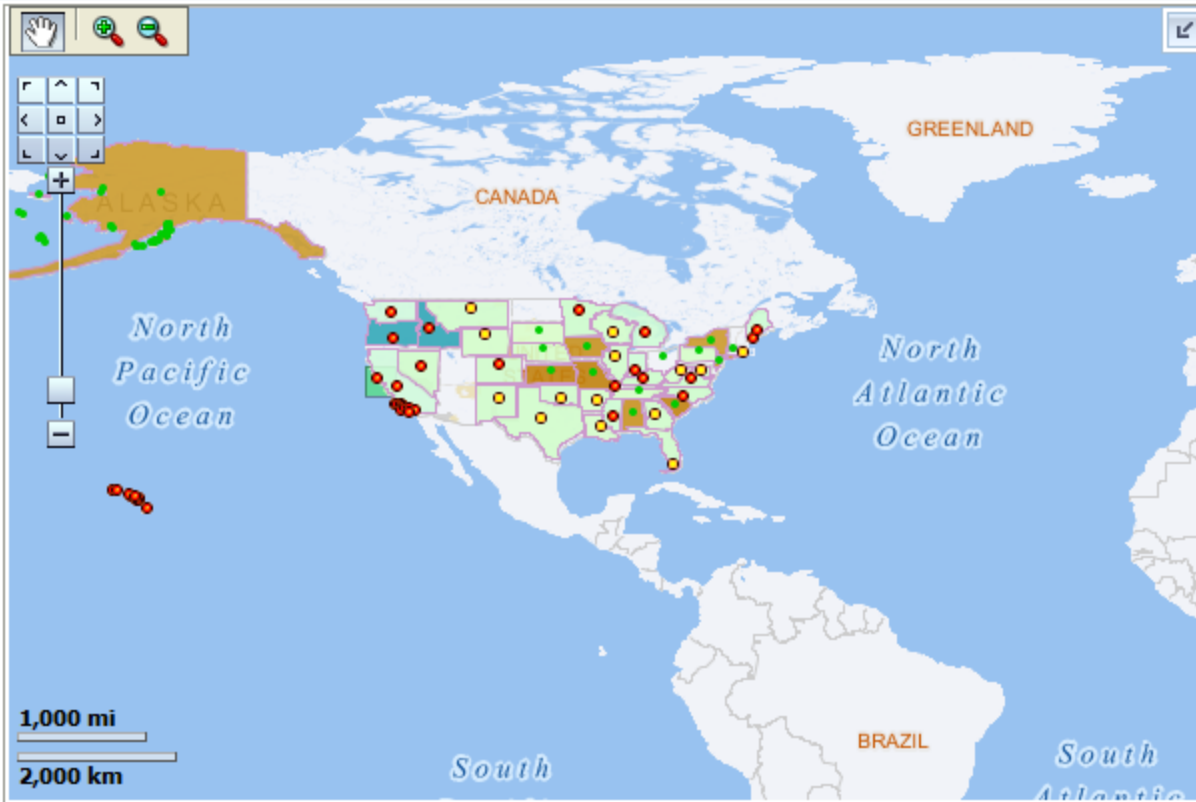
Home Catalog Dashboards v New v Open v

Criteria Results Prompts Advanced



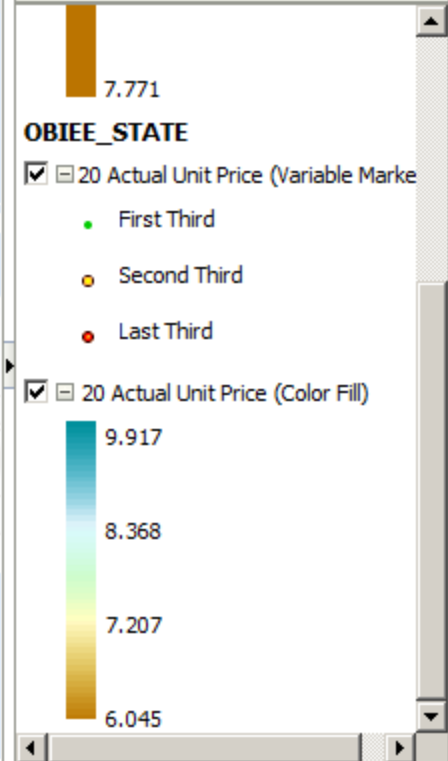
Compound Layout

Map

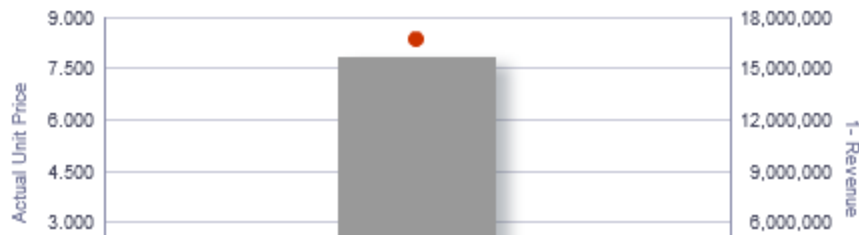


Map Formats

View



Graph



Table



R50 Region	R51 Area	20 Actual Unit Price	1- Revenue
AMERICAS	North	7.771	16,681,135
AMERICAS Total		7.771	16,681,135
Grand Total		7.771	16,681,135

Simple Thematic Map

Criteria Results Prompts Advanced

Map

Editing from: "Compound Layout" Done

Subject Areas



- A - Sample Sales
 - Time
 - Products
 - Offices
 - Sales Person
 - Customers
 - Orders
 - Base Facts
 - Calculated Facts

OBIEE_WORLD_MAP



2,000 mi
2,000 km

Color Fill (OBIEE_STATE)

Name 1- Revenue

☒ Name Automatically

ToolTips R62 Geo Ctry State Name; 1- Revel

