

1 Introduction

Information visualization is the communication of abstract data through the use of interactive visual interfaces.

Abstract Data examples:

- Text and Tables
- Hierarchies and Graphs
- Multivariate Data
- Time Series

Visualization is the use of computers or techniques for comprehending data or to extract knowledge from the results of simulations, computations, or measurements

Demarcation of research areas:

- **Scientific Visualization** Visualization of data with a concrete physical representation (non-abstract data)
- **Computer Graphics** Technical and mathematical aspects of visualization
- **Graphic Design** Aesthetic graphical representation

2 Infographics

2.1 Diagrams

Simple Diagrams

- Line Charts
- Bar Charts
- Pie Charts

Pie charts are trash

- Pro - Works well for comparing the size of a single category with the total size.
- Contra - Difficult to compare size of different categories
- Alternatives - Bar chart, stacked bar chart

Timelines align temporal information along an axis

Sparklines a sparkline is a small intense, simple, word-sized graphic with typographic resolution.

2.2 Metaphors and Symbols

Metaphor a figure of speech that, for rhetorical effect, directly refers to one thing by mentioning another. It may provide clarity or identify hidden similarities between two ideas

Metaphors in Visualization

- Cities
- Trees
- Animals

Symbols/Pictograms

- Highly simplified pictorial representation of objects or activities.
- Very suitable for depicting metaphors

Isotype (Ethnicities by country - funny racist chart) using pictograms to convey statistical information. Quantity is better represented by the number of pictograms than by the size of a pictogram.

2.3 Infographics

Elements of an Infographic

- Story
- Graphics
 - Illustrative
 - Simplified
- Text
 - Keywords and short texts
- Diagramme
 - Connected to graphics

Definition Infographics Information graphics or infographics are graphic visual representations of information, data or knowledge. These graphics present complex information quickly and clearly, such as in signs, maps, journalism, technical writing, and education.

Infographics vs Information Visualization

- 3 Visual Perception
- 4 Visualization of Hierarchies
- 5 Visualization of Graphs
- 6 Multivariate Data and Time Series
- 7 Software Visualization
- 8 Interaction
- 9 Software Visualization Part 2: Architecture
- 10 Software Visualization Part 3: Behavior