THE mini• tasker

DECUS
RT-11 SIG NEWSLETTER

JULY 1976 VOL. 2 NO. 2

Contributions to the newsletter should be sent to:

John T. Rasted
CAM Systems, Inc.
17 Brown Street
Waterbury, Conn. 06702

All other corespondence should be sent to the SIG chairman:

Tom Provost
MIT/LNS Bates Linear Accelerator
P.O. Box 95
Middleton, Mass. 01949

FROM THE CHAIRMAN

1976 SPRING DECUS SYMPOSIUM AT ATLANTA

THE ATLANTA MEETING INCLUDED MANY SESSIONS OF INTEREST TO RT-11 USERS. I WILL ATTEMPT TO REPORT IN THIS ARTICLE AND IN THE NEXT ISSUE ON THOSE I WAS ABLE TO ATTEND. I ENCOURAGE OTHER ATTENDEES TO REPORT ON SESSIONS I WAS UNABLE TO ATTEND.

RT-11 PRODUCT PANEL

THIS SESSION WAS RECORDED, SO A FULL REPORT WILL BE DELAYED UNTIL THE TRANSCRIPT BECOMES AVAILABLE. PLANS FOR VERSION 3 WERE ANNOUNCED AS WELL AS FUTURE SOFTWARE MAINTENANCE POLICY.

RSX-11M MACRO WILL BE MOVED TO RT-11. THIS WILL ELIMINATE THE NEED FOR ASSEMBLE AND EXPAND, AND ENABLE PSECTS AND GLOBAL ARITHMETIC.

EXTRACTION OF A MODULE FROM THE LIBRARY WILL BE MADE POSSIBLE.

THE LINKER WILL NOT RECEIVE A NEW STRUCTURE.

A DISK UTILITY PROGRAM WILL BE ADDED TO HANDLE DIRECTORY INITIALIZATION AND OTHER FUNCTIONS NOW HANDLED BY PIP.

THE ? FEATURE WILL BE ADDED TO PIP.

TECO WILL NOT BE SUPPORTED IN VERSION 3.

THE MT HANDLER WILL BE SPLIT INTO A FILES HANDLER AND A

HARDWARE-MODE HANDLER.

MEMORY MANAGEMENT WILL BE SUPPORTED VIA 18 BIT ADDRESSING FOR HANDLERS AND PLAS (PROGRAM LOGICAL ADDRESS SPACE) AS IN RSX-11M.

THESE CHANGES WILL BE IMPLEMENTED VIA SYSGEN OPTION OR OPTIONAL MODULES, SO SMALL USERS WILL NOT BE IMPACTED.

THERE WAS CONSIDERABLE DISCUSSION OF THE FUTURE MAINTENANCE POLICY.

VERSION 3 SHOULD BE AVAILABLE IN MARCH.

A MORE DETAILED ACCOUNT WILL BE GIVEN NEXT ISSUE, WHEN THE TRANSCRIPT OF THE RECORDINGS WILL BE AVAILABLE.

DOCUMENTATION WORKSHOP

IN ADVANCE OF THE DOCUMENTATION WORKSHOP, FRED MAGEE (RT-11 SIG DOCUMENTATION COMMITTEE CHAIRMAN) AND I MET WITH ARMEN VARTORESSIAN TO DISCUS DOCUMENTATION NEEDS.

THIS SESSION WAS ALSO RECORDED, AND A MORE DETAILED ACCOUNT WILL BE GIVEN IN A FUTURE ISSUE OF THE MINITASKER.

THE V02C SYSTEM REFERENCE MANUAL WILL BE DIVIDED INTO A SYSTEM USER'S GUIDE AND AN ADVANCED PROGRAMMER'S GUIDE. A MASTER INDEX AND INTRODUCTION TO RT-11 WILL BE ADDED.

USERS VOLUNTEERED THEIR IN-HOUSE INTRODUCTORY DOCUMENTATION TO GIVE THE WRITERS SOME INDICATION OF WHAT IS NEEDED IN THAT AREA. IF YOU HAVE SUCH DOCUMENTATION, PLEASE SEND IT TO ME FOR FORWARDING TO DEC.

