inla.surv

The routines in R-INLA work with objects of class "inla.surv", which is a data structure that combines times, censoring, truncation and subject number information. Such objects are constructed using the 'inla.surv' function. 'inla.surv' works for both

- event time data(an event per subject)
- longitudinal data(multiple events per subject)

For event time data, it takes four arguments:
an observation time, an event indicator(censoring indicator), an ending time for interval censored data and left truncation time. This can be done using the following command:

```
inla.surv(time, event, time2, truncation)
```

The observation time is the follow up time for right censored data and starting time for interval censored data. The event indicator can be coded as following:

1 for uncensored observation,

0 for right censored observation,

2 for left censored data and

3 for interval censored data.

The left truncation time if missing is considered 0.

For longitudinal data, it takes three arguments:
an observation time, an event indicator(censoring indicator) and subject indicator. This can be done using the following command:

```
inla.surv(time, event, subject=subject)
```

The observation time is the time of detecting an event, event is a censoring indicator and subject is subject indicator. The event indicator can be coded as following:

1 if an event is detected,

0 if an event not detected

The out put of 'inla.surv' is different for event time data(when there is one event per subject) and longitudinal data(multiple events per subject).

- event time data:
  For, such data, the out put of 'inla.surv' is a data frame consisting of 5 columns, the names of which can be seen using the command,

  ```
  names(inla.surv(time, event, time2, truncation))
  ```

  resulting in:

  ```
  [1] "time"       "lower"      "upper"      "event"      "truncation"
  ```

- longitudinal data:
  For such data the out put of 'inla.surv' is a data frame consisting of 3 columns, the names of which can be seen using the command,

  ```
  names(inla.surv(time, event, time2, truncation, subject=subject))
  ```

  resulting in:

  ```
  [1] "time"         "event"      "subject"
  ```

A print method is associated with the 'inla.surv'object that displays the objects in special format, with a '+' marking censoring observations.