



Prof. Antony Unwin  
Dept of Computer-Oriented Statistics and Data Analysis  
Institute for Mathematics  
University of Augsburg  
<http://stats.math.uni-augsburg.de/>

## Stochastik IV – Graphical Data Analysis

### Exercise Sheet 6: Interactive Graphics

**Tutorial:** Tuesday, 29th November, 2011, 10.00 - 11.30 Uhr, Room 3029

Consider the dataset *rainforest* available in the R package *DAAG*.

1. Carry out an analysis of this dataset in R.
  - (a) Save all your R commands in a file and at the end of your analysis prepare a second file of R commands containing only those commands that you regard as having been useful.
  - (b) What are the most important pieces of information that you have discovered? (Not more than 5, please!) Which commands were most useful to you in your analysis?
2. Carry out an analysis of this dataset with Mondrian.
  - (a) If possible, record all the graphics you draw (including repeats, i.e. drawing a graphic a second or third time). Which graphics would you include in a final report?
  - (b) What are the most important pieces of information that you have discovered? (Not more than 5, please!) Which interactive tools were most useful to you in your analysis?
3. Compare your results and methods from the two approaches. Would you have carried out your analyses in different ways if you had used Mondrian first and then R?
4. What aspects of the two approaches work best and how could they be effectively combined?

### Extra: Population age structure

The webpage

[www.smallmeans.com/new-york-times-infographics/](http://www.smallmeans.com/new-york-times-infographics/)

provides links to graphics published in the New York Times. The one for Feb 3, 2011 is called “The Aging of America” and includes an animation of the US population age structure from 1950 to 2050.

Is this an effective graphic? What information can you draw from it?

Where do the data behind the graphic come from? How reliable are they likely to be and what are the underlying assumptions that have been made about the data?

A main feature of this graphic is the animation. What static graphics might be used instead? Could interactive graphics be used?