RT-11

November 1981

AD-C740C-20

THE SOFTWARE DISPATCH

digital

RT-11 SOFTWARE DISPATCH

Published by
Corporate Administrative Systems Group, Software Services
Digital Equipment Corporation
P.O. Box F
Maynard, MA 01754

The RT-11 Software Dispatch complements the RT-11 Software Dispatch Review. New and revised Software Product Descriptions, programming notes, software problems and solutions, and documentation corrections are published here. Much of the material is developed from Software Performance Report (SPR) answers significant to the general audience and is printed here to supplement the maintenance notebook (established by the Software Dispatch Review).

PRODUCTS SUPPORTED in the RT-11 SOFTWARE DISPATCH

BASIC-11/RT-11 V2
CTS-300 V6
DECnet-RT V1.1
FMS-11/RT-11 V1.1
FORTRAN GRAPHICS PACKAGE V1.1
FORTRAN/RT-11 LAB Extensions V1
FORTRAN IV/RT-11 V2.5
GAMMA-11 F/B V3
LSP-11 V1.1
MSB11 V1
MSB/FORTRAN IV V1
MU BASIC-11/RT-11 V2
PLOT 11/RT-11 V1.1
RT-11 V4
RT-11 2780/3780 Protocol Emulator V4
SSP-11 V1.2

DISTRIBUTION

The RT-11 Software Dispatch is directed to one software contact for each software product. No mailing will be made to addresses without a software contact name. **Address change requests should be sent to the nearest DIGITAL field office. Include the new address and mailing label from the most recently received publication.**

Software binary and sources are provided under licenses only. The standard Terms and Conditions, OEM Agreement, and/or Quantity Discount Agreement contain the licenses for all binaries other than DECsystem-10.

Eleanor F. Hunter, Editor
Ann Owens, Associate Editor

TABLE OF CONTENTS

SPR USER LETTER

Submitted by Sheila Hatchell, 8/11 Administration

How to Make the Best Use of the SPR Form

What We Can Do for You:

1. Blank SPR forms are returned with each SPR acknowledgement and are available upon request in the desired quantities through the SPR Administration (P.O. Box F) and your local office/SPR Center.

2. Copies of the SPR acknowledgement and answer are sent to the appropriate DIGITAL Office/SPR Center for their information.

3. STATUS FOR SUBMITTED SPRs IS PROVIDED UPON REQUEST.

4. SPRs marked PROBLEM/ERROR will have a response for DIGITAL SUPPORTED products. These SPRs should refer to suspected deficiencies in the software.

5. SPRs marked SUGGESTION are forwarded to the pertinent software group for information purposes, and are responded to at their discretion.

What You Can Do for Us:

1. Fill out the form completely either by typing or printing clearly. **PLEASE INCLUDE YOUR SOFTWARE SERVICE CUSTOMER NUMBER IN THE ADDRESS BOX.**

2. Limit only one problem per SPR form. Several problems on an SPR can lengthen the turnaround time.

3. WHENEVER POSSIBLE, SUBMIT AN SPR WITH ATTACHMENTS, SUCH AS MACHINE READABLE DATA, DETAILED INSTRUCTIONS ON HOW TO REPRODUCE THE PROBLEM, PROGRAM AND/OR DATA FILES, LISTINGS, AND CONSOLE LOG.

4. It would be helpful to all concerned if problems with patches are reported as soon as possible.

5. For security SPRs, it is imperative that the DO NOT PUBLISH box be marked.

6. It would be helpful if tapes submitted with SPRs are labeled (track and density), and have a directory attached.

7. Complete the questionnaire that is supplied with each SPR answer. Your feedback is essential in monitoring the quality of our responses.

8. SPRs should not be used for problems concerning software policy, software distribution, or hardware. The local office should be contacted in these cases.

RT-11 V4.Ø
System Utilities
PIP.SAV VØ7.ØØF

Seq 7.1.8 M

1 of 1

COPY/BINARY STOPS PROCESSING AFTER ENCOUNTERING AN OBJ LIBRARY FILE (DBF)

OBJ library files cannot be copied using COPY/BINARY. If an OBJ library file matches one of the input specifications PIP prints "PIP-F-Library file not copied". However, PIP will not copy any more files after one of these is encountered. It should continue processing any remaining non-OBJ library files.

