THE mini• tasker

DECUS
RT-11 SIG NEWSLETTER

APRIL 1978 VOL. 4 NO. 2

Contributions to the newsletter and other correspondence should be sent to:

John T. Rasted
JTR Associates
58 Rasted Lane
Meriden, CT 06450

or to:

RT-11 SIG
c/o DECUS
129 Parker Street, PK-3/E55
Maynard, MA 01754

FROM THE EDITOR

At the end of this newsletter is a questionaire which has been submitted by Digital Software Maintenance Services. Please take a few minutes to complete the questionaire and return it to Software Maintenance Services. Note, that the form has a postpaid mailer on the back to facilitate the return of the questionaire.

CHICAGO SYMPOSIUM

The following RT-11 sessions and times are scheduled for the Spring DECUS Symposium in Chicago:

RT-11 Symposium Roadmap and SIG Business Meeting	10:15 - 11:45 am	April 25th
RT-11 Languages Panel	2:00 - 4:00 pm	April 25th
RT-11 Product Panel	9:45 - 11:45 am	April 26th

RT-11 Technical Session - A Tutorial	4:15 - 6:15 pm	April 27th
RT-11 Papers and RT-11 User Application Panel	8:00 - 11:00 pm	April 27th
RT-11 SIG Symposium Wrap-Up Session	8:30 - 10:45 am	April 28th
RT-11 SIG operations/ gathering spot with DEC technical people will be in the Pan American A room	open	April 25th thru April 28th

DIGITAL's Computer Special Systems Group is providing DECUS with a machine capable of media-copy operations. Bring a magtape for swap operations. Contact the RT-11 SIG DECUS Library Coordinator or his representative at, or before, the symposium for additional details.

RT-11 SIG DECUS Library Coordinator:

Eric Morton
Prelco Corporation
170 Lincoln
Lowell, MA 01851
(617) 458-8763

HELP

If anyone has a handler for a RP06 disk drive(176 Mb) to run under RT-11, contact:

D.R. Cuddy
Bell-Northern Research Ltd.
P.O. Box 3511
Station C
Ottawa Canada K1Y 4H7

Can anyone supply a RT-11 driver for Tektronix 4010 terminal and/or a program to read from DOS/BATCH MT tape to RT-11 disk? Contact:

Ming D. Ni, Ph.D.
Dept. of Otolaryngology
University of Texas Medical Branch
Galveston, TX 77550
(713) 765-2786

LETTER FROM RAY STRACKBEIN

Chalfont Communications
73-680 Hwy 111
Palm Desert, Calif 92260
Feb. 15, 1978

John T. Rasted
JTR Associates
58 Rasted Lane
Meridian, Ct. 06450

Dear John,

The following is a slightly edtied version of a letter I sent to Ray Rittenhouse, Software Support in DEC's Los Angeles office. I thought you might be interested in seeing it.

Dear Ray ...

I have talked to you briefly about a couple of my problems and you sent me some SPR forms which I haven't used for many reasons -- among the reasons:

1) I haven't had time.
2) The problem could easily be mine and not the system's
3) Some of what I feel to be problems could later turn out to be assets

I have also been keeping track of problems with the new RT-11 manuals, but I have not yet sent those to Digital either. As you are going to an RT-11 product meeting next week in Maynard, I feel that this would be a good time to unload.

CDT --

CDT doesn't work.
GIVEN:

```
.R LINK
*CDTFOO,LF:=CDT,FOO
*^C
.R CDTFOO
CDT V6.00 (or something like that)
*(right here is my problem. If I try to enter "7100;R", my terminal may echo
*70R or some other inconsistant and unpredictable response. Whatever it does
echo, though, is what it acts upon -- not what I typed, but what it echoed.
If at this point I exit and reenter at ODT+2 or ODT+4, then ODT works fine):
*^C
 C
```

.START 1234
EE5052
* (or something like that).
I should also note that if I
.SET TT: CONSOLE=1
CDT works off of console Ø anyway.