Vary Color By 1- Revenue

Bin Type Percentile Binning

Bins Decile (10)

Style

Minimum

0 %

Label

Color

10 %

20 %

30 %

40 %

☐ Allow Dashboard Users to Edit Thresholds

Help

OK

Cancel

Map Formats

View

☐ 20 Actual Unit Price (Color Fill)

7.771

7.771

OBIEE_STATE

☐ 20 Actual Unit Price (Variable)

First Third

Second Third

Last Third

☐ 20 Actual Unit Price (Color Fill)

9.917

8.368

7.207

6.045

Subject Areas

- [-] A - Sample Sales
 - [+] Time
 - [+] Products
 - [+] Offices
 - [+] Sales Person
 - [+] Customers
 - [+] Orders
 - [+] Base Facts
 - [+] Calculated Facts

[-] Catalog

List 

- My Folders
Shared Folders



Color Fill (OBIEE_STATE)

Name:

☒ Name Automatically

ToolTips:

Vary Color By:

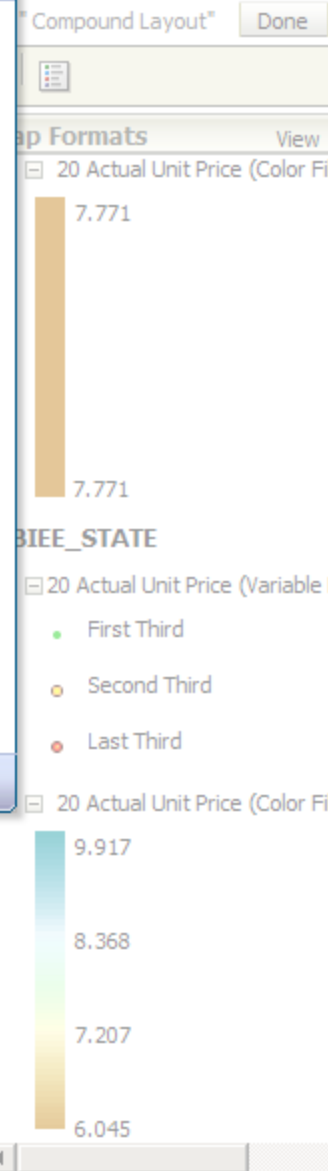
Bin Type:

Bins:

Style:

☐ Allow Dashboard Users to Edit Thresholds

Help OK Cancel



Simple Thematic Map

Home Catalog Dashboards v New v Open v

Criteria Results Prompts Advanced

Map

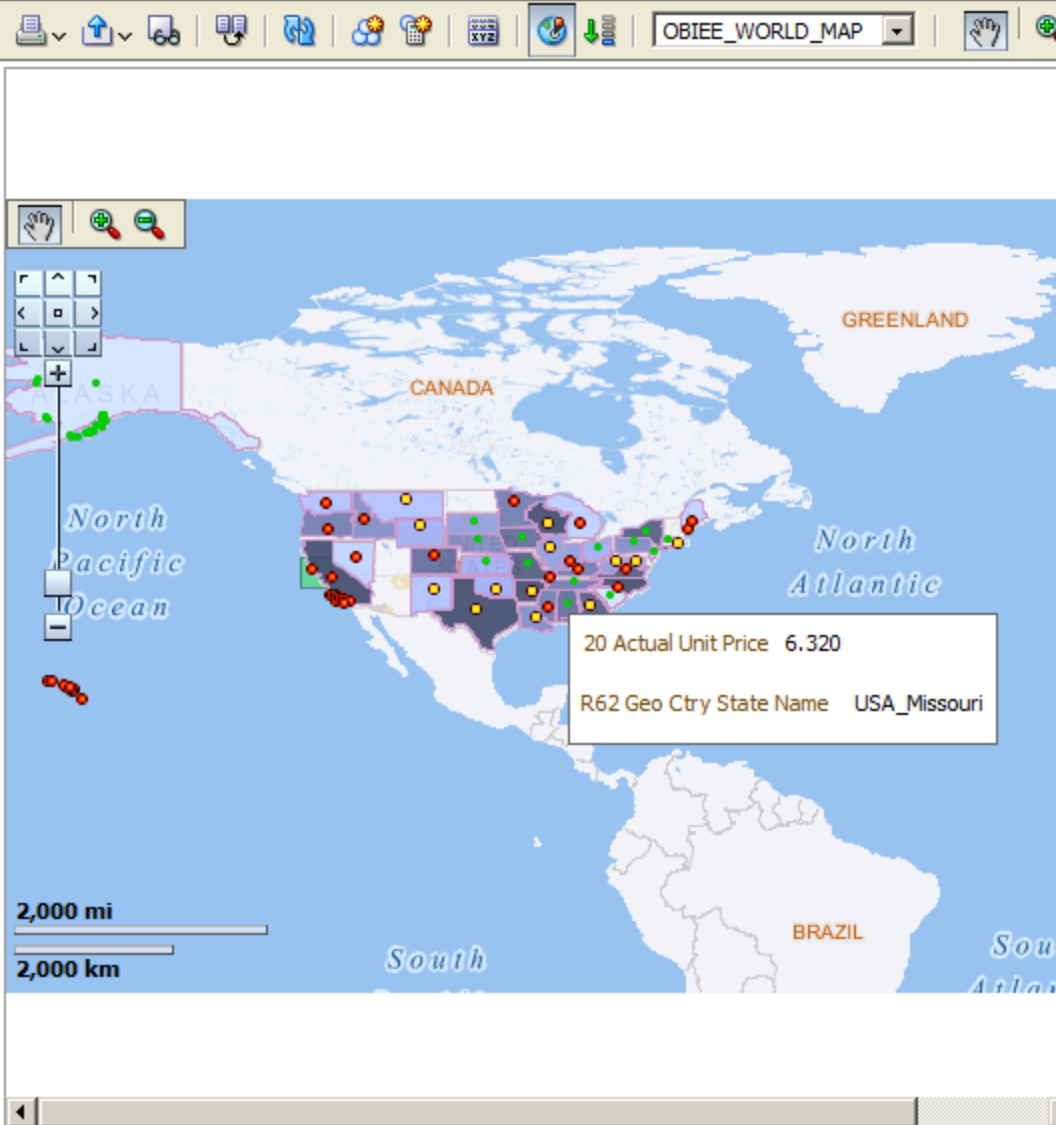
Editing from: "Compound Layout" Done

Subject Areas

- [-] A - Sample Sales
 - [+] Time
 - [+] Products
 - [+] Offices
 - [+] Sales Person
 - [+] Customers
 - [+] Orders
 - [+] Base Facts
 - [+] Calculated Facts

Catalog

- List All
- [+] My Folders
 - [+] Shared Folders



Map Formats

View

☒ Automatically create formats wh

OBIEE_COUNTRY

☐ 20 Actual Unit Price (Variable

• Tile 0

☐ 20 Actual Unit Price (Color Fill



OBIEE_STATE

☒ 20 Actual Unit Price (Variable

• First Third

• Second Third

• Last Third

☒ 1- Revenue (Color Fill)