RT-11 SIG

THE RT-11 SIG MEETING FOCUSED ON THE DECUS LIBRARY AND LOCAL USER GROUPS (LUGS). GREGG CHURCH OF THE WASHINGTON D.C. LUG REPORTED ON HIS EXPERIENCE IN HELPING TO FORM THE LUG, AND ON WHAT BENEFITS HE RECEIVES FOR HIS PARTICIPATION. EXCHANGE OF HARDWARE AND SOFTWARE EXPERTISE, MAINTENANCE OF A LOCAL LIBRARY, MEDIA EXCHANGE, AND FAMILIARIIZATION WITH THE APPLICATIONS OF THE OTHER USERS WERE CONSIDERED MOST IMPORTANT. THE INTERFACE WITH DIGITAL IS OF GREAT VALUE, BUT MUST NOT BE ALLOWED TO DEGENERATE INTO A GRIPE SESSION.

OF THE 2500 KNOWN INSTALLATIONS, ONLY 700 ARE ON THE SIG MAILING LIST. IF YOU DO NOT RECEIVE THIS NEWSLETTER, PLEASE FILL OUT A SIG MEMBERSHIP APPLICATION FORM, EVEN IF YOU HAVE ALREADY DONE SO.

SINCE MANY RT-11 INSTALLATIONS ARE SMALL, THEY CANNONT AFFORD TO ATTEND THE SYMPOSIUM. LOCAL USER GROUPS ARE ESSENTIAL TO THESE INSTALLATIONS. SEVERAL ATTENDEES VOLUNTEERED TO HELP ORGANIZE LUGS IN THEIR AREAS. A LIST OF ALL KNOWN LUG CONTACTS WILL BE PUBLISHED IN THIS ISSUE. IF THERE IS NO GROUP IN YOUR AREA AND YOU ARE WILLING TO HELP START ONE, WE WILL ADD YOUR NAME TO THE LIST.

DAVE SYKES, OUR REPRESENTATIVE TO THE DECUS LIBRARY COMMITTEE, REPORTED ON THE STATE OF THE LIBRARY, AS REGARDS LIMITATIONS IN MEDIA AVAILABILITY AND LACK OF RT-11 PROGRAMS. IT WAS DECIDED TO USE LUG LOCAL LIBRARIES TO SHAKE DOWN USER PROGRAMS, PROVIDE MEDIA EXCHANGE FOR LUG MEMBERS, AND DEVELOP TECHNIQUES SUCH AS MACHINE READABLE DOCUMENTATION AND STANDARDS. IN THIS WAY, WE HOPE TO HELP THE LIBRARY IN MAYNARD TO BECOME MORE RESPONSIVE TO THE NEEDS OF THE USERS.

MEETING OF SIG CHAIRMEN AND DEC SOFTWARE ENGINEERING MANAGEMENT

THE MAIN ISSUE AT THIS MEETING WAS THE NEED FOR INCREASED COMMUNICATION BETWEEN DIGITAL MANAGEMENT AND SIG LEADERSHIP. THE SIG CHAIRMEN ALSO REQUESTED INCREASED FINANCIAL SUBSIDIZATION OF THE DECUS LIBRARY BY THE PRODUCT LINES, MORE HARDWARE FOR DEMONSTRATION IN THE EQUIPMENT AREA AT THE SYMPOSIUM, AND SOME CONFIGURATION AT THE SUMPOSIUM CAPABLE OF DOING MEDIA TRANSFER TO EXPEDITE USER EXCHANGE OF SOFTWARE.

