

# 2009 SAP BusinessObjects USER CONFERENCE

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## Visualization Design principals from the Experts

Clark Duey

# Introductions

- Who am I?
- Clark Duey: Sr. Business Intelligence Solution Architect
- Certified Xcelsius Trainer
- Company: Idhasoft (Formerly Westbay Solutions Group)
  - Business Objects AND SAP Gold Partner
  - Consulting Services
  - Authorized Training Center
  - Business Objects and SAP Reseller
- Joined Westbay Solutions in February 2008
- Prior to that I worked for three different Business Objects Customers since 1999

# Learning Points

- Purpose of Visualizations
- Common mistakes and issues when designing an Xcelsius Visualization
- Design ideas and “Best Practices” from Visualization “Experts”
- Ways to apply Visualization “best practices” using Xcelsius



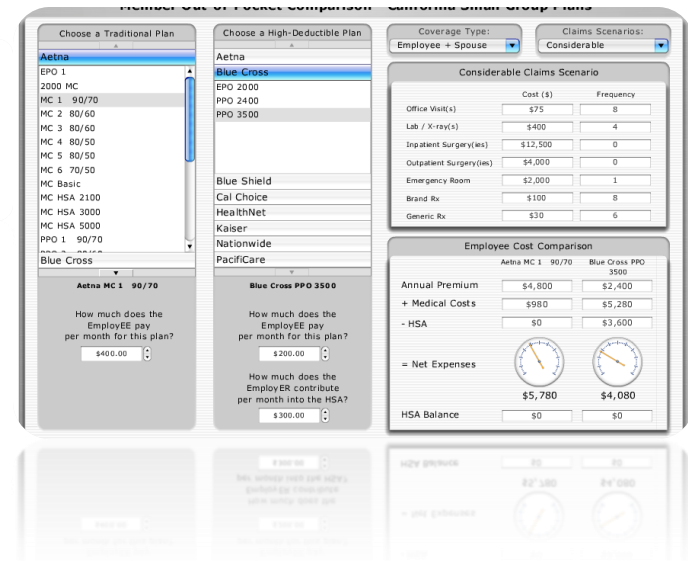
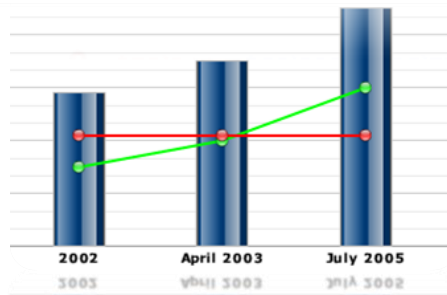
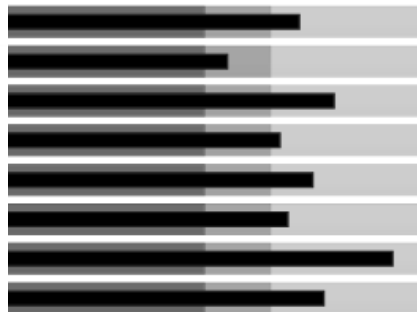
# What is Xcelsius?

- (...for the 30<sup>th</sup> + time this conference)
- Designer tool used to create Interactive Visualizations
- Flash based output that can be used in applications, web sites, portals, Business Objects, PDF, MS Office Documents, etc...
- Multiple data sources, Business Objects , Crystal Reports, XML, Web Services, etc...
- Leverages Excel and Excel functions for data mapping, data manipulation and interactive events.

# Purpose of Visualizations

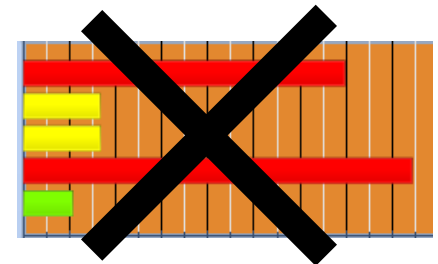
- Clearly and efficiently communicate
- Allow user to quickly view information that is important
- Highlight and draw attention to needed events
- Ability to Act on the information
- Simple and easy to interpret with limited distractions
- Data Dense

Customers Jan 12 months Dec low high  
Customer 1 \$39,314 \$28,844 \$15,506 \$61,227