• First Tenth

• Second Tenth

• Third Tenth

Simple Thematic Map

Home Catalog Dashboards New Open Signed In As

Criteria Results Prompts Advanced

Map

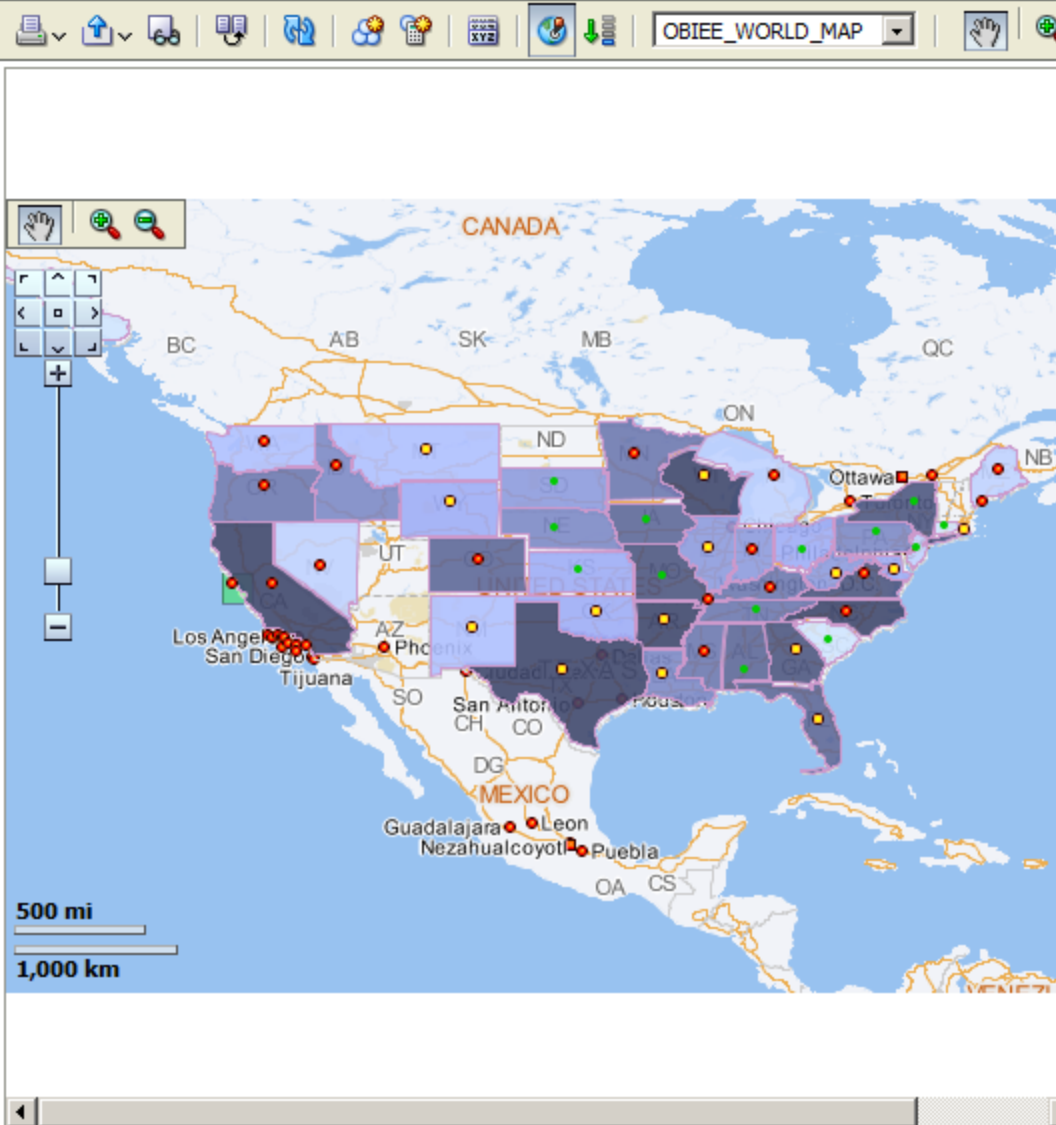
Editing from: "Compound Layout" Done

Subject Areas

- [-] A - Sample Sales
 - [+] Time
 - [+] Products
 - [+] Offices
 - [+] Sales Person
 - [+] Customers
 - [+] Orders
 - [+] Base Facts
 - [+] Calculated Facts

