Date and Time System Variables

The following topics are covered:

Usage

The date and time system variables listed below may be specified in the following places:

- statements:
  COMPUTE
  DISPLAY
  MOVE
  PRINT
  WRITE
- logical condition criteria

The contents of date and time system variables as generated by Natural are **non-modifiable**, which means that in a Natural program you cannot assign another value to any of them.

Date System Variables

All date system variables contain the current date. The format of the date is different for each date variable, as indicated below.

Date Variable	Format/Length	Date Format*
***DATD**	A8	DD.MM.YY
***DAT4D**	A10	DD.MM.YYYY
***DATE**	A8	DD/MM/YY
***DAT4E**	A10	DD/MM/YYYY
***DATG**	A15	DD*monthname*YYYY (Gregorian date)
***DATI**	A8	YY-MM-DD
***DAT4I**	A10	YYYY-MM-DD
***DATJ**	A5	YYDDD (Julian date)
***DAT4J**	A7	YYYYDDD (Julian date)
***DATN**	N8	YYYYMMDD
***DATU**	A8	MM/DD/YY
***DAT4U**	A10	MM/DD/YYYY
***DATV**	A11	DD-MON-YYYY
***DATVS**	A9	DDMONYYYY
***DATX**	D	internal date format

* D = day, M = month, Y = year, MON = leading three bytes of the month’s name as in *DATG

Time System Variables

Time Variable	Format/Length	Explanation
TIMD(r)*	N7	Can only be used in conjunction with a previous SETTIME statement. Contains the time that has elapsed after the SETTIME statement was executed (in format HHIISST (*)). (r) represents the statement label or source-code line number of the SETTIME statement used as the basis for *TIMD.
***TIME**	A10	Contains the time of day in format HH:II:SS.T (*).
***TIME-OUT**	N5	Contains the number of seconds remaining before the current transaction will be timed out (only available with Natural Security). *TIME-OUT is "0" if transaction mode has not been entered. Transaction mode is entered with the execution of a FIND, READ or GET statement that reads a database record for the purpose of updating or deleting the record. *TIME-OUT is reset to "0" when an END TRANSACTION or BACKOUT TRANSACTION statement is executed.
***TIMESTMP**	B8	Machine-internal store clock value.
***TIMN**	N7	Contains the time of day in format HHIISST (*).
***TIMX**	T	Contains the time of day in internal time format.

* H = hour, I = minute, S = second, T = tenth of a second.

Example of Date and Time System Variables

Code Example:

```
* EXAMPLE 'DATIVAR': DATE AND TIME SYSTEM VARIABLES
************************************************
WRITE NOTITLE
  'DATE IN FORMAT DD.MM.YYYY  '   *DAT4D /
  'DATE IN FORMAT DD/MM/YYYY  '   *DAT4E /
  'DATE IN FORMAT DD-MON-YYYY '   *DATV  /
  'DATE IN FORMAT DDMONYYYY   '   *DATVS /
  'DATE IN GREGORIAN FORM     '   *DATG  /
  'DATE IN FORMAT YYYY-MM-DD  '   *DAT4I /
  'DATE IN FORMAT YYYYDDD     '   *DAT4J /
  'DATE IN FORMAT YYYYMMDD    '   *DATN (AD=L) /
  'DATE IN FORMAT MM/DD/YYYY  '   *DAT4U /
  'DATE IN INTERNAL FORMAT    '   *DATX (DF=L) ///
  'TIME IN FORMAT HH:MM:SS.T  '   *TIME /
  'TIME IN FORMAT HHMMSST     '   *TIMN (AD=L) /
  'TIME IN INTERNAL FORMAT    '   *TIMX /
*
MOVE *DATX TO #DATE(D)
ADD 14 TO #DATE
WRITE 'CURRENT DATE'              *DATX (DF=L) 3X
      'CURRENT DATE + 14 DAYS   ' #DATE (DF=L)
MOVE *TIMX TO #TIME(T)
ADD 100 TO #TIME
WRITE 'CURRENT TIME'              *TIMX 5X
      'CURRENT TIME + 10 SECONDS' #TIME
END
```

Screen Display:

```
DATE IN FORMAT DD.MM.YYYY   14.01.2003
DATE IN FORMAT DD/MM/YYYY   14/01/2003
DATE IN FORMAT DD-MON-YYYY  14-Jan-2003
DATE IN FORMAT DDMONYYYY    14Jan2003
DATE IN GREGORIAN FORM      14January  2003
DATE IN FORMAT YYYY-MM-DD   2003-01-14
DATE IN FORMAT YYYYDDD      2003014
DATE IN FORMAT YYYYMMDD     20030114
DATE IN FORMAT MM/DD/YYYY   01/14/2003
DATE IN INTERNAL FORMAT     2003-01-14


TIME IN FORMAT HH:MM:SS.T   10:52:19.0
TIME IN FORMAT HHMMSST      1052190
TIME IN INTERNAL FORMAT     10:52:19

CURRENT DATE 2003-01-14   CURRENT DATE + 14 DAYS    2003-01-28
CURRENT TIME 10:52:19     CURRENT TIME + 10 SECONDS 10:52:29
```