FACTORING
Have you noticed that the SYSTEM RELEASE NOTES (p 3-2) says
.COPY DT:FILE(1,2,3).MAC RK:*.*
will work? It won't for me. Nor will a
.RENAME FCC1%.MAC FOO2%.*
which I have tried on many occasions to do (to get from one program generation to another (FOO1A.MAC,FOO1B.MAC,FOO1C.MAC TO FOO2A.MAC ...)

-BAD-
PIP, DUP, or someone, has apparently saved me a couple of times from a pending head crash by substituting -BAD- for the date on a file. Whenever this has happened I have immediately cleaned the heads and the disk pack on my RKØ5 and have found an unbelievable amount of dirt. The trouble is that after the system has renamed my file from FOO .MAC 12-Feb-78 to FOO .MAC -BAD- my file appears to be branded for life even though I may inspected it and found it to be unadulterated and useable, any attempt to squeeze or copy the file to another disk pack leaves even the copied file with the name FOO .MAC -BAD-. (I cannot find any documentation at all -- not even a mention -- for -BAD-.)

SET TT: QUIET
I'd really like to see a way for that command not to echo if called from an indirect file, or maybe even if Digital would publish a monitor location bit that we could descreetly set with a user program to SET TT: QUIET and not tell the whole world about it. (As a point of information, this can now be acomplished by passing the SET TT: QUIET just before .EXITing a program and it will not echo. But even this is not totally satisfactory.)

SHOW
This is really an asset. But I would like to also see the status of the foreground job <LOADED>, <RUNNING>, <SUSPENDED>, <NONE>, and maybe even its name.

%%%
GIVEN FILES: FCO.MAC,FOCA.MAC,FOOB.MAC,FOOC1.MAC,FOOC2.MAC.
.DIR FCO%%%.* (finds nothing)
.DIR FOO%.* (finds FOOA.MAC and FOOB.MAC only)
There are times when I would like to be able to copy, delete, directory all of my FCC%%%.* files and I would like to test only for FOO and if FOO and anything else is present, to operate as directed whether the file has three, four, five, or six letters. Other times I would like to operate on FOC%.* and operate only on the four letter files FOO%.* (which is what the system now does). This is a dilema. Maybe I could really have it both ways?

EDITING WITH COMMAND FILES OR PATCH OR TECO
I have had a consistant need do be able to edit from a command file and I have not yet figured out just how to do this. I spent a couple of days trying to learn TECO just to generate a "?UEI" error message when I finally tried it. I was really upset to discover this and I feel strongly that Appendix A should have stated that indirect files were not a feature of RT-11 TECO instead of Digital making it almost manditory to learn TECO and try a few programs in order to generate an error message to discover that I can not use TECO to do what I specifically learned TECO to be able to do. (This seems doubly rediculous in that HELP.SAV is a TECO program and HELP.TEC is a TECO command file doing exactly what I wanted to do with TECO, but which I can't. (Got that?)

TCH showed some promise with the 'LET A=33' command as shown in Appendix A of the SYSTEM USER'S GUIDE, but which, alas, my system doesn't like. I'm sorry, but I didn't document exactly what happened to me, but as I remember it, the system didn't like the command 'A' OR 'A"A' OR 'A''A' when I tried to do exactly what was shown on page A-33.

RT-11 COMMAND FILES of course won't work because they can be used to call EDIT, but not to pass any information to EDIT.

MACRO LIBRARIES
It should be noted that the MACRO "/M" switch specifies that the file indicated is a macro library, but while MACRO automatically looks for SYSMAC.SML 'SML' being the extention for the system macro library, '/M' looks for a default ".MAC' file which causes difficulty in distinguishing the edited, source version of the file from the librarian produced macro library. I would really like to see the default extention changed when the '/M' is used, but I also know that this is contrary to RT-11 CSI extention conventions (all input files get the same default extension).

