# Package ‘SeerMapper2010Regs’

April 13, 2017

**Type** Package  
**Version** 1.2.0  
**Date** 2017-04-13  

**Title** Supplemental U. S. 2010 Census Tract Boundaries for 15 States with Seer Registries for ‘SeerMapper’  
**Author** ```Jim Pearson''<jpearson@statnetconsulting.com>```  
with data provided by ```U. S. Census Bureau''<geo.tiger@census.gov>```  
**Maintainer** ```Jim Pearson''<jpearson@statnetconsulting.com>```  

**Depends** R (>= 3.2.0)  
**Imports** sp  

**Description** Provides supplemental 2010 census tract boundaries of the 15 states containing Seer Registries for use with the 'SeerMapper' package.  
The data contained in this package is derived from U. S. 2010 Census data and is in public domain.  

**License** GPL (>= 2)  

**LazyData** no  
**LazyLoad** no  
**BuildResaveData** yes  
**ByteCompile** yes  
**NeedsCompilation** no  

**Repository** CRAN  
**Date/Publication** 2017-04-13 21:27:26 UTC

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SeerMapper2010Regs-package

SeerMapper-Supplemental 2010 Census Tract boundary datasets for states with Seer Registries

Description

The SeerMapper2010Regs package provides supplemental 2010 Census Tract boundary datasets for 15 states containing Seer Registries for use with SeerMapper package.

The SeerMapper2010West supplemental data package contains the 2010 census tract boundary dataset for 14 states west of the Mississippi river that do not contain NCI Seer Registries. The SeerMapper2010East data only package contains the 2010 census tract boundary datasets for 21 states, District of Columbia and Puerto Rico that do not have Seer Registries and are east of the Mississippi river.

By loading these packages (via the library function) expands the SeerMapper package abilities to map census tract level data in any of the 50 states, the District of Columbia and Puerto Rico.

Details

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<tr>
<th>Package</th>
<th>SeerMapper2010Regs</th>
</tr>
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<tbody>
<tr>
<td>Type</td>
<td>Package</td>
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<tr>
<td>Version</td>
<td>1.2.0</td>
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<td>2017-04-13</td>
</tr>
<tr>
<td>License</td>
<td>GPL-2</td>
</tr>
<tr>
<td>LazyLoad</td>
<td>no</td>
</tr>
</tbody>
</table>

No special action is required by the user to install this package or load it when running SeerMapper2010 function in the SeerMapper package. The defined interdependencies of the packages automatically install the supplemental census tract boundary packages when SeerMapper is install. When the SeerMapper2010 function is called, it sets the census year to "2010" to instruct SeerMapper to use the 2010 boundaries and related information to map the data.

```r
library(SeerMapper)

rateDate <- data.frame(FIBS=stateFibs,
                        Rate=stateRateVector,
                        pValue=stateRatePValue)

SeerMapper2010(rateData, Title=c("Test Map"))
```

If the package attachment or dataset load fails, the caller is notified of the problem and mapping is terminated.

The SeerMapper2010Regs package contains the 2010 census tract boundary datasets for:
<table>
<thead>
<tr>
<th>FIPS</th>
<th>Name</th>
<th># of Registries</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>Alaska</td>
<td>1</td>
</tr>
<tr>
<td>04</td>
<td>Arizona</td>
<td>1</td>
</tr>
<tr>
<td>06</td>
<td>California</td>
<td>4</td>
</tr>
<tr>
<td>09</td>
<td>Connecticut</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Georgia</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>Hawaii</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>Iowa</td>
<td>1</td>
</tr>
<tr>
<td>21</td>
<td>Kentucky</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>Louisiana</td>
<td>1</td>
</tr>
<tr>
<td>26</td>
<td>Michigan</td>
<td>1</td>
</tr>
<tr>
<td>34</td>
<td>New Jersey</td>
<td>1</td>
</tr>
<tr>
<td>35</td>
<td>New Mexico</td>
<td>1</td>
</tr>
<tr>
<td>40</td>
<td>Oklahoma</td>
<td>1</td>
</tr>
<tr>
<td>49</td>
<td>Utah</td>
<td>1</td>
</tr>
<tr>
<td>53</td>
<td>Washington</td>
<td>1</td>
</tr>
</tbody>
</table>