1. The following is a required patch to the PIP.SAV utility program. It must be installed in all copies of the utility.

   NOTE: Since patching the distribution medium is not recommended, the patch must be installed every time you copy the program from the distribution medium.

2. This patch is installed using SIPP, the Save Image Patching Program. First, ensure that a copy of the file PIP.SAV is on a mounted volume. Create the file, PIP.ØØ7 as follows. Replace 'DK:' in the patch below with the name of the device that contains the program file.

```
RUN SIPP
DK:PIP.SAV/A/C
Ø
3632
1Ø7
^Z                                  (up-arrow/Z)
5562
5Ø67
173616
627Ø5
16
2Ø7
^Z                                  (up-arrow/Z)
2Ø332
4767
172414
^Y                                  (up-arrow/Y)
151752
^C                                  (CTRL/C to exit)
```

3. To apply the patch to PIP.SAV type:

   ```
   @PIP.ØØ7
   ```

   The resulting version of the utility will be PIP VØ7.ØØG.

4. Save the new version of the utility on a backup volume.

RT-11 V4.Ø
System Utilities
PIP.SAV VØ7.ØØG

Seq 7.1.9 N

1 of 1

COPYING FILES TO UNINITIALIZED DISKS (DBF)

When PIP or DUP attempts to open a file on a disk which has not been initialized, the system hangs. This can occur when COPY or COPY/DEV/FILE is used to create a file on any disk which has been formatted but not subsequently initialized.

This will be corrected in the next release of RT-11. PIP and DUP will verify that a valid directory exists on a disk before attempting to enter a new file on that disk. For V4, be sure that all disks have a valid RT-11 directory before being used for file transfers. If the system does hang, double Control/C's can be used to return to the monitor.

USE OF COPY/DEV/FILE WITHOUT FILE SPECIFICATION (DBF)

If a COPY/DEV/FILE command is issued with no files specified, DCL inserts *.* as the filenames for both input and output. DUP will then open a file on the output device named *.* and will copy the input device to this file.

When /FILE is used, DUP selects the specification without wildcards as the device which will contain, or does contain, the image of the other volume within a file. DUP should issue the "?DUP-F-Illegal command" when wildcards are used in both the input and output specifications, since DUP will then have no filename to use for the operation.

1. The following is a required patch to the DUP.SAV utility program. It must be installed in all copies of the utility.

   NOTE: Since patching the distribution medium is not recommended, the patch must be installed every time you copy the program from the distribution medium.

2. This patch is installed using SIPP, the Save Image Patching Program. First, ensure that a copy of the file DUP.SAV is on a mounted volume. Create the file, DUP.Ø11 as follows. Replace 'DK:' in the patch below with the name of the device that contains the program file.

```
RUN SIPP
DK:DUP.SAV/A/C
Ø
3546
113
^Z                                  (up-arrow/Z)
1344Ø
4767
14Ø2
24Ø
^Z                                  (up-arrow/Z)
15Ø46
32767
4ØØØØ
16541Ø
14Ø6
32767
4ØØØØ
165376
14Ø2
167
176356
32767
4ØØ
165366
2Ø7
^Y                                  (up-arrow/Y)
15656
^C                                  (CTRL/C to exit)
```

3. To apply the patch to DUP.SAV type:

```
@DUP.Ø11
```

   The resulting version of the utility will be DUP VØ4.ØØK.

4. Save the new version of the utility on a backup volume.

RT-11 V4.Ø
System Utilities
LINK.SAV VØ6.Ø1E

Seq 7.9.7 M

LINK UPGRADE (DBB & SHD)

This patch fixes four problems with LINK:

A. LINK does not allow references with additive displacements to symbols in an overlay segment .PSECT having the I attribute from within the same overlay segment,

B. LINK does not always calculate the correct transfer address when getting it from a library module,

C. LINK interprets formatted binary records from object modules incorrectly when the checksum of the previous record is 1, and

D. LINK corrupts its Overlay Segment Descriptor Block's symbol list when it finds it necessary to move the first section in an overlay segment to the root.

