The trip package

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Abstract

The **trip** package provides tools for working with animal track data.

1 Introduction

Basic use of the trip package.

2 Data input and validation

```
> library(trip)
> d <- data.frame(x = 1:10, y = rnorm(10), tms = Sys.time() + 1:10,
+     id = gl(2, 5))
> coordinates(d) <- ~x + y
> proj4string(d) <- CRS("+proj=laea")
> tr <- trip(d, c("tms", "id"))
> summary(tr)

Object of class trip
  tripID ("id") No.Records   startTime ("tms")     endTime ("tms") tripDuration
1             1          5 2014-11-05 11:34:10 2014-11-05 11:34:14       4 secs
2             2          5 2014-11-05 11:34:15 2014-11-05 11:34:19       4 secs
  tripDistance meanSpeed maxSpeed meanRMSspeed maxRMSspeed
1     5.508260  4957.434 6199.441     1252.822    5011.289
2     8.960405  8064.364 9253.867     1752.435    7009.741

Total trip duration: 8 seconds (0 hours, 8 seconds)

Derived from Spatial data:

Object of class SpatialPointsDataFrame
Coordinates:
        min       max
x  1.000000 10.000000
y -1.765506  1.191484
Is projected: TRUE
proj4string : [+proj=laea]
Number of points: 10
Data attributes:
      tms                       id
 Min.   :2014-11-05 01:34:10   1:5
 1st Qu.:2014-11-05 01:34:13   2:5
 Median :2014-11-05 01:34:15
```

```
 Mean   :2014-11-05 01:34:15
 3rd Qu.:2014-11-05 01:34:17
 Max.   :2014-11-05 01:34:19
```

3 Simple plotting

```
> plot(tr)
> lines(tr)
```

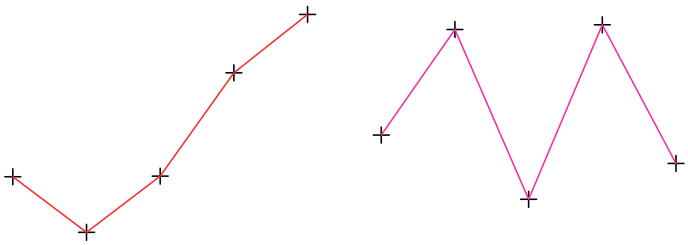
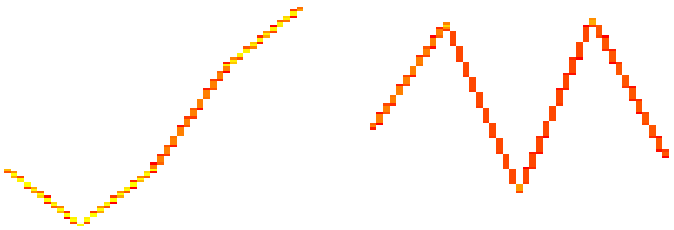


Figure 1: Plot of a very simple trip object.

4 Gridding for time spent

```
> tg <- tripGrid(tr)
> image(tg, col = c("transparent", heat.colors(25)))
```



5 Example data from diveMove