The SeerMapper2010East package contains the 2010 census tract boundary datasets for:

<table>
<thead>
<tr>
<th>FIPS</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Alabama</td>
</tr>
<tr>
<td>10</td>
<td>Delaware</td>
</tr>
<tr>
<td>11</td>
<td>District of Columbia</td>
</tr>
<tr>
<td>12</td>
<td>Florida</td>
</tr>
<tr>
<td>17</td>
<td>Illinois</td>
</tr>
<tr>
<td>18</td>
<td>Indiana</td>
</tr>
<tr>
<td>23</td>
<td>Maine</td>
</tr>
<tr>
<td>24</td>
<td>Maryland</td>
</tr>
<tr>
<td>25</td>
<td>Massachusetts</td>
</tr>
<tr>
<td>28</td>
<td>Mississippi</td>
</tr>
<tr>
<td>33</td>
<td>New Hampshire</td>
</tr>
<tr>
<td>36</td>
<td>New York</td>
</tr>
<tr>
<td>37</td>
<td>North Carolina</td>
</tr>
<tr>
<td>39</td>
<td>Ohio</td>
</tr>
<tr>
<td>42</td>
<td>Pennsylvania</td>
</tr>
<tr>
<td>44</td>
<td>Rhode Island</td>
</tr>
<tr>
<td>45</td>
<td>South Carolina</td>
</tr>
<tr>
<td>47</td>
<td>Tennessee</td>
</tr>
<tr>
<td>50</td>
<td>Vermont</td>
</tr>
<tr>
<td>51</td>
<td>Virginia</td>
</tr>
<tr>
<td>54</td>
<td>West Virginia</td>
</tr>
<tr>
<td>55</td>
<td>Wisconsin</td>
</tr>
<tr>
<td>72</td>
<td>Puerto Rico</td>
</tr>
</tbody>
</table>

The SeerMapper2010West package contains the 2010 census tract boundary datasets for:

<table>
<thead>
<tr>
<th>FIPS</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>08</td>
<td>Colorado</td>
</tr>
</tbody>
</table>


16  Idaho
20  Kansas
17  Illinois
18  Indiana
30  Montana
38  North Dakota
31  Nebraska
32  Nevada
39  Ohio
41  Oregon
46  South Dakota
48  Texas
55  Wisconsin
56  Wyoming

Author(s)

Jim Pearson <jpearson@statnetconsulting.com> with data sourced from U. S. Census Bureau <geo.tiger@census.gov>
Maintainer: "Jim Pearson" <jpearson@statnetconsulting.com>
Package compiled by "Jim Pearson" <jpearson@statnetconsulting.com>

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trXX_dXX  Provides the U.S. 2010 Census Tract Boundary data datasets for 15 States the have Seer Registries for use with SeerMapper Package

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Description

There are six supplemental census tract boundary packages for use with SeerMapper. The are SeerMapperRegs, SeerMapperEast, SeerMapperWest for the 2000 census and Seer2010MapperRegs, Seer2010MapperEast and Seer2010MapperWest for the 2010 census. The combination of the either three provide a set of census tract boundaries for one U. S. census year (either 2000 or 2010). The SeerMapperRegs and Seer2010MapperRegs packages contains the census tract boundaries for the 15 states the have U. S. Seer Registries. The remaining census tract boundaries are split into two packages for each census year based on whether the state is east or west of the Mississippi river. The census tracts for 23 states without registries east of the Mississippi river at contained in the SeerMapperEast and Seer2010MapperEast packages. The tract boundaries for the 14 states west of the Mississippi river are in the SeerMapperWest and Seer2010MapperWest packages. The states include the District of Columbia and Puerto Rico. This package contains the 2010 census tract boundaries for the 15 states with Seer Registries.