A SUMMARY
In all I feel that most of the effort required to try to upgrade to RT-11 V-3 was certainly worth it. I really do agree with Holliday Inn's commercial which states that the best surprise is no surprise, and I am still being surprised by V3. For all of the fanfare, I still feel that the RT-11 manuals which I commonly use are very much lacking in clarity and the ADVANCED PROGRAMMER'S GUIDE appears at this point to contain a little new material, but otherwise it is a copy of the applicable sections of V-2C's SYSTEM REFERENCE MANUAL. I've been programming assembly language RT-11 for two years now, and I know that certainly a year of struggling and debugging could have been avoided with better manuals. I feel that Digital should offer information about what good assembly language programming is given RT-11 as a tool. For example ... .IRP is a beautiful and useful tool, but it took a while for me to realize that it can really be a pig with the code it generates and that in most more-than-extremely-elementry cases it is usually better (less core with no loss in execution speed, but even gaining assembly time) to rewrite what would have been contained in the .IRP into a do loop. Another now-obvious example ... a program with interrupt service routines and completion routines should not rely on a single AREA block for programmed requests (thank goodness I woke up in the middle of the night with that revelation just before I was to undertake debugging an extremely complex program which I had been writing for the past nine months).

I hope this treatise has been of some help. I am taking the liberty of sending a modified copy of this letter to John Rasted for publication in the RT-11 sig newsletter. Please feel free to call me regarding any questions you may have about my comments.

Sincerely,

Ray Strackbein
Systems Development Engineer

SAN DIEGO SYMPOSIUM DEC PANEL OUTLINES

WHAT IS RT-11?

RT'S DESIGN PHILOSOPHY IS TO USE THE SIMPLEST ALGORITHM POSSIBLE TO DO THE JOB. THEREFORE,

- SMALL

  AIMED AT LOW END OF PDP-11 FAMILY (LSI TO 11/60)
- SINGLE USER (APPLICATION)
- REAL TIME (E.G. LAB, PROCESS CONTROL COMMERCIAL)
- FAST, EFFICIENT, LOW OVERHEAD
- EASY TO LEARN & USE BECAUSE IT SPEAKS ENGLISH

WE'RE HERE TO TALK ABOUT WHAT'S NEW WITH RT-11

DOCUMENTATION
MONITOR
HARDWARE
SYSGEN
UTILITIES
MONITOR COMMANDS
INDIRECT FILES

DOCUMENTATION

MANUAL SET REVISED TO BE EASIER TO UNDERSTAND AND USE, ESPECIALLY FOR NOVICE USER,

DOC. DIRECTORY
RELEASE NOTES
SYSGEN
INTRO TO RT-11
USER'S GUIDE
POCKET GUIDE
MESSAGE MANUAL
ADVANCED PROGRAMMER'S GUIDE

GRADED BY LEVEL OF DIFFICULTY

MONITOR

- .FORK PROCESS:

  INTENDED FOR DEVICE HANDLERS; LETS THEM PERFORM LENGTHY NON-TIME-CRITICAL TASKS AT LOWER PRIORITY THAN DEVICE INTERRUPT LEVEL.

- SUPPORT FOR DEC OR ASCII

  ESCAPE SEQUENCES AVAILABLE (SYSGEN OPTION)

- TIMER SUPPORT AVAILABLE IN SJ (SYSGEN OPTION)

  PLUS NEW PR'S: .MRKT .CMKT

- DEVICE HANDLER FORMAT CHANGE;

  MACROS MAKE THEM EASIER TO WRITE

  ;KMON INSTALL + REMOVE CMDS.

