

Web Appendix 2: Introduction to the `muRL` Package Mail-merge using `R` and `LATEX`

Ryan T. Moore*

Andrew Reeves†

March 7, 2011

This document describes how to use `muRL` to create beautiful mail-merged letters typeset in `R`. In it we:

1. Prepare the jobs spreadsheet;
2. Create the `TEX` file using `muRL` and `R`;
3. Customize the `TEX` file; and
4. Compile the `TEX` file.

Be sure to include all of the files in the same directory or else point the input commands appropriately. In this example we use Mac OS path names, and the user's job data is in directory `/Users/JohnnyF/Desktop/eJobs/`.

1 A Complete `muRL` Example

One way to learn `muRL` is to try the following short example. In `R`, simply type

```
> install.packages("muRL")
> library(muRL)
> data(murljobs)
> zip.plot(murljobs)
> write.murl(murljobs)
```

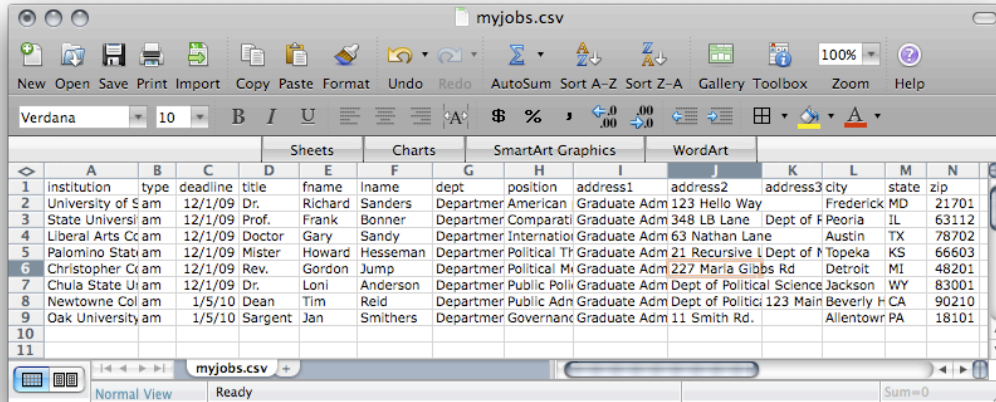
This installs and loads the package and sample data, plots the ZIP codes in the sample data, and creates a ready-to-compile `TEX` file. For more detail on these commands, keep reading!

*Assistant Professor, Department of Political Science, Washington University in St. Louis, 241 Seigle Hall, Campus 1063, One Brookings Drive, St. Louis MO 63130; <http://rtm.wustl.edu>; rtm@wustl.edu; 314/935-3461.

†Assistant Professor, Department of Political Science; 232 Bay State Road, Boston University, Boston MA 02215; <http://people.bu.edu/areeves>; areeves@bu.edu; 617/353-5284.

2 Preparing the jobs spreadsheet

In the spreadsheet application of your choosing, enter the mail-merge information and store the file as using a `.csv` extension. You can import APSA eJobs directly using `muRL`'s `apsahtml2csv` command, described in detail in Web Appendix 1. The spreadsheet pictured below is included with `muRL` and is used in the example here.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	institution	type	deadline	title	fname	lname	dept	position	address1	address2	address3	city	state	zip
2	University of Sam		12/1/09	Dr. Richard	Richard	Sanders	Department American	Graduate Adm	123 Hello Way			Frederick	MD	21701
3	State University		12/1/09	Prof. Frank	Frank	Bonner	Department Comparati	Graduate Adm	348 LB Lane			Dept of F Peoria	IL	63112
4	Liberal Arts Cc	am	12/1/09	Doctor Gary	Gary	Sandy	Department Internatio	Graduate Adm	63 Nathan Lane			Austin	TX	78702
5	Palomino Stati	am	12/1/09	Mister Howard	Howard	Hesseman	Department Political T	Graduate Adm	21 Recursive			Dept of M Topeka	KS	66603
6	Christopher C	am	12/1/09	Rev. Gordon	Gordon	Jump	Department Political M	Graduate Adm	227 Marla Gibbs Rd			Detroit	MI	48201
7	Chula State U	am	12/1/09	Dr. Loni	Loni	Anderson	Department Public Poli	Graduate Adm	Dept of Political Science			Jackson	WY	83001
8	Newtowne Col	am	1/5/10	Dean Tim	Tim	Reid	Department Public Adn	Graduate Adm	Dept of Politici			123 Main	Beverly H CA	90210
9	Oak University	am	1/5/10	Sargent Jan	Jan	Smithers	Department Governanc	Graduate Adm	11 Smith Rd.			Allentown	PA	18101
10														
11														

3 Creating the T_EX file using `muRL` and R

In R, install and load the `muRL` package:

```
> install.packages("muRL")
> library(muRL)
Loading required package: maps
```

Then process your spreadsheet of job information using `read.murl` (see the help file using `help(read.murl)` for the full documentation):

```
> murljobs <- read.murl("/Users/JohnnyF/Desktop/myjobs.csv")
```

The jobs spreadsheet is now loaded into R and ready for the mail-merge. First, we use `zip.plot` to plot the zip codes of our addresses on a map of the U.S. Figure 1 presents that map.

```
> zip.plot(murljobs)
```

Since our jobs spreadsheet is already a `muRL` object in R, we can use the `write.murl` command to implement a mailmerge. The result will be a T_EX file, which will need to be compiled. The file is generated in the working directory (see `getwd()`) of R.

