NAME

datetime − convert between TAI labels and seconds

SYNTAX

#include <datetime.h>

void **datetime_tai**(&*dt*,*t*);

datetime_sec **datetime_untai**(&*dt*);

struct datetime *dt*;
datetime_sec *t*;

DESCRIPTION

International Atomic Time, TAI, is the fundamental unit for time measurements. TAI has one label for every second of real time, without complications such as leap seconds.

A struct datetime variable, such as *dt*, stores a TAI label. *dt***.year** is the year number minus 1900; *dt***.mon** is the month number, from 0 (January) through 11 (December); *dt***.mday** is the day of the month, from 1 through 31; *dt***.hour** is the hour, from 0 through 23; *dt***.min** is the minute, from 0 through 59; *dt***.sec** is the second, from 0 through 59; *dt***.wday** is the day of the week, from 0 (Sunday) through 6 (Saturday); *dt***.yday** is the day of the year, from 0 through 365.

The **datetime** library supports more convenient TAI manipulation with the datetime_sec type. A datetime_sec value, such as *t*, is an integer referring to the *t*th second after the beginning of 1970 TAI. The first second of 1970 TAI was 0; the next second was 1; the last second of 1969 TAI was -1. The difference between two datetime_sec values is a number of real-time seconds.

datetime_tai converts a datetime_sec to a TAI label.

datetime_untai reads a TAI label (specifically *dt***.year**, *dt***.mon**, *dt***.mday**, *dt***.hour**, *dt***.min**, and *dt***.sec**) and returns a datetime_sec.

SEE ALSO

now(3)