LUG CONTACTS

CHICAGO	SAM C. BIBLER FERMI NATIONAL ACCELERATOR P. O. BOX 500 BATAVIA, ILL 60510
WASHINGTON, D.C.	WILLIAM H. TALBOT, PHD. ASSOCIATE PROFESSOR OF PHYSIOLOGY THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE 725 N. WOLFE ST. BALTIMORE, MD 21205
SOUTHERN CALIFORNIA	BOB ROESSLER (SCURT) UCI-CCM 144 MSR1 IRVINE, CA 92664
FLORIDA	PATRICK E. PERROT PELCOR 1607 FORSYTH RD. ORLANDO, FLA 32807 (305) 275-1132
NEW ENGLAND	ERIC MORTON PRELCO CORP. 170 LINCOLN LOWELL, MA 01851 (617) 458-8763
ROCHESTER, N.Y.	ROBERT C. GROSS KODAK KODAK PARK ROCHESTER, N.Y. 14650

DENVER, COLORADO	EL (ED) SARTORE MARATHON OIL CO. 7400 S. BROADWAY LITTLETON, COL 80122 (303) 794-2601
	LYNN O. NEWMAN 850 HOLLAND LAKEWOOD, COL 80215
CHARLOTTE, N.C.	CHARLES M. MUSCAT UNC-CHARLOTTE COMP. LAB. COMPUTER GRPH.
	UNCC STATION CHARLOTTE, N.C. 28223 (704) 596-2175
OHIO	G. WILLIAM FLEMING MONSANTO ADDYSTON, OHIO 45001 (513) 941-2400
	JOHN O. AMOSS OHIO STATE UNIV. COLUMBUS, OHIO 43210 (614) 421-6940 EXT 2060

INSTALLATIONS

California Cooperative Creamery
P.O. Box 871
Petaluma, California 94952

Contact: Lou Mills

The Creamery's RT-11 system consists of the following:

PDP-11/10

16K words of core memory

KW11-L line time clock

DR11-K general device interface

DL11-C asynch serial line interface

LA36 Decwriter II

RX11 dual floppy disk unit

PC11 paper tape reader/punch

The DR11-K interfaces an Infra-Red Milk Analyzer (IRMA) to the 11/10. The IRMA provides 16 bits of parallel data to the DR11-K. The DR11-K is bit interruptable via the first 3 high-order bits, and the resulting data is a datum component id and value. IRMA tests milk samples for their milkfat, protein and lactose percentages.

The DL11-C is interfaced to an INFORMER video display terminal (model D301) for the IRMA data displays at 2400 Baud.

We are using RT-11 version 2 with MACRO-11 and BASIC.

The Creamery also has an IBM 370/115 for batch commercial processing.

DEC

PERFORMANCE IMPROVEMENT IN LINKER

PROBLEM: Speed performance of the linker.

DISPOSITION: An enhancement was made to the linker involving the execution time when linking with libraries. The most dramatic change in linking time is noticed when using a slower CPU (e.g., 11/05 or 11/10). The following patch is to LINK V04-04 (RT-11 V02C).

```
.R PATCH <CR>

PATCH V01-02

FILE NAME--
*LINK.SAV <CR>
*616/   1043    1077<CR>
*E
.R PATCH <CR>

PATCH V01-02
```

```
FILE NAME--
*LINK.SAV/O <CR>

?BOTTOM ADDR WRONG?
*500;B
*3242/   12700    105767 <LF>
3244/    1636     176531 <LF>
3246/    10146    1404 <LF>
3250/    10003    167 <LF>
3252/    12702    6040 <LF>
3254/    10       62704 <LF>
3256/    112420   10 <LF>
3260/    105767   11400 <LF>
3262/    176513   1416 <LF>
3264/    1412     21100 <LF>
3266/    20405    1372 <LF>
3270/    103410   26164 <LF>
3272/    10046    2 <LF>
3274/    105067   2 <LF>
3276/    176475   1366 <LF>
3300/    4767     12703 <LF>
3302/    1054     1636 <LF>
3304/    12600    10300 <LF>
3306/    105167   12420 <LF>
3310/    176463   12420 <LF>
3312/    5302     12420 <LF>
3314/    1360     12420 <LF>
3316/    10300    207 <LF>
3320/    5202     261 <LF>
3322/    22123    207 <CR>
*7210;0R
*2:0,2104/        XXX      12702 <LF>
2:0,2106/         XXX      4 <LF>
2:0,2110/         XXX      12703 <LF>
2:0,2112/         XXX      1636 <LF>
2:0,2114/         XXX      5714 <LF>
2:0,2116/         XXX      1424 <LF>
2:0,2120/         XXX      20405 <LF>
2:0,2122/         XXX      103406 <LF>
2:0,2124/         XXX      105067 <LF>
2:0,2126/         XXX      170435 <LF>
2:0,2130/         XXX      4767 <LF>
2:0,2132/         XXX      173014 <LF>
2:0,2134/         XXX      105167 <LF>
2:0,2136/         XXX      170425 <LF>
2:0,2140/         XXX      12423 <LF>
2:0,2142/         XXX      5302 <LF>
2:0,2144/         XXX      1365 <LF>
2:0,2146/         XXX      12703 <LF>
2:0,2150/         XXX      1636 <LF>
```

```
2:0,2152/       XXX     21113 <LF>
2:0,2154/       XXX     1353 <LF>
2:0,2156/       XXX     26163 <LF>
2:0,2160/       XXX     2 <LF>
2:0,2162/       XXX     2 <LF>
2:0,2164/       XXX     1347 <LF>
2:0,2166/       XXX     207 <LF>
2:0,2170/       XXX     261 <LF>
2:0,2172/       XXX     207 <CR>
*7216;0R
*4:0,24\        40      101 <CR>
```