Catalog

- List All
- [+] My Folders
 - [+] Shared Folders



Map Formats

View

☒ Automatically create formats wh

OBIEE_COUNTRY

☐ 20 Actual Unit Price (Variable

• Tile 0

☐ 20 Actual Unit Price (Color Fill



OBIEE_STATE

☒ 20 Actual Unit Price (Variable

• First Third

• Second Third

• Last Third

☒ 1- Revenue (Color Fill)

• First Tenth

• Second Tenth

• Third Tenth

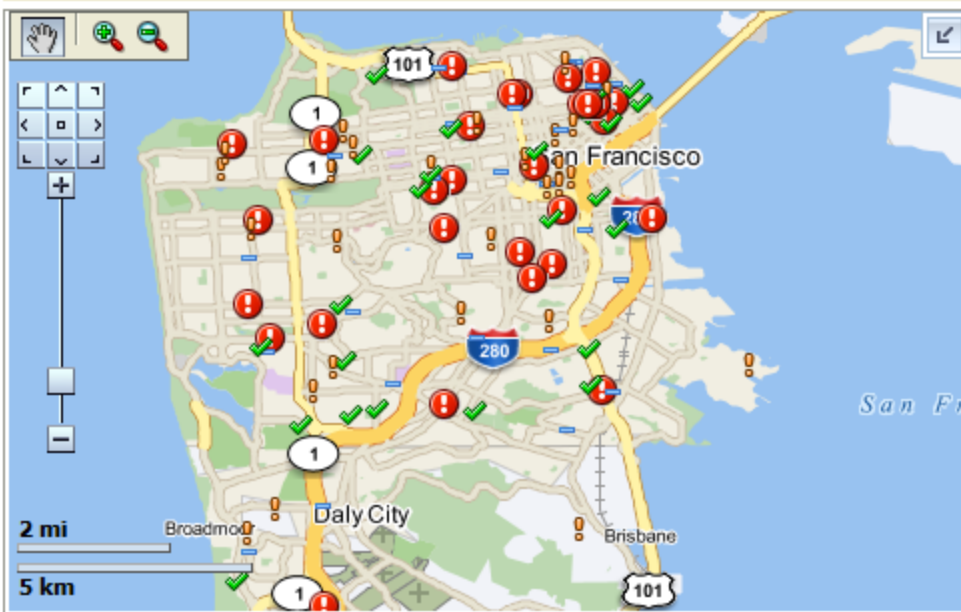
3.5 Map Views

Note Master Detail Map Drilling **Streets SF** Streets Sydney Streets London



Street Level Maps SF

Time run: 7/14/2010 10:27:11 AM



Map Formats View ▾

Custom Point Layer

☒ 1- Revenue (Variable Marker)

- ✓ Top Quartile
- Second Quartile
- Third Quartile
- ! Fourth Quartile

Streets Level Map view of San Francisco

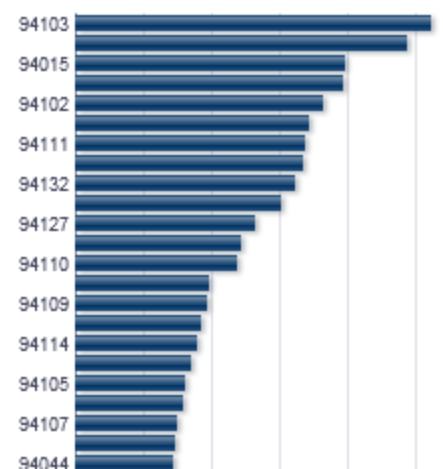
[Return to Current Topic's Index](#) [Return to Main Index](#)



► **Description :** This is an example of map view displaying addresses on street maps.

► **This Example :** There are three different maps displayed, one for each city. Use the "Revenue" filter the data that each map view displays.

► **Setup :** The whole setup for this map view is done in webcat report definition. It leverages Map View done in webcat administration screen.