  ;MULTIVECTOR SUPPORT (PC: IS EXAMPLE)

- NEW PR'S
  - .SCCA
  - .UNPROTECT
  - .GVAL
  - .GTLIN

- MULTI TERMINAL SUPPORT:

  DL11, DLV11, DZ11

  UP TO 16 ADDITIONAL TERMINALS

  BG CONSOLE (MUST BE LOCAL DL);

  FG CAN HAVE ITS OWN TERMINAL

  FRUN PROG/T:N

  ;NEW PR'S:

.MTATCH	.MTDTCH
.MTGET	.MT SET
.MTIN	.MTOUT
.MTPRN	.MTRCTO

  REMOTE LINES BOTH MODEM & DIAL-UP

(5)

- XM :NEW MONITOR;

  ACCESS UP TO 124K MEMORY (MAPPED)

  (HANDLERS DO 18-BIT I/O)

  1) DESIGNED FOR DIBOL
  2) USEABLE FOR FORTRAN

     VIRTUAL ARRAYS

  3) NEW PR'S: USEABLE FROM MACRO

.CRAW	CREATE WINDOW
.CRRG	CREATE REGION
.ELAW	ELIMINATE WINDOW
.ELRG	ELIMINATE REGION
.GMCX	GET MAPPING STATUS
.MAP	MAP WINDOW TO REGION
.UNMAP	UNMAP WINDOW FROM REGION

  4) NO RESIDENT OVERLAY,

     NO "XRUN"

     RESTRICTIONS

(6)

HARDWARE

- RK06 W/BAD BLOCK REPLACEMENT

  + ECC OFFSET POSITIONING FOR ERROR CORRECTION

- ANSI COMPATIBLE MAGTAPE
  NEW HANDLER - 2 PARTS

- DISKETTE: 2 CONTROLLERS, STILL ONLY ONE HANDLER

- 11/60 SUPPORT

- PAPERTAPE READER/PUNCH COMBINED INTO 1 HANDLER: PC:

- CARD READER HANDLER USES .FORK TO ELIMINATE I/O SCHEDULING PROBLEM

- NULL HANDLER: NEW

- DZ11 FOR MULTITERMINAL SUPPORT

- 11T03 (SYSTEM COMPOSED OF RK05 AND LSI-11)

- MEMORY PARITY SUPPORT AVAILABLE (OPTIONAL)

(7)

SYSGEN

RT COMES READY TO USE.

USE SYSGEN TO:

1) ERROR LOGGING
2) ESCAPE SEQUENCE SUPPORT
3) MULTI TERMINAL SUPPORT
4) TIMER SUPPORT

(8)

UTILITY PROGS

- PIP (COPY, DELETE, RENAME)

- DUP DEVICE UTILITY
  INITIALIZE DEVICES, STORE BOOT,
  SCAN FOR BAD BLOCKS,

- DIR DIRECTORY
  LISTS DIRECTORIES 57 VARIETIES

- ERROR LOGGING ERRUTL
  PSE
  SYE

- PAT - OBJECT MODULE PATCHING
  UTILITY, REPLACES PATCH0

- TECO - "YOU ASKED FOR IT!"

- ALL OTHERS IMPROVED

  LINK, LIBR, BATCH,

(9)

MONITORS
COMMANDS

GREATLY EXPANDED; IMPROVE EASE OF USE.

E.G.:

COPY
DELETE
:
:
:
EXECUTE (ASSEMBLE, LINK & RUN IN ONE STEP)

INDIRECT FILES (START UP @ FILES)

CALL BY .@ FILENAME

FILE

(10)

BASIC-11

CURRENT STATUS

(1) SUPPORTED PRODUCTS AVAILABLE
BASIC-11/RT-11, V2
MU BASIC/RT-11, V1
BASIC-11/IAS-RSX, V2

(2) PLANNED PRODUCTS
MU BASIC-11/RT-11, V2

(3) COMPATIBILITY
ALL VERSION 2 IMPLEMENTATIONS OF BASIC-11 ARE GENERALLY COMPATIBLE.

ALL V2'S WILL BE SHIPPED WITH THE SAME LANGUAGE REFERENCE MANUAL.