The new LINK version will be LINK V04-04A.

Note: The ?BOTOM ADDR WRONG? error is produced for the following reason. Patch expects LINK to be loaded at location 1000 (default), but is actually loaded starting in location 500. LINK's true base address must be set to its actual value (500;R).

SPRS

SYSTEM PROGRAM AND VERSION (OR DOCUMENT)	MONITOR AND VERSION	DATE
MU BASIC/RT-11 V01-01	RT-11 SJ V2C	11-MAY-76

NAME: HAROLD R. BERGESON
FIRM: U.S. BUSINESS SUPPLY CORP.
ADDRESS: 151 SUNNYSIDE BLVD
PLAINVIEW, NY 11803
ZIP

SUBMITTED BY: HAL BERGESON PHONE: 516-822-6108

LIST ATTACHMENTS

DEC OFFICE: LONG ISLAND

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
11/05	210068	RK11	32KB	RK

PROBLEM:

THERE IS NO WAY FOR A PROGRAM TO SUSPEND OPERATION(SLEEP) FOR A SHORT PERIOD OF TIME.

SOLUTIONS:

1) IMPLEMENT "SLEEP" SYS CALL

2) USE A CALL TO AN ASSEMBLY SUBROUTINE

INQUIRY:

DOES DIGITAL HAVE ANY PLANS FOR (A) AND HOW SOULD (B) BE IMPLEMENTED.

SPR # 30283

SYSTEM PROGRAM AND VERSION (OR DOCUMENT)	MONITOR AND VERSION	DATE
EDITOR V02-12	RT-11 V02C-02	26-APR-76

NAME: Dr. C.D.Lowenstein
FIRM: Marine Physical Laboratory
University of California, San Diego
ADDRESS:
MPL BLDG. 106
Naval Undersea Center
San Diego, Ca. ZIP 92132

SUBMITTED BY: William B. Fincke PHONE: (714)-452-2310

LIST ATTACHMENTS: NONE

DEC OFFICE: San Diego

REPORT TYPE
- [X] ~~LOGIC/CODING ERROR~~
- [ ] DOCUMENTATION ERROR
- [X] 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	8451	RK05	28K	RK05

PROBLEM: The editor fails to trap directory I/O errors, causing the monitor to abort the job if the user tries to perform an Edit Write to an off-line or write-locked device, or an Edit Read from an off-line device. This of course can cause the entire editing session to be lost due to a small oversight.

DIAGNOSIS: The editor does not invoke the .SERR programmed request to prevent the monitor from aborting the job on encountering a directory I/O error or directory-full condition.