# Common Mistakes and some resolutions

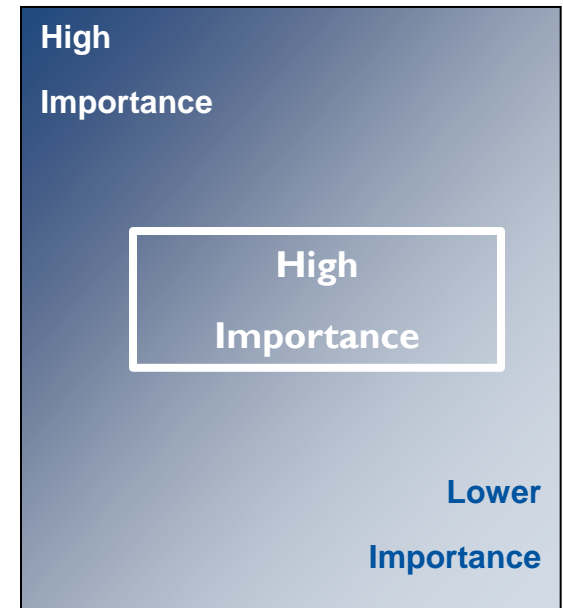
- Font and Fonts Size      A A A A A A A A A A A
- Too much color
  - How will it look printed in Black and White?
  - Use a color palette with more natural colors. Create a color scheme in Xcelsius to be saved and re-used. Should include some intense colors (or different hue) for exceptions.
    - Make sure that it is printer friendly
- Design for the wrong screen resolution
  - Design your models based on your users screen resolution, not yours.



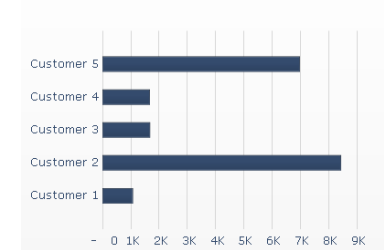
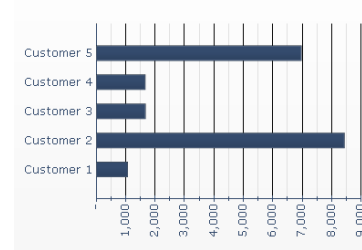
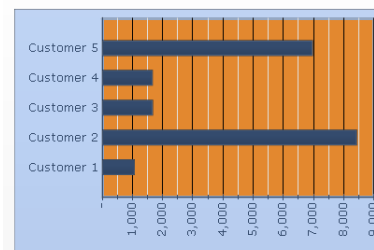
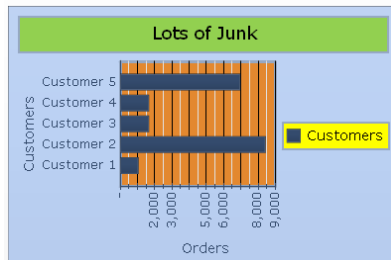
100%	75%
Food: 5%	Food: 5%
Medical: 3%	Medical: 3%
Entertainment: 6%	Entertainment: 6%
Loans & Credit Cards: 2%	Loans & Credit Cards: 2%
Taxes: 8%	Taxes: 8%

# Common Mistakes and resolutions

- Information in the wrong location
  - Real Estate is still valuable
  - Top left corner and middle should contain items of “High Importance”
- “Chartjunk”
  - Term coined by Edward Tufte
  - “Non-data-ink”
  - Draws attention away from the data



## Remove the Junk...



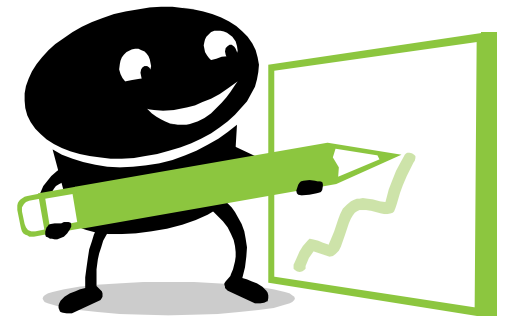
# Common Mistakes and resolutions

- Using the wrong components
  - Columns and lines to show trends
  - Bubble charts, size of bubbles are difficult to compare
  - Gauges, low density and consume a lot of space
  - Pie charts, are useful for comparisons on small number of dimensions
- Too many dimensions
  - Dashboards/Visualizations are for Highly aggregated data
  - Limit your data to Top 5, 10, 15...
  - Use Xcelsius Interactivity options to create buckets to scroll



# Common Mistakes and resolutions

- Too much data
  - Highly aggregated data is needed
  - Will cause poor performance
  - May confuse users
- Design it to Scale with data
  - Live Data Sources need to be configured to avoid missing data
- Draw it
  - This will save time in the long run
  - Avoid getting lost in the design and data
  - Organize your design idea