COMMON LANGUAGE KERNAL, DIFFERENCES COVERED IN THE USERS GUIDES FOR EACH PRODUCT.

(4) STANDARDS
GENERALLY CONFORMS TO THE DEC BASIC LANGUAGE STANDARD. DEC - STD - 150

(1)

BASIC-11

OPERATING SYSTEMS

(1) BASIC-11/RT-11, V2
RT-11, V3 OR LATER

(2) MU BASIC/RT-11, V1
RT-11, V2B OR V2C
RT-11, V3 - RUNTIME ONLY!

(3) BASIC-11/IAS-RSX, V2
IAS, V1.1 OR LATER
RSX-11D, V6B OR LATER
RSX-11M, V2 OR LATER

(4) MU BASIC-11/RT-11, V2
RT-11, V3 OR LATER

(2)

BASIC-11, V2

FEATURES

(1) BASIC-11/RT-11, V2 INCLUDES DOUBLE PRECISION AS AN OPTION. FORMAT IS 8 BYTES PER VARIABLE WHICH IS 15 PLACES OF DECIMAL ACCURACY.

(2) MU BASIC-11/RT-11, V2 WILL INCLUDE DOUBLE PRECISION ALSO.

(3) ALL VERSION 2 IMPLEMENTATIONS HAVE A ASSEMBLY LANGUAGE CALL INTERFACE WHICH IS THE SAME AS THAT FOR FORTRAN 4.

(4) ALL V2'S SHARE A COMMON LANGUAGE KERNAL WHICH IS A SUBSET OF BASIC+2. BASIC-11 PROGRAMS ARE THUS UPWARD SOURCE COMPATIBLE AT A LANGUAGE LEVEL.

③

FORTRAN IV V2

SMALL, FAST COMPILER

EXTENDED 1966 ANSI FORTRAN LANGUAGE

OPTIMIZES FOR SPEED AND SPACE

OPTIMIZED SUPPORT FOR ALL HARDWARE ARITHMETIC OPTIONS:

EAE, EIS, FIS. FPP

SUPPORTS STAND-ALONE PROGRAM EXECUTION

①

MU BASIC-11, V2

FEATURES

(1) SAME LANGUAGE KERNAL AS BASIC-11, V2. ONLY CHANGES WILL BE BUG FIXES.

(2) RUNS UNDER F/B MONITOR ONLY SINCE MULTI TERMINAL HANDLER IS REQUIRE BY MU, V2.

(3) RUNS IN FIRST 28K WORDS OF CORE ONLY. USER AREAS IN EXTENDED (XM) MEMORY SPACE WILL BE ALLOWED, BUT NOT MU ITSELF.

(4) WILL NOT BE TOTALLY COMPATIBLE WITH MU BASIC, V1. WE WILL INCLUDE A CONVERSION AID SIMILIAR TO THE ONE SUPPLIED WITH BASIC-11/ RT-11, V2.

④

V2 FEATURES

INLINE CODE GENERATION OPTION FOR EAE, EIS AND FIS HARDWARE

COMPILER OPTION FOR

THREADED CODE
EAE CODE
EIS CODE
FIS CODE

INLINE CODE GENERATED FOR:

ALL INTEGER ARITHMETIC

REAL ARITHMETIC FOR FIS

OTS ROUTINES FOR:

DOUBLE PRECISION ARITHMETIC

COMPLEX ARITHMETIC

REAL ARITHMETIC FOR EAE/EIS

②

VIRTUAL ARRAYS

STORED IN EXTENDED MEMORY (ABOVE 28K)

UP TO 32767 ELEMENTS IN EACH VIRTUAL ARRAY

TRANSPARENT USAGE - FEW RESTRICTIONS

DECLARED USING VIRTUAL STATEMENT INSTEAD OF DIMENSION STATEMENT

AVAILABLE WITH ALL RT-11 MONITORS:

SJ, FB AND XM

XM VERSION USES PLAS

SJ, FB VERSIONS DO NOT USE PLAS

(3)

OPTIMIZATIONS

COMPILE-TIME ARGUMENTS LIST GENERATION FOR INLINE CODE

OPERATOR STRENGTH REDUCTION FOR THE DO-LOOP INDEX:

INDEX * CONSTANT
ARRAY (INDEX)

INLINE CODE EXPANSIONS OF INTRINSIC FUNCTION:

MAXØ
MINØ
MOD
IABS
IDIM
ISIGN

(4)

OPEN/CLOSE FILE MANIPULATION STATEMENTS

LIST-DIRECTED I/O ("FREE FORMAT")

ALPHANUMERIC LITERALS IN EXPRESSIONS

SEPARATION OF CODE AND DATA FOR ROM/PROM APPLICATIONS

COMPILER CRASH DUMP ANALYSIS PHASE

IMPROVED COMPILER AND OTS DIAGNOSTICS

(5)

SPRS

REPORT

PAGE 1 OF 1

ERATING SYSTEM	VERSION	SYSTEM PROGRAM OR DOCUMENT TITLE	VERSION OR DOCUMENT PART NO.	DATE
RT-11 SJ	V03-02	Fortran Compiler	V02.04	1-mar-78

E EXAMPLE IN INSTRUCTIONS)

AME: Ed Egan

RM: BELL NORTHERN RESEARCH

DDRESS: P.O. BOX 3511 STATION C

OTTAWA ZIP: K1Y 4H7

UBMITTED BY: D.R.CUDDY PHONE: 596-6207

DEC OFFICE: Kanata

DO YOU HAVE SOURCES? NOPE YES ☐ NO ☐

REPORT TYPE
- ☒ SOFTWARE ERROR
- ☐ DOCUMENTATION ERROR
- ☐ INQUIRY
- ☐ FOR YOUR INFORMATION/SUGGESTION

PRIORITY
- ☐ LOW
- ☒ STANDARD
- ☐ HIGH

CAN THE PROBLEM BE REPRODUCED AT WILL? YES ☒ NO ☐

ATTACHMENTS: MAG TAPE ☐ FLOPPY DISKS ☐ LISTING ☒ DECTAPE ☐ OTHER

COULD THIS SPR HAVE BEEN PREVENTED BY BETTER OR MORE DOCUMENTATION? PLEASE EXPLAIN IN PROVIDED SPACE BELOW. YES ☐ NO ☐

PU TYPE	SERIAL NO.	MEMORY SIZE	DISTRIBUTION MEDIUM	SYSTEM DEVICE	DO NOT PUBLISH
11/40	923	32K	RK	RK	☐

PROBLEM : USE OF "ERR = s " CONSTRUCTION IN AS A KEYWORD IN OPEN STATEMENT CAUSES PROBLEMS.

DIAGNOSIS : SEE ATTACHED LISTINGS. IF AN "OPEN" STATEMENT CONTAINS ERR= in A SINGLE LINE STATEMENT, IT CAUSES A ******P (UNMATCHED PARENS) COMPILER ERROR.

IF THE OPEN STATEMENT IS CONTINUED ACROSS A LINE, THE ERR=s IN THE SECOND LINE CAUSES A COMPILER CRASH AND RESULTING ANALYSIS (attached).

CURE : DO NOT USE ERR=s CONSTRUCTION IN A OPEN STATEMENT UNTIL REPAIRED.