CURE: Allow the editor to trap directory I/O errors. The simple modification of inserting a .SERR in the code will do this. This has been done at this installation and has caused no problems, except for the fact that the monitor does not reset the soft/hard error flip-flop in the job impure area on program exit. (see SPR #30284)

SYSTEM PROGRAM AND VERSION (OR DOCUMENT)	MONITOR AND VERSION	DATE
MONITOR	RT-11 V02C-02	26-APR-76

NAME: Dr. C.D.Lowenstein
FIRM: Marine Physical Laboratory
University of California, San Diego
ADDRESS:
MPL BLDG. 106
Naval Undersea Center
San Diego, Ca. ZIP 92132

SUBMITTED BY: William B. Fincke PHONE: (714)-452-2310

LIST ATTACHMENTS: Program listing & printout

DEC OFFICE: San Diego

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	8451	RK05	28K	RK05

PROBLEM: RT-11 System Reference Manual DEC-11-ORUGA-C-D states on page 9-59 that R0 is set to 0 on return from a non-file structured .LOOKUP. This is in fact not the case. .LOOKUP returns the address of the DEVBLK in R0 after ~~following~~ a non-file structured .LOOKUP.

The attatched program listing and printout demonstrate the above problem.

```
 R MACRO
*LOKTST,TT:=LOKTST



.MAIN.  RT-11 MACRO VM02-12   23-APR-76 17:20:12 PAGE 1


1                       ;       PROGRAM LOKTST
2                       ;
3                       ;       A SHORT TEST PROGRAM TO SEE WHAT LOOKUP RETURNS IN R0
4                       ;
5                               .MCALL  ..V2..,.REGDEF,.PRINT,.CSISPC,.LOOKUP
6                               .MCALL  .TTYOUT,.CLOSE
7  000000                       .REGDEF
8  000000                       ..V2..
9  000000               START:  .PRINT  #DEVMSG                 ;PROMPT USER
10 00006                        .CSISPC #OUTSPC,#DEFEXT,#0      ;INPUT FROM TT:
11 00024 103004                 BCC     1$                      ;CHECK FOR .CSI ERRORS
12 00026                        .PRINT  #HUHMSG
13 00034 000761                 BR      START
14 00036               1$:      .LOOKUP #AREA,#0,#INSPC         ;LOOKUP 1ST INPUT FILE
15 00066 010002                 MOV     R0,R2                   ;SAVE RETURN R0
16 00070 103007                 BCC     2$                      ;NO C-BIT => NO ERROR
17 00072 113701                 MOVB    @#52,R1                 ;FETCH ERROR BYTE
           000052
1  00076                        .PRINT  #ERRMSG
19 00104 004767                 JSR     PC,OCTPRT               ;REPORT ERROR
           000030
20 00110 010201        2$:      MOV     R2,R1                   ;FETCH SAVED R0
21 00112                        .PRINT  #R0MSG                  ;REPORT IT
22 00120 004767                 JSR     PC,OCTPRT
           000014
23 00124                        .CLOSE  #0
24 00136 000720                 BR      START
25                      ;
26                      ;       BINARY TO OCTAL PRINTER
27                      ;
28 00140 112700        OCTPRT:  MOVB    #30,R0                 ;FIRST DIGIT IS SIGN BIT
           000030
29 00144 000261                 SEC
30 00146 006101        1$:      ROL     R1
31 00150 106100                 ROLB    R0
32 00152                        .TTYOUT                         ;PRINT IT
33 00156 112700                 MOVB    #206,R0                 ;LOAD SEED FOR OCTAL DIG
IT
           000206
34 00162 006301        2$:      ASL     R1                      ;GET NEXT BIT
35 00164 001403                 BEQ     OUT                     ;ALL DONE IF 0
36 00166 106100                 ROLB    R0                      ;BUILD THE DIGIT
37 00170 103774                 BCS     2$                      ;MORE TO COME
38 00172 000765                 BR      1$                      ;NEXT DIGIT, IF ANY
39 00174               OUT:     .PRINT  #CRLF                   ;APPEND <CR><LF>
40 00202 000207                 RTS     PC
41                      ;                       (9)
42                      ;       BUFFERS AND THINGS
43                      ;
44                               NLIST  BEX
```

```
45 00204     015 DEVMSG: .ASCII  <15><12>/DEVICE:/<200>
46 00216     114 ERRMSG: .ASCII  /LOOKUP ERROR= /<200>
47 00235     114 R0MSG:  .ASCII  /LOOKUP RETURNED R0= /<200>
48 00262     110 HUHMSG: .ASCIZ  /HUH?/
49 00267     000 CRLF:   .BYTE   0
50                       .EVEN
51 00270         AREA:   .BLKW   3
52 00276         OUTSPC: .BLKW   15.



.MAIN.  RT-11 MACRO VM02-12   23-APR-76 17:20:12 PAGE 1+


53 00334         INSPC:  .BLKW   24.
54 00414 000000  DEFEXT: .WORD   0,0,0,0
55                       .NLIST  SYM
56       000000'         .END    START
ERRORS DETECTED: 0
FREE CORE: 15549. WORDS

LOKTST,TT:=LOKTST

ERRORS DETECTED: 0
FREE CORE: 15549. WORDS

*^C

.R LINK
*LOKTST=LOKTST


*^C

.R LOKTST

DEVICE:*RK:LOKTST.MAC
LOOKUP RETURNED R0= 000003

DEVICE:*LOKTST.SAV
LOOKUP RETURNED R0= 000002

DEVICE:*LOKTST.XXX
LOOKUP ERROR= 000001
LOOKUP RETURNED R0= 001334

DEVICE:*RK:
LOOKUP RETURNED R0= 001334

DEVICE:*TT:
LOOKUP RETURNED R0= 001334

DEVICE:*^C
```

