



Tech Info Library

Pascal: Speeding up Pascal text file reading (3 of 3)

Revised: 11/30/84
Security: Everyone

Pascal: Speeding up Pascal text file reading (3 of 3)

=====

```
PROCEDURE FILLBUFFER;
BEGIN
  EMPTY := BLOCKREAD (INFILE,BUFFER,2) = 0;
  IF NOT EMPTY THEN BEGIN
    NOTNULLS := BUFSIZE + SCAN (- BUFSIZE, <> CHR(0),
      BUFFER [1023]);
    BUFINDEX := 0;
  END;
END;

PROCEDURE OPENFILE (FNAME: STRING);
BEGIN
  IF ((POS('.text',FNAME) = 0) AND
    (POS('.TEXT',FNAME) = 0)) THEN
    FNAME := CONCAT (FNAME, '.TEXT');
  RESET (INFILE, FNAME);
  FILLBUFFER; FILLBUFFER;
END;

PROCEDURE READFILE (VAR LINE: STRING);
VAR INDENT,
    LINELEN: INTEGER;
BEGIN
  IF BUFINDEX >= NOTNULLS THEN FILLBUFFER;
  IF NOT EMPTY THEN BEGIN
    LINELEN := SCAN (BUFSIZE, = CHR(13), BUFFER [BUFINDEX]);
    IF BUFFER [BUFINDEX] = CHR (16) THEN BEGIN
      INDENT := ORD (BUFFER [BUFINDEX + 1]) - 32;
      (*$R-*)
      LINE [0] := CHR (LINELEN + INDENT - 2);
      (*$R+*)
      IF INDENT > 0 THEN FILLCHAR (LINE [1], INDENT, ' ');
      IF LINELEN > 2 THEN MOVELEFT (BUFFER [BUFINDEX + 2],
        LINE [1 + INDENT], LINELEN - 2);
    END ELSE BEGIN
      (*$R-*)
```

```
        LINE [0] := CHR (LINELEN);
        (*$R+*)

        IF LINELEN > 0 THEN MOVELEFT (BUFFER [BUFINDEX],
                                      LINE [1], LINELEN);

    END;
    BUFINDEX := BUFINDEX + LINELEN + 1;
END;

PROCEDURE GETOPTION;
BEGIN
    REPEAT
        WRITELN;
        WRITE ('OPTIONS: Q)uickread, R)eadln, E)xit ');
        CH := ' ';
        READ (KEYBOARD, CH);
    UNTIL CH IN ['Q', 'q', 'R', 'r', 'E', 'e'];
    IF CH IN ['E', 'e'] THEN BEGIN
        PAGE (OUTPUT);
        RESET (INFILE, FILENAME);
        CLOSE (INFILE, PURGE);
        EXIT (PROGRAM);
    END;
END;

PROCEDURE PRINTFILE;
BEGIN
    PAGE (OUTPUT); WRITELN;
    CASE CH OF
        'Q', 'q': BEGIN
            OPENFILE (FILENAME);
            REPEAT
                LINE := '';
                READFILE (LINE);
                WRITELN (LINE);
            UNTIL EMPTY;
            CLOSE (INFILE);
        END;
        'R', 'r': BEGIN
            RESET (TEXTFILE, FILENAME);
            REPEAT
                READLN (TEXTFILE, LINE);
                WRITELN (LINE);
            UNTIL EOF (TEXTFILE);
            CLOSE (TEXTFILE);
        END;
    END; (* CASE *)
END;

PROCEDURE INIT;
VAR TEMP: STRING;
BEGIN
```

```
PAGE (OUTPUT); WRITELN;
WRITE ('One moment, please...');
REWRITE (TEXTFILE, FILENAME);
WRITE (TEXTFILE, 'This is a test file written to ');
WRITE (TEXTFILE, 'demonstrate the ');
WRITE ('.');
WRITELN (TEXTFILE, '"QUICKREAD" program.');
```

```
WRITE ('.');
WRITELN (TEXTFILE);
TEMP := 'I'm melting.';
REPEAT
  WRITE (TEXTFILE, 'TEST STRING --> ');
  WRITELN (TEXTFILE, TEMP);
  DELETE (TEMP, LENGTH (TEMP), 1);
  WRITE ('.');
UNTIL TEMP = '';
WRITELN (TEXTFILE, ' AHHHHhhhhhh....');
WRITELN (TEXTFILE);
WRITE (TEXTFILE, 'Notice that using READLN takes much ');
WRITE (TEXTFILE, 'more time');
WRITELN (TEXTFILE, ' to read a long line');
WRITE ('.');
WRITELN (TEXTFILE, 'than it takes to read a short one.');
```

```
WRITE ('.');
CLOSE (TEXTFILE, LOCK);
WRITELN;
END;

BEGIN
  INIT; (* Write a temporary file for *)
  HELL_FREEZES_OVER := FALSE;
  REPEAT
    GETOPTIONS; (* Get users choice *)
    PRINTFILE; (* Print the file *)
  UNTIL HELL_FREEZES_OVER; (* Forever.  *)
END.
```

Apple Tech Notes

Tech Info Library Article Number:653