1. The following is a required patch to the LINK.SAV VØ6.Ø1E utility program (previously modified in Seq 7.9.6). It must be installed in all copies of the utility.

   NOTE: Since patching the distribution medium is not recommended, the patch must be installed every time you copy the program from the distribution medium.

2. This patch is installed using SIPP, the Save Image Patching Program. First, ensure that a copy of the file LINK.SAV VØ6.Ø1E is on a mounted volume. Create the file, LINK.ØØ6 as follows. Replace 'DK:' in the patch below with the name of the device that contains the program file.

```
RUN SIPP
DK:LINK.SAV/A/C
Ø
31Ø4
1775
1Ø53ØØ
1373
4767
177746
137Ø
^Z                              (up-arrow/Z)
5Ø22
43Ø61
^Z                              (up-arrow/Z)
15122
5Ø67
175726
5Ø67
175724
1Ø5767
176122
1ØØØØ6
3274Ø
```

```
4ØØØØØ
1744
4767
5166
572Ø
1ØØ67
176776
^Z                                  (up-arrow/Z)
15162
176262
^Z                                  (up-arrow/Z)
16146
427Ø1
17ØØØØ
1456
^Z                                  (up-arrow/Z)
16156
1Ø146
63Ø1
63Ø1
626Ø1
667Ø1
175Ø44
2ØØØ1
14Ø3
1Ø1Ø3
111Ø1
761
42713
7777
4767
154
1417
4767
1644
5Ø113
413
Ø
Ø
Ø
Ø
Ø
Ø
Ø
Ø
Ø
Ø
Ø
Ø
^Z                                  (up-arrow/Z)
2234Ø
1Ø5267
17Ø716
12767
177777
17Ø5Ø2
2Ø7
```

```
^Z                              (up-arrow/Z)
23Ø32
45Ø6
^Z                              (up-arrow/Z)
41414
4767
2324
^Z                              (up-arrow/Z)
43744
3271Ø
2ØØØØ
14Ø3
3276Ø
2ØØØØ
4
2Ø7
^Y                              (up-arrow/Y)
114537
^C                              (CTRL/C to exit)
```

3. To apply the patch to LINK.SAV type:

```
@LINK.ØØ6
```

   The resulting version of the utility will be LINK VØ6.Ø1F.

4. Save the new version of the utility on a backup volume.

RT-11 V4.Ø
System Utilities
EDIT.SAV VØ4.Ø3

Seq 7.2Ø.1 M

1 of 2

EDIT MISHANDLES OUTPUT FILE FULL ERROR (MG)

*** Replacement article for patch Seq 7.2Ø.1 M published in Jan 1981.

The following article is correct, and should be installed instead of the article published in Jan 1981.

When an alternate output file is opened following the error "?EDIT-f-Output file full", lines from the end of the file are appended to the beginning of the new output file. This occurs after closing the file and exiting the EDIT utility.

1. The following is a required patch to the EDIT.SAV utility program. It must be installed in all copies of the utiltiy.

   NOTE: Since patching the distribution medium is not recommended, the patch must be installed every time you copy the program from the distribution medium.

2. This patch is installed using SIPP, the Save Image Patching Program. First, ensure that a copy of EDIT.SAV is on a mounted volume. Create the file EDIT.ØØ1 as follows. Replace 'DK:' in the patch below with the name of the device that contains the program file.

```
R SIPP
DK:EDIT.SAV/C
Ø
2522
1Ø246
127Ø2
5532
4767
11556
12767
5532
434
126Ø2
1Ø5267
215
2Ø7
^Z                              (up-arrow/Z)
16346
1Ø1
^Z                              (up-arrow/Z)
21Ø26
4767
16147Ø
^Y                              (up-arrow/Y)
141674
^C                              (CTRL/C to exit)
```

3. To apply the patch to EDIT.SAV type:

   @EDIT.ØØ1

   The resulting version of the utility will be EDIT.SAV VØ4Ø3A.