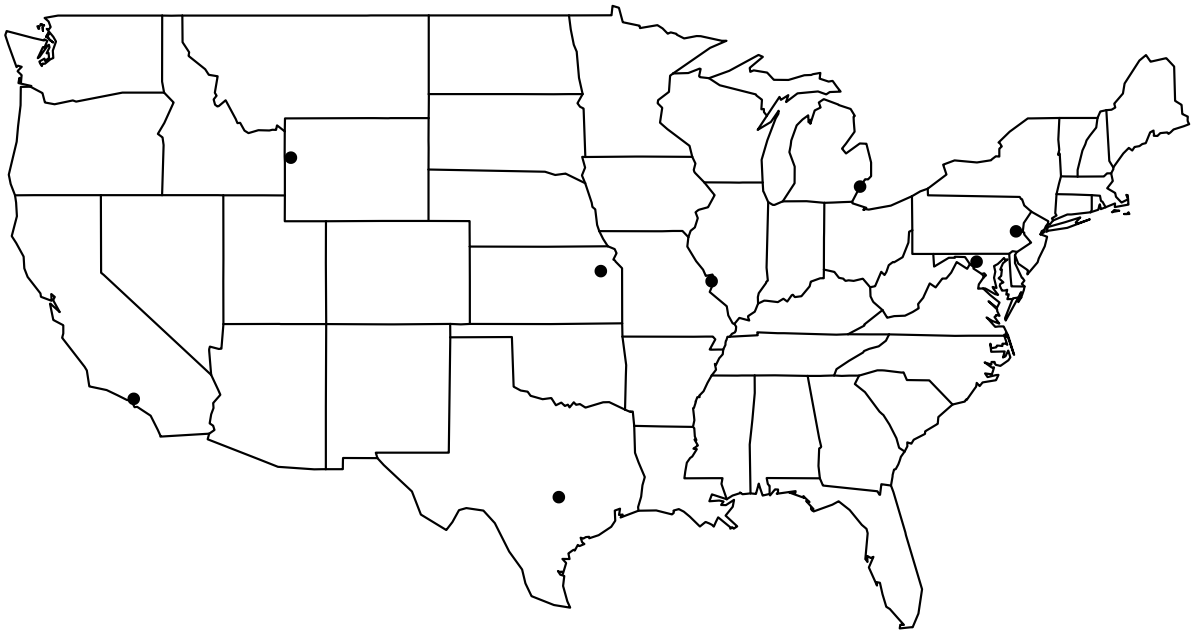


Figure 1: Location of mail-merge addresses (by ZIP code)

```
> getwd()
[1] "/Users/JohnnyF/Desktop"
> write.murl(murljobs)
Data stored as file 'mailmerge.tex'.
The current working directory is /Users/JohnnyF/Desktop
```

4 Customizing the $\text{T}_{\text{E}}\text{X}$ file

Using `write.murl`, we create a $\text{T}_{\text{E}}\text{X}$ file (`mailmerge.tex` is the default filename) in the working directory of R. Open this file using a text editor like Emacs, Notepad, or TextEdit. Like any $\text{T}_{\text{E}}\text{X}$ file, `mailmerge.tex` is highly customizable, and the $\text{T}_{\text{E}}\text{X}$ file contains many annotations to aid the user. The user can specify formatting options like the margin or the font size as well as content like date, the signature, or the text of the letter.

In the body of `mailmerge.tex` we provide descriptions of various fields that the user can change if they did not already do so using `write.murl`. In the example below, we provide the $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ default date of `\today`. The user may replace this varying date with the fixed date of their choosing.

```
\date{\today}
\signature{Johnny Fever} %your name, which will follow the valediction.
```

In addition to the date and signature, the user will almost certainly need to specify the return address and the body of the letter (see the help file for `write.murl` for further details).

Of special interest for the mail-merge is the ability to create labels using the `enlabb` package. By default, the package is used and generates labels based on the Avery® 5164 label format. These labels include barcodes for ZIP codes ensuring prompt and accurate delivery.

5 Compiling the $\text{T}_{\text{E}}\text{X}$ file

The final step is to compile the $\text{T}_{\text{E}}\text{X}$ file. Once `mailmerge.tex` is to your specification, you can compile the file. This will result in mail-merged letters typeset by $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$. For example, if you use pdfLaTeX, the results will be a PDF document of the letters and mailing labels.