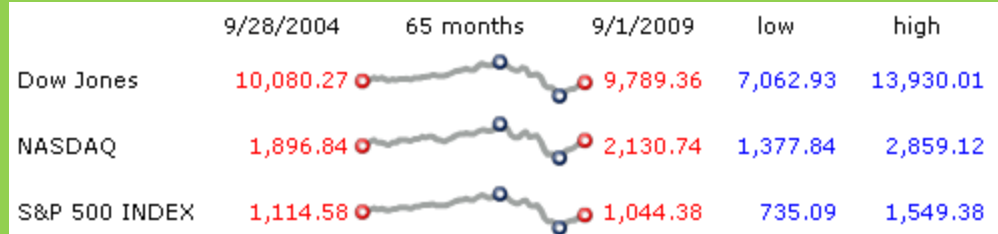
# “Expert” Visualizations

- Sparklines: Small, high-resolution graphics embedded in a context of words, numbers, images. Sparklines are data-intensive, design-simple, work-sized graphics.
  - Introduced/Developed by Edward Tufte in the book Beautiful Evidence (2006)

Quickly See Trend  
Start, High, Low and Current



Add Small Multiples  
195 data points (65 months \* 3)  
Very Dense



# “Expert” Visualizations

- **Bullet Graph:** A variation of a bar graph which features a single, primary measure, compares that measure to one or more other measures, and displays it in the context of qualitative ranges of performance
  - Introduced/Developed by Stephan Few in the book *Information Dashboard Design: The Effective Visual Communication of Data* (2006)

Quantitative Range (Poor, Satisfactory, Good)

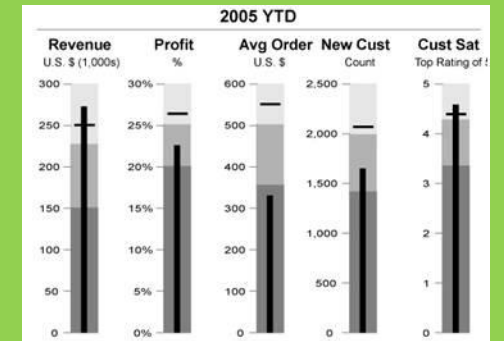
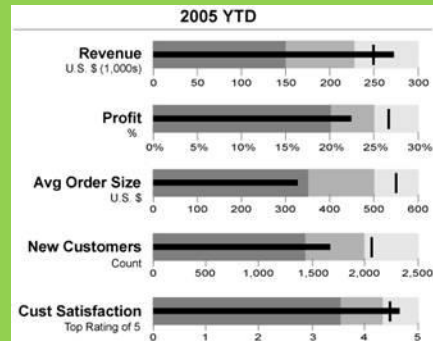
Current Measure

Comparative Measure

A bar graph that behaves like a thermometer and a gauge

Small Multiples

Vertical or Horizontal display



- Additional information can be found at the below URL
- [http://www.perceptualedge.com/articles/misc/Bullet\\_Graph\\_Design\\_Spec.pdf](http://www.perceptualedge.com/articles/misc/Bullet_Graph_Design_Spec.pdf)

# “Expert” Visualizations

- Similarities
  - Data dense
  - Simple
  - Small multiples
  - Easy and quickly evaluated
  - Can be used together to show historical trend and current status
  - Both can be created using Xcelsius (No SDK)

## Demonstration

# Recommended Sites and Books

## ■ Books

- Now You See It: Simple Visualization Techniques for Quantitative Analysis by Stephen Few (Analytics Press, 2009)
- Information Dashboard Design: The Effective Visual Communication of Data by Stephen Few (O'Reilly Media, 2006)
- Beautiful Evidence by Edward Tufte (Graphics Press, 2006)

## ■ Web Sites

- <http://www.perceptualedge.com>
- <http://www.edwardtufte.com>
- <http://xcomponents.blogspot.com>
- <http://www.sdn.sap.com/irj/boc/xcelcius>
- <http://www.forumtopics.com/busobj/index.php>

# Review

- Features within Xcelsius can be used to deliver visualizations that are based off of the “Experts” best practices
  - Layering
  - Color Schemes
  - Dynamic Visibility
- Keep the design simple and clean
- Don’t “Shock” your users with too Much Color
- Keep the data dense and avoid “chart-junk”
- Visualizations and Dashboards are an iterative design process. Be patient and have some fun.

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## Questions

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## Thank you for participating

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**1209**