OK

OK

FILE DOES NOT EXIST, OK

NON-FILE STRUCTURED LOOKUP RETURNS ADDRESS OF DEVBLK, NOT 0 AS ADVERTISED.

SEE BACK FOR DIRECTIONS

PLEASE TYPE

30289

Digital

SOFTWARE PERFORMANCE REPORT

FIELD #:	SPR #:
FOR DEC USE ONLY	

Page 1 of 1

SYSTEM PROGRAM AND VERSION (OR DOCUMENT)	MONITOR AND VERSION	DATE
FORTRAN V01C	RT-11 V026-02	27-APR-76

NAME: Dr. C.D. Lowenstein
FIRM: Marine Physical Laboratory
University of California, San Diego
ADDRESS:
MPL Bldg. 106
Naval Undersea Center
San Diego, Ca. ZIP 92132
SUBMITTED BY: PHONE:
William B. Fincke (714)-452-2310

DEC OFFICE: San Diego

LIST ATTACHMENTS: Program listing and printouts

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	8451	RK05	28K	RK05

PROBLEM: Different versions of the FORTRAN OTS (NHD,EIS,FIS,&EAE were tested) handle the problem of converting the real number -32768. to integer form in an inconsistent manner. As the attached program IRTEST and its output show, NHD reports integer overflow and aborts the conversion, EIS & FIS perform the conversion without complaining, and EAE gets the wrong answer.

DIAGNOSIS:
a) Different programmers have different ideas about how to do things.
b) The module $IR in the EAE version fails to take into account the fact that normalizing the numbers 100000(8) and 140000(8) gives the same result in the normalize shift count register (a special case for the EAE).

CURE:
a) For the EAE problem, the source code obviously must be fixed.
b) For the general problem of inconsistency in the treatment of the integer -32768, I recommend that it be allowed as a valid integer, since some users may want to manipulate 16-bit unsigned integers in FORTRAN. (I do.)