E.G. OPEN(UNIT=1,NAME='file',TYPE='OLD', causes compiler crash.
1 ASSOCIATEVARIABLE=n, ERR=99)

REPORT

PAGE 1 OF 1

OPERATING SYSTEM	VERSION	SYSTEM PROGRAM OR DOCUMENT TITLE	VERSION OR DOCUMENT PART NO.	DATE
RT11 SJ	V03	FORTRAN	User's Guide & Ref. Manual	7 Mar. '78

(SEE EXAMPLE IN INSTRUCTIONS)

NAME: Ed. Egan 7Z60
FIRM: Bell Northern
ADDRESS: P.O. Box 3511
Station C
OTTAWA, Ontario ZIP: K1Y 4H7

SUBMITTED BY: D. Cuddy PHONE: 596-6207

DEC OFFICE: Kanata

DO YOU HAVE SOURCES? YES ☐ NO ☒

REPORT TYPE
☐ SOFTWARE ERROR
☒ DOCUMENTATION ERROR
☐ INQUIRY
☐ FOR YOUR INFORMATION/SUGGESTION

PRIORITY
☐ LOW
☒ STANDARD
☐ HIGH

CAN THE PROBLEM BE REPRODUCED AT WILL? YES ☒ NO ☐

ATTACHMENTS
MAG TAPE ☐ FLOPPY DISKS ☐ LISTING ☐
DECTAPE ☐ OTHER

COULD THIS SPR HAVE BEEN PREVENTED BY BETTER OR MORE DOCUMENTATION? PLEASE EXPLAIN IN PROVIDED SPACE BELOW. YES ☒ NO ☐

CPU TYPE	SERIAL NO.	MEMORY SIZE	DISTRIBUTION MEDIUM	SYSTEM DEVICE	DO NOT PUBLISH
11/40	923	32K	RK	RK	☐

PROBLEM: Inconsistancy in documented restrictions in the FORTRAN LANGUAGE REFERENCE MANUAL (DEC - 11 - LFLRA - C - D) and the RT - 11 FORTRAN USER'S GUIDE (DEC - 11 - LRRUB -A-D) concerning the use of direct-access I/O.

Sections 5.5 and 5.8 of F.L.R.M. clearly state that a direct-access read or write cannot generate an end-of-file, and that the END = S transfer-of-control construction cannot be used.

This is directly contradicted by section 3.9.1 of F.U.G. which implys that END = S can be used to determine the length of the file.

In reality, a simple test program will demonstrate that an EOF condition is sensed when reading a direct-access file, and that the END = S construction can be used. When EOF is reached, an error condition is not generated (despite documentation to the contrary) and the ERR = S construction will not transfer on an end-of-file.

REPORT

FOR DEC USE ONLY

Page 1 of 1

SYSTEM PROGRAM AND VERSION (OR DOCUMENT)	MONITOR AND VERSION	DATE
FORTRAN V02.04	RT11 SJ V03	7 March, 1978

NAME: Ed Egan 7Z60
FIRM: Bell Northern Research
ADDRESS: P.O. Box 3511
Station C
OTTAWA, Ontario ZIP K1Y 4H7

SUBMITTED BY: D. Cuddy PHONE: 596-6206

LIST ATTACHMENTS: None

DEC OFFICE: Kanata

REPORT TYPE
☐ LOGIC/CODING ERROR
☐ DOCUMENTATION ERROR
☒ SUGGESTION
☐ INQUIRY
☐ FOR YOUR INFORMATION

PRIORITY
☐ LOW
☒ STANDARD
☐ HIGH

CAN THE PROBLEM BE REPRODUCED AT WILL? ☒ YES ☐ NO

CPU TYPE	SERIAL NO.	SYSTEM DEVICE	MEMORY SIZE	DISTRIBUTION MEDIUM
11/40	923	RK	32K	RK

WARNING TO USERS OF DIRECT-ACCESS I/O :

When defining a direct-access file with the DEFINE FILE statement, it is the user's responsibility to initialize the record counter variable (the associated variable as defined in 5.9.4 of the FORTRAN LANGUAGE REFERENCE MANUAL. This variable is not initialled by the DEFINE FILE statement and must be set to 1 before reading or writing the first record of the file.

As noted in another SPR submitted, the FIND statement generates faulty code, and cannot be used to set the associated variable.

