Google Motion Charts with R: Package Vignette

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Abstract

The `GoogleMotionChart` package provides functions to format a `data.frame` in R into a DataTable as used by the Google Visualisation API so it can embeded into HTML-page which generates motion chart rendered within a browser using Flash.

turn a in R into a Google Motion Chart.

The standard motion chart is essentially an animated bubble chart, which allows you to explore several indicators over time. The idea of motion chart was popularised by Hans Rosling at a Ted talk about socical and economic developments in the world in in 2006

1 Introduction

Idea Hans Rosling

When to use it one variable to investigate over time with mesasurements and several dimnstions

Examples

public data

gapminder
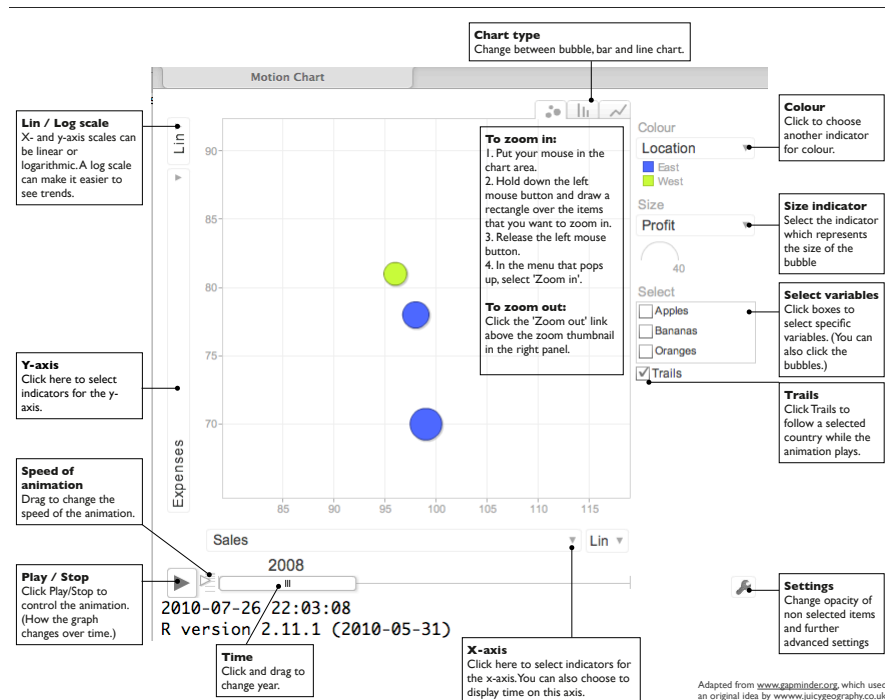
R.rsp

2 Google Motion Chart API

The Google Motion Chart is part of Google Visualisation API. The chart is rendered within a browser using Flash.

Data stays local

Output is html code with reference to Google's Visualisation API.

All code and data are processed and rendered in the browser. No data is sent to any server.

Example

Chart type
Change between bubble, bar and line chart.

Motion Chart

Lin / Log scale
X- and y-axis scales can be linear or logarithmic. A log scale can make it easier to see trends.

Lin

To zoom in:
1. Put your mouse in the chart area.
2. Hold down the left mouse button and draw a rectangle over the items that you want to zoom in.
3. Release the left mouse button.
4. In the menu that pops up, select 'Zoom in'.

To zoom out:
Click the 'Zoom out' link above the zoom thumbnail in the right panel.

Colour
Location
■ East
■ West

Size
Profit
40

Select
☐ Apples
☐ Bananas
☐ Oranges
☑ Trails

Colour
Click to choose another indicator for colour.

Size indicator
Select the indicator which represents the size of the bubble

Select variables
Click boxes to select specific variables. (You can also click the bubbles.)

Trails
Click Trails to follow a selected country while the animation plays.

Y-axis
Click here to select indicators for the y-axis.

Speed of animation
Drag to change the speed of the animation.

Play / Stop
Click Play/Stop to control the animation. (How the graph changes over time.)

Expenses

Sales

Lin ▾

2008

2010-07-26/22:03:08
R version 2.11.1 (2010-05-31)

Time
Click and drag to change year.

X-axis
Click here to select indicators for the x-axis. You can also choose to display time on this axis.

Settings
Change opacity of non selected items and further advanced settings

Adapted from www.gapminder.org, which used an original idea by wwww.juicygeography.co.uk

3 Package overview

[Goo10]
   The full R code from the book is provided in the demos for the package The source scripts can be found in the

4 Create dynamic pages

browseRsp

References

[Goo10] Google Inc., http://www.google.com/publicdata/home. *Google Public Data Explorer*, 2010.