Package 'fasttime'

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R topics documented:

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fastPOSIXct   *Fast version of* as.POSIXct.character *for GMT fixed format.*

Description

fastPOSIXct converts timestamps in textual (string) form into POSIXct objects. It interprets sequences of digits separated by non-digits as a timestamp in GMT. The order of interpretation is fixed: year, month, day, hour, minute, second. Note that only true (positive) POSIX dates (since 1970-01-01 00:00:00) are supported and fastPOSIXct accepts dates up to year 2199.

It is extremely fast (compared to as.POSIXct by several orders of magnitude (on some platforms 1000x faster) since it uses pure text parsing and no system calls.

fastDate is a faster shorthand for as.Date(fastPOSIXct(x,"GMT",3L,fixed)).

Usage

```
fastPOSIXct(x, tz = NULL, required.components = 3L, fixed = NA)
fastDate(x, fixed = NA)
```

Arguments

x	string vector to interpret as timestamps
tz	timezone for the resulting `POSIXct` object - this is NOT the time of x, that will always be GMT!
required.components	
	minimum number of timestamp components that are required. For example 3 means only the date is required, 6 means all components (up to the seconds) are required. If the requirement is not met, the result for that entry will be `NA`.
fixed	NA for separator-based parsing. If the components of the time stamp have fixed-width format (where separators are optional or non-existent) then this can be set to the number of characters expected for the year (see details).

Details

By default the parsing is done by extracting digits separated by non-digits. Each such group of digits is then interpreted in the order year, month, day, hour, minute and seconds. The separators can be arbitrary and of any length. Years less than 100 are assumed to be 2000..2099. For example, "2022-01-05 09:15" has five groups (from year to minute). The same timestamp would also be parsed from "22/1/1,time 9:15" or the ISO standard GMT form "2022-01-01T09:15:00Z".

If the format uses no separators then `fixed` can be set to the length of the year component (in digits) – months through minutes are assumed to have at most two digits each. For example, the following call will have the same timestamp result as above: `fastPOSIXct("2201010915",fixed=2)`. Note that separators are still allowed in the fixed parsing and will terminate the preceding group so "220101 9:15" would yield the same result.

Value

Numeric vector of the class `POSIXct` (`fastPOSIXct`) or `Date` (`fastDate`).

Author(s)

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See Also

[as.POSIXct](#)

Examples

```
## let us generate a bunch of random timestamps until today
ts <- as.character(.POSIXct(runif(1e4) * unclass(Sys.time()), "GMT"))

## convert them using as.POSIXct
```

```
system.time(a <- as.POSIXct(ts, "GMT"))

## same using the fast method
system.time(b <- fastPOSIXct(ts, "GMT"))

identical(a, b)

## same for dates
day <- substr(ts, 1, 10)

system.time(da <- as.Date(day))
system.time(db <- fastDate(day))
identical(da, db)

## some parsing examples
fastPOSIXct("2022-01-05 09:15", "GMT")
fastPOSIXct("22/1/1, the time is 9:15", "GMT")
fastPOSIXct("2022-01-01T09:15:00Z", "GMT")
fastPOSIXct("2201010915", "GMT", fixed=2)

## the same converted to your local time zone
fastPOSIXct("2022-01-05 09:15")
## or ET
fastPOSIXct("2022-01-05 09:15", "US/Eastern")
```

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