(11)

SOFTWARE COMMUNICATIONS USE ONLY

DO NOT | DATE RECEIVED | BACK FROM MAINTAINER | LOGGED ON

```
*R FORTRA
?ILL CMD?
*^C

.R FORTRA
*IRTEST,TT:=IRTEST/L:1

FORTRAN IV     V01C-03A   TUE 27-APR-76 15:55:15          PAGE 001

0001          PROGRAM IRTEST
      C
      C     FLOAT ALL INTEGERS, FIX THEM, AND COMPARE RESULTS
      C
0002          CALL SETERR(1,0)
0003          TYPE 100              !SIGN ON
0004          DO 10 I=32767,-32767,-1      !DO ALL NORMAL INTEGERS IN LOOP
0005    10     CALL ICHECK(I)
0006          CALL ICHECK(I)                !I COMES OUT OF LOOP = -32768
0007          STOP
0008    100   FORMAT (' IRTEST - TEST INTEGER TO REAL CONVERSIONS')
0009          END

FORTRAN IV     V01C-03A   TUE 27-APR-76 15:55:36          PAGE 001

0001          SUBROUTINE ICHECK(I)
0002          R = I                 !FLOAT IT
0003          J = R                 !FIX IT AGAIN
0004          IF (J .NE. I) TYPE 100,I,I,R,J      !REPORT ERRORS
0006          RETURN
0007    100   FORMAT (X,I,O,' FLOAT-> ',F,' IFIX-> ',,O)
0008          END
*^C

.R LINK
*IRTEST.NHD=IRTEST,FORLIB.NHD

*IRTEST.EIS=IRTEST.\.\,FORLIB.EIS

*IRTEST.FIS=IRTEST,FORLIB.FIS

*IRTEST.EAE=IRTEST,FORLIB.EAE/L/I

LIBRARY SEARCH:
$SIMRT
$8K
```

← NOTE .LDA FILE FOR EAE. WILL PUNCH PAPER TAPE & TRANSPORT TO STANDALONE SYSTEM

(12)

```
*^C

.NOW RUN THE TESTS FOR NHD, EIS, & FIS.  EAE WILL BE RUN ON STANDALONE SYSTEM

R IRTEST.NHD

IRTEST - TEST INTEGER TO REAL CONVERSIONS
?ERR 1 INTEGER OVERFLOW
IN   ROUTINE "ICHECK"  LINE 3


 -32768 100000 FLOAT->  -32768.0000000 IFIX->       0
STOP --

.R IRTEST.EIS

IRTEST - TEST INTEGER TO REAL CONVERSIONS
STOP --

.R IORTEST^U
R IRTEST.FIS

IRTEST - TEST INTEGER TO REAL CONVERSIONS
```

NOTE OVERFLOW FROM 'J=R' STATEME

NOTE NO OVERFLOW

EAE RUNNING IRTEST.LDA

```
IRTEST - TEST INTEGER TO REAL CONVERSIONS
 -32768 100000 FLOAT->  -16384.0000000 IFIX->  140000


****** STOP
```

NOTE NO OVERFLOW, INCORRECT CONVERSION FROM INTEGER -32768 TO REAL -16384.

CONVERTING BACK TO INTEGER GIVES 140000_8

$IR CONVERSION MODULE (13) CAN'T TELL DIFFERENCE BETWEEN 100000 AND 140000 (EAE VERSION)

SEE BACK FOR DIRECTIONS

PLEASE TYPE

30284

digital

SOFTWARE PERFORMANCE REPORT

FIELD #: | SPR #:

FOR DEC USE ONLY

Page 1 of 1

SYSTEM PROGRAM AND VERSION (OR DOCUMENT)	MONITOR AND VERSION	DATE
MONITOR	RT-11 V02C-02	26-APR-76

NAME: Dr. C.D.Lowenstein
FIRM: Marine Physical Laboratory
University of California, San Diego
ADDRESS:
MPL BLDG. 106
Naval Undersea Center
San Diego, Ca. ZIP 92132
SUBMITTED BY: PHONE:
William B. Fincke (714)-452-2310

DEC OFFICE: San Diego

LIST ATTACHMENTS: Program listing and printout

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	8451	RK05	28K	RK05

Problem: The .SERR programmed request sets the backgound into the soft error condition permanently, even when the program exits. This condition exists until a program performs a .HERR request. This would not seem to be the intention of the system designers.

