latlong2region

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R topics documented:

`latlong2region` *Match coordinates to regions in a shapefile.*

Description

Match coordinates to regions in a shapefile. Also includes the possibility to find the region a point is closest to if, for example, the point is the water.

Usage

```
latlong2region(p, shp, closest = TRUE)
```

Arguments

`p`	Longitudes and latitudes of points. Can be a vector of two points or a matrix or `data.frame` of 2 columns (first is longitude, second is latitude). Can also be a `SpatialPoints` object.
`shp`	The `SpatialPolygonDataFrame` to match to.
`closest`	Whether to find the closest region for points that don't fall in any region in `shp`. Default is `TRUE`. This step can be slow for large shapefiles.

Value

Returns a `data.frame` with `p` and the corresponding elements in `shp`.

Examples

```
# Download, extract and load the US counties shapefile:
us <- "http://www2.census.gov/geo/tiger/GENZ2015/shp/cb_2015_us_county_500k.zip"
download.file(us, "us_counties.zip")
unzip("us_counties.zip")
shp <- rgdal::readOGR(".", "cb_2015_us_county_500k")

# Points to use, the Chicago point is in Lake Michigan so it won't be matched.
# It will be matched to the closest county.
df <- data.frame(name = c("New York", "San Francisco", "Chicago"),
                 lon  = c(-74.00594, -122.41942, -87.61),
                 lat  = c(40.71278, 37.77493, 41.87811))

p <- df[, c("lon", "lat")]
latlong2region(p, shp)
```

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