

# Rggobi2

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## **”Serious” abstract:**

### **Rggobi2 — Bringing R and GGobi Closer**

Rggobi2 aims to integrate R with GGobi, a software tool for exploratory data analysis that features multivariate visualization and interactive graphics, including linked plots and the grand tour. Rggobi2 is a rewrite of the original Rggobi, which was a valuable tool for loading quantitative data from R into GGobi and manipulating GGobi plots. Unfortunately, the lack of precisely defined goals led to inconsistent syntax in the R API and general instability throughout the interface. Realizing the value of synthesizing R’s flexible data analysis with GGobi’s interactive graphics, the project was restarted with a more systematic development approach and a greater level of commitment from the developers. The most significant improvement is the refactoring of the R API so that it follows a more natural R syntax. For example, GGobi datasets now masquerade as R data frames. The loading of R data into GGobi is now more robust and fully supports categorical variables. Besides these fundamental improvements, Rggobi2 aims to cover every functional aspect of GGobi, including full control over interaction and projection modes, listening to tour projections, translation of GGobi displays to R graphics, and embedding GGobi plots in RGtk2 interfaces. There is also a long term goal of enabling R to record an entire GGobi analysis session and later reproduce it. Rggobi2 is committed to fully realizing the marriage between numerical analysis and interactive graphics.

## **”Somewhat less serious” abstract:**

### **Rggobi2 — The Second Date Between R and GGobi**

GGobi is a mature software tool with a career in exploratory data analysis. Its hobbies include multivariate visualization and interactive graphics, including linked plots and the grand tour. Several years ago, GGobi met R, a platform for statistical computing with whom we are all familiar. Their first date, Rggobi, was pleasant overall and even involved some serious conversation, including some data transfer and plot manipulation. However, it was a bit hard to break the ice and they were not quite sure how to approach one another. Admittedly, there were some awkward moments, like when they tried discussing categorical variables. Both GGobi and R agreed that there was a lot of chemistry between them, given GGobi’s interactive graphics and R’s flexible data analysis. Thus, they have decided to go on a second date, Rggobi2. They are resolving some of their minor differences and focusing on fundamentals like robust loading of R data into GGobi and a more consistent and natural R API. R is expanding their conversation to include every aspect of GGobi, including full control over interaction and projection modes, listening to tour projections, translation of GGobi displays to R graphics, and embedding GGobi plots in RGtk2 interfaces. Eventually they hope to become close enough that R can record an entire GGobi analysis session and later reproduce it. All signs point to a fruitful relationship.