Diagnosis: The soft/hard error flip/flop is not reset to the default contition between background jobs.

The attatched program listing and printout demonstrate the problem. (see SPR #30283 for listing of LOKTST program.)

```
R MACRO
*SERR,TT:=SERR
```

```
.MAIN.  RT-11 MACRO VM02-12   26-APR-76 09:01:45 PAGE 1

                        ;       PROGRAM SERR
                        ;
                        ;       PROGRAM DOES .SERR AND THEN EXITS
                        ;
                                .MCALL  .SERR,.EXIT,..V2..
000000                          ..V2..
000000                  START:  .SERR
000006                          .EXIT
        000000'                 .END    START
```

(14)

SOFTWARE COMMUNICATIONS USE ONLY

```
.MAIN.  RT-11 MACRO VM02-12   26-APR-76 09:01:45 PAGE 1+
SYMBOL TABLE

START   000000R          ...V2 = 000001
  ABS.  000000      000
        000010      001
ERRORS DETECTED: 0
FREE CORE: 16053. WORDS

SERR,TT:=SERR

ERRORS DETECTED: 0
FREE CORE: 16053. WORDS

*^C

.R LINK
*SERR=SERR


*^C

.R  LOKTST

DEVICE:*RK:
LOOKUP RETURNED R0= 001334

DEVICE:*TT:
LOOKUP RETURNED R0= 001334

D  ICE:*RF:

?M-NO DEV 001066

.R SERR

  .R LOKTST

  DEVICE:*RK:
  LOOKUP RETURNED R0= 001334

  DEVICE:*TT:
  LOOKUP RETURNED R0= 001334

  DEVICE:*RF:
  LOOKUP ERROR= 177776
  LOOKUP RETURNED R0= 001334

  DEVICE:*LP:
  LOOKUP ERROR= 177776
  LOOKUP RETURNED R0= 001334

  DEVICE:*RP:
  LOOKUP ERROR= 177776
  LOOKUP RETURNED R0= 001334

  DEVICE:*RQ:
  LOOKUP ERROR= 177776
  LOOKUP RETURNED R0= 001334

  DEVICE:*^C
```

← MONITOR TRAPS ERROR FROM .LOOKUP WITH NO .FETCH

DOES .SERR, EXITS

(1)

MONITOR NO LONGER TRAPS HARD ERRORS, WHICH IT SHOULD. LOKTST DOES NOT DO .SERR, SO DEFAULT SHOULD BE .HERR.

(15)

SOFTWARE PERFORMANCE REPORT

FIELD #: | SPR #:
FOR DEC USE ONLY

41894

Page 1 of 1

SYSTEM PROGRAM AND VERSION (OR DOCUMENT)	MONITOR AND VERSION	DATE
EDIT V02-12	RT11 V02C	17-MAR-76

NAME: Philip W Herman Jr
FIRM: RLE/MIT
ADDRESS: Rm 36-796
Cambridge, Mass
ZIP 02139

SUBMITTED BY: Philip W. Herman Jr PHONE: 253-2554

LIST ATTACHMENTS

DEC OFFICE

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

PRIORITY
- [ ] LOW
- [ ] STANDARD
- [x] HIGH

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

CPU TYPE	SERIAL NO.	SYSTEM DEVICE	MEMORY SIZE	DISTRIBUTION MEDIUM
11/45	5119	RK-11D	32K	RK-05

EDIT, when reading in a file which is exactly "n" blocks long, loses the ~~first~~ last character of the file.

The following set of commands will produce the error:

```
.R EDIT
*511<IX$>$IY$V$$
{EDIT produces a string 511 X's followed by one Y}
*NEWTEMP$EX$$
.RE
*ERTEMP$R$L$$
{EDIT produces a string of 511 X's, but no Y!}
```

(16)

SOFTWARE COMMUNICATIONS USE ONLY

DO NOT PUBLISH ☐	DATE RECEIVED	BACK FROM MAINTAINER	LOGGED ON
	TO MAINTAINER	DATE CLOSED	LOGGED OFF

DECUS

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