# Package 'SeerMapperEast'

October 12, 2022

**Type** Package

**Version** 1.2.5

**Date** 2021-01-08

**Title** Supplemental U.S. 2000 Census Tract Boundaries for 20 States,
District and Territory without Seer Registries that are East of
the Mississippi River for Use with 'SeerMapper' Package

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**Depends** R (>= 3.6.0)

**Imports** sp

**Suggests**

**Description** Provides supplemental 2000 census tract boundaries for the 20 states, district and territory
without Seer Registries that are east of the Mississippi river
for use with the 'SeerMapper' package.
The data contained in this
package is derived from U.S. Census data and is in the public domain.

**License** GPL (>= 2)

**LazyData** no

**LazyLoad** no

**BuildResaveData** yes

**ByteCompile** yes

**NeedsCompilation** no

**Repository** CRAN

**Date/Publication** 2021-01-12 21:00:06 UTC

# R topics documented:

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SeerMapperEast-package

*SeerMapper-Supplemental 2000 Census Tract East States Boundary Datasets*

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**Description**

The *SeerMapperEast* package provides supplemental 2000 Census Tract boundary datasets for 20 states (PR and DC included), which are without Seer registries and are east of the Mississippi river for use with *SeerMapper* package.

The *SeerMapperWest* data only package contains the 2000 census tract boundary datasets for 13 states west of the Mississippi river that do not contain NCI Seer Registries. The *SeerMapperRegs* data only package contains the 2000 census trace boundary datasets for the 19 states with Seer Registries.

By loading these packages (via the library function) expands the *SeerMapper* package abilities to map 2000 census tract level data in any of the 50 states, the District of Columbia and Puerto Rico.

**Details**

| | |
|---|---|
| Package: | SeerMapperEast |
| Type: | Package |
| Version: | 1.2.4 |
| Date: | 2020-06-22 |
| License: | GPL-2 |
| LazyLoad: | no |

No special action is required by the user to install this package or load it when running *SeerMapper*. The defined interdependencies of the packages automatically install the supplemental 2000 census tract boundary packages when *SeerMapper* is install. When *SeerMapper* is called, if it determines that one or more supplemental packages need to be loaded, it initiates the loading for the caller.

```
library(SeerMapper)

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

SeerMapper(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 *SeerMapperEast* package contains the 2000 census tract boundary datasets for:

```
FIPS   Name
01     Alabama
10     Delaware
11     District of Columbia
12     Florida
17     Illinois
18     Indiana
23     Maine
24     Maryland
28     Mississippi
33     New Hampshire
37     North Carolina
39     Ohio
42     Pennsylvania
44     Rhode Island
45     South Carolina
47     Tennessee
50     Vermont
51     Virginia
54     West Virginia
72     Puerto Rico
```

## Author(s)

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| trXX_dXX | *Provides the U.S. 2000 Census Tract Boundary data datasets for 20 States and districts East of the Mississippi River 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*, and *SeerMapperWest* for the 2000 census and *Seer2010MapperRegs*, *Seer2010MapperEast* and *SeerMapper2010West* 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 contain the census tract boundaries for the 19 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 20 states, district, and territory without registries east of the Mississippi river at contained in the *SeerMapperEast* and *Seer2010MapperEast* packages. The tract boundaries for the 13 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 provides the 2000 census tract boundaries for the 20 states, district and territory without registries east of the Mississippi river.

**Usage**

    data(tr10_d00)

**Format**

Each file contains a set of SpatialPolygons structures for the 20 states east of the Mississippi that do not have 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 strucures. 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 *SeerMapperEast* and *SeerMapper2010East* packages contains 20 eastern states including:

    FIPS    Name
    01      Alabama
    10      Delaware
    11      District of Columbia
    12      Florida
    17      Illinois
    18      Indiana
    23      Maine
    24      Maryland
    28      Mississippi
    33      New Hampshire
    37      North Carolina
    39      Ohio
    42      Pennsylvania
    44      Rhode Island
    45      South Carolina
    47      Tennessee
    50      Vermont
    51      Virginia
    54      West Virginia
    72      Puerto Rico

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 2000 Census census tract boundary shapefiles, https://www2.census.gov/geo/tiger/PREVGENZ/tr/tr00shp/trXX_d00_shp.zip where XX is the state FIPS code.

### Examples

```
#
#  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 and see 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:",outDir,"\n")

stList    <- c("01","10","11","12","17",
               "18","23","24","28","33",
               "37","39","42","44","45",
               "47","50","51","54","72")
stName    <- c("Alabama","Delaware","Dist.of Columbia","Florida","Illinois",
               "Indiana","Maine","Maryland","Mississippi","New Hampshire",
              "North Carolina","Ohio","Pennsylvania","Rhode Island","South Carolina",
               "Tennessee","Vermont","Virginia","West Virginia","Puerto Rico")
cY        <- "00"

outFile   <- paste0("SeerMapperEast",cY,"-CT.pdf")
outFN     <- file.path(outDir,outFile)
cat("Output example PDF file:",outFN,"\n")

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

for (stN in seq(from=1, to=length(stList), by=8)) { # Test draw 3 of 20 states (1, 9, and 17)

   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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