Usage

data(tr02_d10)
Format

This dataset contains a set of SpatialPolygons structures for the 15 states with Seer Registries. Each state structure is a list of the census tracts boundaries that the state. Refer to the documentation on the sp package for details on the structures. Each list element is a "polygons" class structure containing attributes of the census tract (label point, area, ID, etc.) and a list of "Polygons" class elements that define the boundary polygons.

Details

The SeerMapperRegs and SeerMapper2010Regs packages contains 15 states with Seer Registries including:

<table>
<thead>
<tr>
<th>FIPS</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>Alaska</td>
</tr>
<tr>
<td>04</td>
<td>Arizona</td>
</tr>
<tr>
<td>06</td>
<td>California</td>
</tr>
<tr>
<td>09</td>
<td>Connecticut</td>
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<td>Georgia</td>
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<td>15</td>
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<td>Iowa</td>
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<td>26</td>
<td>Michigan</td>
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<td>34</td>
<td>New Jersey</td>
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<tr>
<td>35</td>
<td>New Mexico</td>
</tr>
<tr>
<td>40</td>
<td>Oklahoma</td>
</tr>
<tr>
<td>49</td>
<td>Utah</td>
</tr>
<tr>
<td>53</td>
<td>Washington</td>
</tr>
</tbody>
</table>

The SeerMapper package contains the state and county boundary data for all 51 states and DC and the Seer Registry boundary data for the 20 established registries. Due to space limitations, the base packages cannot contain the census tract boundary data.

Three supplemental data packages are used for each census year to provide the census tract boundary data to SeerMapper package. Each state ".rda" file (dataset) contains state’s census tract boundary data. The file name structure is trXX_dYY, where tr identifies the file as census tract boundary data, "XX" is the state (2 digits) fips code and "YY" represents the census year (e.g., 00 = 2000 or 10 for 2010)

To conserve disk space and downloading/installation time, the rda files are compressed using the "xy" method.

The U. S. Census Bureau census tract boundary shape file data was pre-processed by "www.MapShaper.org" website version 01.15 using modified Visvalingam method with the intersection repair and prevent shape removal options enabled, the coordinate precision value set to 0.0 and the simplify parameter set to 10 by 85 alignments.

When the SeerMapper package is install, the six (6) census tract boundary supplement packages are also install automatically by R. The SeerMapper package then manages the loading of the packages to ensure the needed boundary files are available.
Source

The census tract boundary shapefiles were downloaded from the CENSUS.GOV web site for the 2010 Census census tract boundary shapefiles, https://www2.census.gov/geo/tiger/GENZ2010/gz_2010_XX_140_00_500k.zip, where XX is the state FIPS code.

Examples

```r
# These examples are a test to ensure each census tract file
# can be read and a plot of the state generated.
# require("sp")

# If you want to save the example output PDF files, change the
# the following "tempDir()" to the path you want to save the output files.
# For Example: outDir <- "c:/RTestPDFs"
outDir <- tempdir()
cat("Output Directory used: ", outDir, "\n")

stList <- c("02", "04", "06", "09", "13",
            "15", "19", "21", "22", "26",
            "34", "35", "40", "49", "53")

            "Hawaii", "Iowa", "Kentucky", "Louisiana", "Michigan",
            "New Jersey", "New Mexico", "Oklahoma", "Utah", "Washington")

cY <- "10"

cat("Output example PDF file: ", outDir, "\n")

outFile <- paste0("SeerMapperRegs", cY, "-CT.pdf")
outFN <- file.path(outDir, outFile)

pdf(outFN, width=7, height=10)

for (stN in seq(from=1, to=length(stList), by=7)) { # test draw 3 of 15 states

  stID <- stList[stN]
  stNa <- stName[stN]
  trFN <- paste0("tr", stID, ".d", cY)
  TT_tr <- paste0("U. S. Census Tracts - ", stNa, Fips=", stID, " file="trFN)

  data(list=trFN)
  wrSP <- get(trFN)
  #str(wrSP)

  plot(wrSP, main=TT_tr)
  rm(list=trFN)
}

dev.off()
```
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tr19_d10 (trXX_dXX), 4
tr21_d10 (trXX_dXX), 4
tr22_d10 (trXX_dXX), 4
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