4. Save the new version of the utility on a backup volume.

RT-11 V4.Ø
KED and K52
KED.SAV

Seq 17.1.1Ø N

1 of 1

KED DOCUMENTATION CORRECTION (JP)

In the PDP-11 Keypad Editor User's Guide, there is an error in the descriptions of the SET ENTITY PAGE and SET ENTITY SECTION commands, on pages 3-2Ø and 3-21.

The manual states that these commands can be abbreviated as follows:

```
For SET ENTITY PAGE:      SE [EN] P "marker-string"
                          SE [EN] P 'marker-string'
                          SE [EN] P integer [L]

For SET ENTITY SECTION:   SE [EN] SEC "marker-string"
                          SE [EN] SEC 'marker-string'
                          SE [EN] SEC integer [L]
```

In these abbreviations, EN for ENTITY does not work. You must use ENT as the shortest valid abbreviation. The KED HELP text is correct, however.

THE COMPILER INCORRECTLY INTERPRETS COMMENTS WITH TABS (PAT 17)

PROBLEM:

FORTRAN lists incorrectly a comment line of the form C<TAB>n, where n is a delimiter for a continuation line.

SOLUTION:

1. Type in the following MACRO files: PAT17.MAC, FIXVER.CØ4

   PAT17.MAC:

```
                .TITLE  F1
                .IDENT  /ØØ5/
                .PSECT  PATØØ1
PATØØ1:         CMPB    RØ,#'A
                BHIS    RETR
                MOV     R3,-(SP)
                MOV     #CHR1,R3
                CMPB    (R3),#'C
                BEQ     12$
                CMPB    (R3),#'C+4Ø
                BEQ     12$
                DEC     R2
12$:            MOV     (SP)+,R3
RETR:           JMP     RET

                .PSECT  PHØ1B

S=.
.=S+2Ø
CHR1:
.=S+4266
                JMP     PATØØ1
                NOP
                NOP
RET:
                .END
```

FIXVER.CØ4:

```
                .TITLE  FROOT
                .IDENT  /Ø11/
                .PSECT  ROOT
        .=.+37Ø
                .ASCII  /5-4/
                .END
```

2. Assemble the patches using MACRO-11

```
.R MACRO
*PAT17=PAT17.MAC
*FIXVER.PØ4=FIXVER.CØ4
*^C
```

3. Install the patches, using PAT, to the most recently patched F1.OBJ, and FROOT.OBJ files:

   NOTE: Make a copy of F1.OBJ, and FROOT.OBJ before you patch it just in case something goes wrong.

```
.R PAT
*F1=F1/C:66705,PAT17.OBJ/C:Ø2Ø153
.R PAT
*FROOT=FROOT/C:1Ø145Ø,FIXVER.PØ4/C:ØØ7ØØ7
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide.

5. Test the patches by creating and compiling the following FORTRAN program.

```
C       THE FIRST OCCURENCE OF THE LETTER C
C       1 SHOULD BE ALIGNED WITH THIS 1 BELOW
        END
```

   The first two lines of the above program should line up as printed when the program compiles successfully.

MISSING END IN MAIN PROGRAM CAN CAUSE COMPILER CRASH (PAT 18)

PROBLEM:

The FORTRAN IV V2.5 compiler, when the WARNING switch is set, will hang when a main program is missing the END statement and is followed by a subprogram.

SOLUTION:

1. Type in the following MACRO files: PAT18.MAC, FIXVER.CØ5

PAT18.MAC:

```
                .TITLE  F3
                .IDENT  /ØØ4/
                .PSECT  PATØØ3
        S=.
        PATØØ3: MOVB    #3,-(R1)
                ADD     #3,BGNLIN
                ADD     #3,ENDLIN
                JMP     RETR

                .PSECT PHØ3B2
        S=.
        BGNLIN: .BLKW
        ENDLIN: .BLKW
        .=S+21ØØ
                JMP     PATØØ3
        RETR:
                .END
```

FIXVER.CØ5:

