R2rtf: A Package for Generating RTF Documents

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R provides many excellent facilities for performing statistical analyses and producing high-quality figures. Frequently the output of an analysis and the figures will need to be incorporated into a Microsoft Word document describing the analysis and its results. For small numbers of figures it is easy to manually copy and paste the figures, or manually insert them. It is also relatively easy to manually copy and paste statistical output into text or tables describing the results. However, for larger numbers of figures and output this becomes more time consuming. Furthermore, if an analysis has to be re-done because of some corrections or changes in the data, many figures and output results must be copied and pasted all over again.

For LaTeX documents, **Sweave** and other packages make it relatively easy to incorporate *R* statistical results and figures into documents, but many corporate office users and scientists use Microsoft Word to edit their documents. The **odfWeave** package makes it possible to incorporate *R* statistical results and figures into OpenOffice documents, but usually requires the *R* program to be a part of the OpenOffice document itself. The **R2wd** package makes it possible for *R* to create Word documents, but does so by controlling a running copy of Word under Windows.

Rich Text Format (RTF) is a document file format that supports most of the formatting capabilities of native Microsoft Word documents. RTF is a proprietary format but has been publicly documented for over 25 years. RTF documents can be read and written by Word and other word processing programs, including open source packages such as LibreOffice and Apache OpenOffice.

R2rtf is a package for creating RTF documents which can be opened in Microsoft Word or other Word processing programs, for additional editing or to be copied into other Word documents. **R2rtf** can also be used to create complete documents that require no further editing. If a document is created by **R2rtf** and the data set is updated or some change is made to the analysis, the *R* program can be re-run to create a new, updated document.

R2rtf provides function calls for creating a new document, writing figures, tables and text into the document, and saving the document to a file. The function calls are intended to be simple and easy to use. `rtfTable()` writes an *R* data frame to the document, `rtfPlot()` writes a **base** plot figure, `rtfPlotLattice()` writes a **lattice** figure, and `rtfNormal()` writes text to the document. Some basic document formatting capabilities such as headings, figure and table captions, and references to figures and tables are also provided. Figures are written in the Windows Enhanced Metafile (EMF) format so they may be resized in Word without a loss of quality.

R2rtf provides similar functionality to the **rtf** package, although **rtf** does not support EMF figures. The **R2rtf** programming interface is similar to that of the **R2wd** package.

The **R2rtf** package is open source under the Gnu Public License and will be available on CRAN later this year.