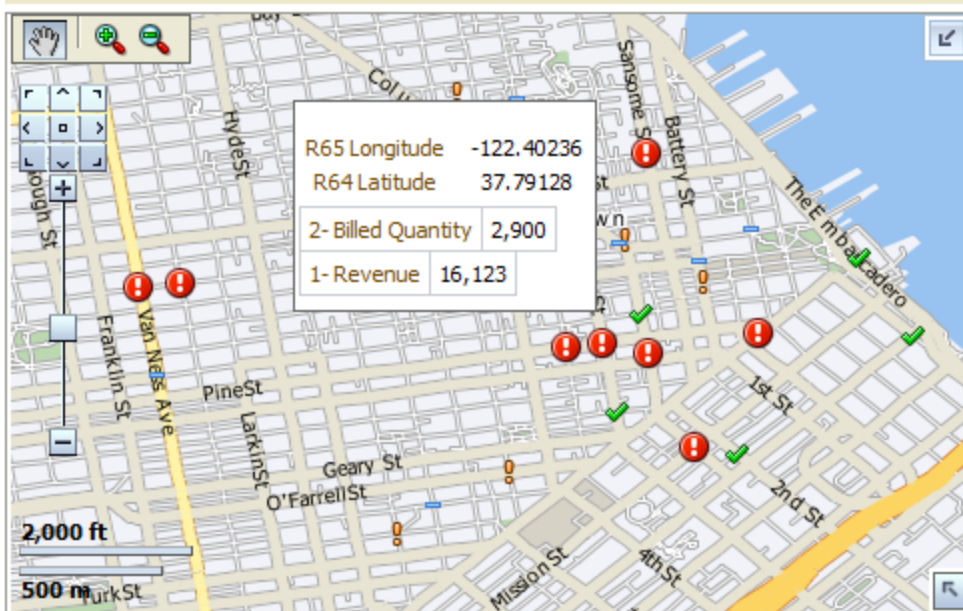
R56 Postal Code	R59 Establishment Name	1- Revenue	2- Billed Quantity
94005	MONSTER CABLE	24,717	4,167
	23 CLUB	23,759	3,305
94014	L AND L HAWAIIAN BARBECUE	24,377	2,565
	WELLS FARGO	23,560	2,673
	FIL-AM CUISINE	23,000	1,500
	BRAKES PLUS	22,132	2,096
94015	FIRST NATIONAL BANK	36,939	3,652
	TAI WU RESTAURANT	24,782	3,304
	ATM	22,383	2,620
	ARCO	22,139	2,176
	BANK OF AMERICA	21,282	1,755
	JD LIMOUSINE SERVICE	19,925	1,781
	JUNIPERO SIERRA AUTO	17,402	2,288

3.5 Map Views

Note Master Detail Map Drilling **Streets SF** Streets Sydney Streets London

Street Level Maps SF

Time run: 7/14/2010 10:27:11 AM



Map Formats

View

Custom Point Layer

☒ 1- Revenue (Variable Marker)

- ☒ Top Quartile
- ☐ Second Quartile
- ☐ Third Quartile
- ☒ Fourth Quartile

Streets Level Map view of San F

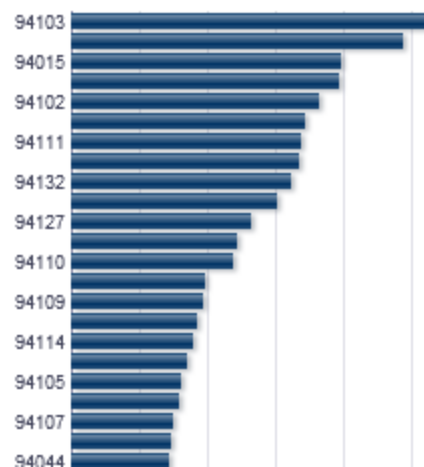
[Return to Current Topic's Index](#) [Return](#)



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► **This Example :** There are three diffe displayed, one for each city. Use the "R filter the data that each map view displ

► **Setup :** The whole setup for this map webcat report definition. It leverages M done in webcat administration screen.



R56 Postal Code	R59 Establishment Name	1- Revenue	2- Billed Quantity
94005	MONSTER CABLE	24,717	4,167
	23 CLUB	23,759	3,305
94014	L AND L HAWAIIAN BARBECUE	24,377	2,565
	WELLS FARGO	23,560	2,673
	FIL-AM CUISINE	23,000	1,500
	BRAKES PLUS	22,132	2,096
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