subject: Date Manipulation Subroutines
Case 39184

PROGRAMMER'S NOTES

These notes describe three subroutines which convert the date to and from the format required for ANSI magnetic tape labels. The subroutines are written in the C programming language to run under the UNIX operating system on a PDP11 computer. The subroutine LABEL converts the date from the form stored internally by UNIX to the label format. The subroutine LDATE converts the date from a MM/DD/YY format to a label format. The subroutine PDATE converts the date from label format to a format suitable for printing.

PDATE and LDATE are included in the module LDATE.O. LABEL is included in the module CTIME.O. Both modules require DMSIZE.O, a module defining a storage area used by LABEL and PDATE. LDATE.O CTIME.O, and DMSIZE.O are included in the library /LIB/LIBA.A.

Mrs. F. S. Menzel

HO-5221-FSM-pak

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3 Subroutine Descriptions

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See next page

J. F. MARANZANO

B. A. TAGUE
P. P. CLAYTON
J. J. LUDWIG

F. M. RALEICH

DESTROY

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Messrs. A. Gerard
      R. E. Machol
      J. F. Maranzano ◄━ THIS COPY FOR ◄
      W. T. Wichman
      R. M. Wolfe

January 10, 1974

NAME   LABEL (III)

    LABEL - convert date to a form suitable for use in

        ANSI magnetic tape labels.

SYNOPSIS

        CHAR   *LABEL(TVEC);

        INT   TVEC[2];

DESCRIPTION

    LABEL converts a time in the vector TVEC such as

    returned by TIME(II) into a form suitable for ANSI

    magnetic tape labels. The date field of an ANSI

    label is 5 characters long and has the form

        YYDDD

    where YY specifies the year

    and DDD specifies the day of the year

    The subroutine returns a pointer to a field containing

    the date in label format. Once the time has been

    placed into T and T+2, this routine is callable from

    assembly language as follows:

        MOV $T,-(SP)

        JSR PC,_CTIME

        TST (SP)+

    and a pointer to the string is available in RO.

SEE ALSO

    TIME(II)

January 10, 1974

NAME   LDATE (III)

LDATE - convert date from ASCII to a form suitable for

ANSI magnetic tape labels.

SYNOPSIS

INT   LDATE (INPUT,OUTPUT);

CHAR   INPUT[9],OUTPUT[6];

DESCRIPTION

This routine converts a date in the form MM/DD/YY

to the form YYDDD, suitable for an ANSI magnetic

tape label. Two parameters must be supplied.

INPUT - a pointer to a 9-character field

containing the date in the form

MM/DD/YY\0.

OUTPUT - a pointer to a 6-character field

into which the subroutine will put

the date in the form YYDDD\0.

In C, the call LDATE (INPUT,OUTPUT) will convert

the date and return 0 for success or -1 for failure.

In assembly language, the calling sequence is as

follows:

```
MOV $OUTPUT,-(SP)

MOV $INPUT,-(SP)

JSR PC,_LDATE
```

```
        CMP (SP)+, (SP)+   /remove parameters from stack.
```

On return, RO will contain 0 if the conversion was

successful and -1 for failure

SEE ALSO

PDATE (III)

January 10, 1974

NAME   PDATE (III)

    PDATE - convert date from ANSI magnetic tape label

            format to a form suitable for printing.

SYNOPSIS

        INT   PDATE(INPUT,OUTPUT);

        CHAR   INPUT[6],OUTPUT[12];

DESCRIPTION

    This routine converts a date in the form YYDDD to a

    form suitable for printing. Two parameters are

    required:

        INPUT - a pointer to a 6-character field

        containing the date in the form YYDDD\0.

        OUTPUT - a pointer to a 12-character field

        into which the subroutine will put the date

        in the form MMM [D]D YYY\0.

    In C, the call PDATE (INPUT,OUTPUT) will convert

    the date and return 0 for success or -1 for failure.

    In assembly language, the calling sequence is as follows:

        MOV $OUTPUT,-(SP)

        MOV $INPUT,-(SP)

        JSR PC,_PDATE

        CMP (SP)+, (SP)+ /remove parameters from stack.

On return, RO will contain 0 if the conversion was
successful or -1 for failure.

SEE ALSO

LDATE (III)