

VISUALIZATION

JUNE 26-27, 2007

Stephen Few, Perceptual Edge

Waldhotel Doldenhorn, Kandersteg

Tuesday, June 26, 2007

Show Me the Numbers – Table and Graph Design to Enlighten

Description

The ability to present quantitative information effectively is not intuitive; it requires a set of visual communication skills that must be learned. Based on his book, *Show Me the Numbers: Designing Tables and Graphs to Enlighten*, Stephen Few will introduce the best practices of data presentation.

No information is more important to most organizations, including businesses, than quantitative information—the numbers that measure performance, identify opportunities, and forecast the future. Most quantitative information is presented as tables and graphs. Unfortunately, most tables and graphs produced today are poorly designed—often to the point of misinformation. Why? Because few of those who produce them, including specialists such as financial analysts and statisticians, have been trained in effective table and graph design. You can become an exception to this norm.

This course will alleviate countless hours of confusion and frustration. Following Few's clear precepts, communicated primarily through business examples of what works and what doesn't, you will learn to design tables and graphs that present data clearly and drive your message home.

You Will Learn To

- Match your message to the right type of display
- Understand visual perception and how it applies to data presentation
- Design each component of your tables and graphs so the data speaks clearly and the most important data speaks loudly

This Course Covers

1. The current state and challenges of data presentation
2. Introduction to table and graph design
 - a. The two fundamental challenges of data presentation
 - b. The characteristics of quantitative information

- c. The differing characteristics and uses of tables and graphs
 - d. The seven common quantitative relationships in everyday graphs
 - e. Visual perception and how it applies to data presentation
 - f. Steps in the visual design process
 - g. Visual design methods for highlighting data
3. Table design
 4. Graph design
 - a. Visual objects used to encode values in graphs, including the best uses of each
 - b. Matching the right visual encoding objects to the seven fundamental quantitative relationships in graphs
 - c. Graph design at the component level

Wednesday, June 27, 2007

Visualization for Discovery and Analysis

Description

Most quantitative data analyses that are performed by organizations, especially businesses and other non-academic, non-scientific organizations, can be done using simple visual techniques to discern meaningful patterns in data. More complex analyses – those that require sophisticated statistical skills – are addressed by countless books and courses, but few resources teach the simple skills that are useful for everyday analyses. Even though these visual analysis skills are easy to learn and apply with proper guidance, they are unknown by all but a few.

This workshop introduces the fundamental practices of visual analysis. Even sophisticated statisticians find these techniques valuable, because the ability to actually see patterns, trends, and exceptions in data can be used to bring them more easily to light and make more understandable, especially during the course of data exploration. The visual techniques that the eminent statistician John Tukey introduced and advocated in his book *Exploratory Data Analysis* (1977) have since been enhanced and extended due to advances in computer graphics and to many contributions from the information visualization research community.

VISUALIZATION

Stephen Few

You Will Learn To

- Recognize those visual characteristics of data that are potentially meaningful
- Perform those visual analysis techniques that are most appropriate for each type of data (time series, distributions, correlations, etc.)
- Navigate efficiently and analytically through the data
- Avoid the pitfalls to data analysis that exist in many software products
- Apply the findings of information visualization research to the analysis of business data
- Identify the features and functions that all visual analysis software should provide

This Course Covers

1. An introduction to visual data analysis
2. The traits of top data analysts
3. The traits of good data
4. Visual perception and data visualization
5. Visual characteristics to look for in the data
6. Quantitative business analysis techniques by type
 - a. Analyzing time series
 - b. Analyzing rankings and parts-to-whole
 - c. Analyzing deviations
 - d. Analyzing distributions
 - e. Analyzing correlations
 - f. Analyzing multivariate profiles
7. Analytical navigation
8. The pitfalls and challenges of popular data analysis software
9. The critical contributions from the information visualization research community

Schedule

The schedule on both days is as follows:

09:00	Instruction begins
10:30-10:45	Mid-morning break
12:30-13:30	Lunch
15:15-15:30	Mid-afternoon break
17:00	Instruction concludes

Instruction Method

Both courses are very interactive. Stephen frequently asks questions of participants and invites them to ask questions or make comments of their own at any time. Both courses

also include small group exercises that are designed to give participants an opportunity to put what they have learned into practice.

Biographical Information

Stephen Few has worked for more than 20 years as an information technology innovator, teacher, and consultant. Today, as Principal of the consultancy Perceptual Edge, he focuses on data visualization for making sense of and communicating quantitative business information. He provides consulting and training services, writes the monthly Visual Business Intelligence Newsletter, speaks frequently at conferences, and teaches in the MBA program at the University of California, Berkeley. He is the author of two books: *Show Me the Numbers: Designing Tables and Graphs to Enlighten* and *Information Dashboard Design: The Effective Visual Communication of Data*. You can learn more about Stephen's work at www.perceptualedge.com.

Location

The course will be held in the Waldhotel Doldenhorn in Kandersteg www.doldenhorn-ruedihus.ch. The hotel offers a free shuttle service to the train station.

Registration

The course fee includes all meals and accommodation in single rooms. Arrival on Monday evening, June 25, departure Wednesday, June 27, 2007, 17.00.

- CHF 1690 for members of the Swiss Statistical Society SSS, other applicants SFR 1890.
- Reduced course fee CHF 1390 for members of the sections SSS-O (Official Statistics) and SSS-ER (Education and research).

A limited number of course places are reserved for students. The reduced course fee of SFR 600 includes course participation and lunch, but no accommodation.

The number of participants is limited to 20, with a minimum of 12.

Registration deadline: April 25, 2007.

Registration and further information : caterina.savi@stat.ch