This situation may also be true for the new OPEN statement; however, we have been unable to get this construction (OPEN (key - P, key = P ...)) to work at all, and hence have returned to the DEFINE FILE method.

REPORT | **FOR DEC USE ONLY** | *Page 1 of 1*

SYSTEM PROGRAM AND VERSION (OR DOCUMENT)	MONITOR AND VERSION	DATE
FORTRAN V02.04	RT11 SJ V03	7 March, 1978

NAME: E. Egan 7Z60
FIRM: Bell Northern Research
ADDRESS: P.O. Box 3511
Station C
OTTAWA, Ontario ZIP K1Y 4H7

DEC OFFICE: Ottawa

SUBMITTED BY: D. Cuddy
PHONE: 596-6206

LIST ATTACHMENTS: 3 sheets - pgm. listings

REPORT TYPE
- [X] LOGIC/CODING ERROR
- [ ] DOCUMENTATION ERROR
- [ ] SUGGESTION
- [ ] INQUIRY
- [ ] FOR YOUR INFORMATION

PRIORITY
- [ ] LOW
- [X] STANDARD
- [ ] HIGH

CAN THE PROBLEM BE REPRODUCED AT WILL?
- [X] YES
- [ ] NO

CPU TYPE	SERIAL NO.	SYSTEM DEVICE	MEMORY SIZE	DISTRIBUTION MEDIUM
11 - 40	923	RK	32K	RK

PROBLEM: Compiler generates faulty code for the FIND statement.

DIAGNOSIS: I have had great difficulty in performing direct-access functions on disc files. The attached short programs demonstrate erratic behaviour when attempting to open and then close such a file. Note the different results when: a) logical unit number (LUN)is explicitly given. b) LUN is set by assignment. c) LUN is set by DATA statement.
In all cases, the programs do not malfunction when the FIND statement is removed. This problem with the FIND was first observed in a user program where it caused a run-time error 63 (Illegal Instruction Trap). I was unable to duplicate this behaviour in a small test program, but instead uncovered these other three results.

CURE: Do not use FIND statement until problem patched.

SYSTEM INFO: Distributed SJ Monitor.
: Default Compiler with: inline code
: EIS
: Speed Optimized

: USR NOSWAP

RT-11 Binary Program Update Service Questionnaire

Name _____

Corporation _____

Corporate Address _____

_____

_____

How long have you used RT-11? _____

_____

_____

What version are you currently running? _____

Have you received any information regarding the RT-11 Binary Program Update Service? _____

_____

Did you receive information by direct mail? _____

_____

Did you receive information from your sales representative? _____

_____

_____

Are you currently subscribing to the service? _____

If you are subscribing, do you have any comments/suggestions for improvements? _____

_____

_____

_____

If you have not subscribed, would you please explain why? _____

_____

_____

_____

Would you consider subscribing to the service if your suggestions were incorporated? _____

_____

_____

☐ Please check this box if you would like to receive information on RT-11 Binary Program Update Service.

Thank you for responding to our questionnaire. Our hope is that we can improve the RT-11 Binary Program Update Service with your inputs.

FIRST CLASS
PERMIT NO. 33
MAYNARD, MASS.

BUSINESS REPLY MAIL
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

Postage will be paid by:

Digital Equipment Corporation
Software Maintenance Services
129 Parker Street, PK3-2/556
Maynard, MA 01754
Attn: Sandy Dickinson

MOVING OR REPLACING A DELEGATE?

Please notify us immediately to guarantee continuing receipt of DECUS literature. Allow up to six weeks for change to take effect.

( ) Change of Address
( ) Delegate Replacement

DECUS Membership No.: _____

Name: _____

Company: _____

Address: _____

_____

State/Country: _____

Zip/Postal Code: _____

Mail to: DECUS - ATT: Membership
129 Parker Street
Maynard, Massachusetts 01754 USA

Affix mailing label here. If label is not available, print old address here. Include name of installation, company, university, etc.

DECUS

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