```
                .TITLE  FROOT
                .IDENT  /Ø12/
                .PSECT  ROOT
        .=.+37Ø
                .ASCII  /5-5/
                .END
```

2. Assemble the patches using MACRO-11

```
.R MACRO
*PAT18=PAT18.MAC
*FIXVER.PØ5=FIXVER.CØ5
*^C
```

3. Install the patches, using PAT, to the most recently patched F3.OBJ and FROOT.OBJ files:

   NOTE: Make a copy of F3.OBJ and FROOT.OBJ before you patch it just in case something goes wrong.

```
.R PAT
*F3=F3/C:Ø34Ø67,PAT18.OBJ/C:Ø16677
.R PAT
*FROOT=FROOT/C:1Ø3654,FIXVER.PØ5/C:ØØ7Ø11
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide.

5. Test the patches by creating and compiling the following FORTRAN program with the WARNING switch set.

```
          WRITE(5,1ØØ)
1ØØ       FORMAT(' THIS WILL NOT BE PRINTED ')
          FUNCTION NAMEITRY(CRN)
          INTEGER CRN
          DIMENSION ANS(2ØØØ,2ØØØ,2ØØØ,2ØØØ)
          STOP
          END
```

   After the patch is installed, the FORTRAN IV compiler will issue the following messages:

```
  ERROR:  Subprogram statement must be first
WARNING:  Non-standard statement ordering
  ERROR:  Array "ANS" exceeds maximum size
```

   These messages are issued when there are declarations following executatble code, which are not separated by an END statement. The compiler expects to find the declarations first and instead finds them out of order. The last error message due to the array being too large.

CORRECTION FOR UNIT CLOSING (PAT16)

PROBLEM:

The FORTRAN OTS does not correctly close a unit when more than one unit has been closed.

SOLUTION:

1. Type in the following MACRO file: PAT16.MAC

PAT16.MAC:

```
        .TITLE $EOL
        .IDENT /ØØ7/
        .PSECT OTS$I
S=.
.=S+114
        JMP PATIOX
RET:

.=S+262
PATIOX: ADD     #4,RØ
        MOV     -(RØ),R4
        MOV     -(RØ),(SP)
        SUB     #4,RØ
        JMP     RET
        .END
```

2. Assemble the patch using MACRO-11

```
.R MACRO
*PAT16=PAT16
*^C
```

3. Install the patch, using PAT, to the most recently patched OTSCOM.OBJ file:

NOTE: Make a copy of OTSCOM.OBJ before you patch it just in case something goes wrong.

```
.R PAT.SAV
*OTSCOM=OTSCOM/C:61441,PAT16/C:11647
```

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide.

5. Test the patch by creating and compiling the following FORTRAN program.

   NOTE: You must create TST.DAT and TST1.DAT in your work area before running the following FORTRAN program.

```
OPEN(UNIT=3,NAME='TST.DAT',TYPE='OLD')
OPEN(UNIT=2,NAME='TST1.DAT',TYPE='OLD')
WRITE(2,*) 'HELLO'
WRITE(3,*) 'BYE'
CLOSE(UNIT=3)
CLOSE(UNIT=2)
STOP
END
```

   Which should execute without error when the patch has been successfully installed.

GAMMA-11 V3.1 Seq 49.5.2 M
BGAMMA
DATANL 1 of 1

SLICE - LAST POINT IS NOT PLOTTED (LM)

Problem

1. The last point of a vertical or horizontal slice is not plotted on the screen.

Solution:

1. The following patch will fix the problem.

   NOTE: Patching the distribution medium is not recommended. The patch must be installed every time you copy the Gamma-11 system from the distribution medium.

2. The patch is installed using SIPP, the Save Image Patching program.

   First ensure that a copy of the file DATANL.SAV is on a mounted volume.

   Create the file DATANL.Ø05 as follows. Replace 'DK:' in the patch below with the name of the device that contains DATANL.SAV.

```
R SIPP
DK:DATANL.SAV/C
22
55Ø14
261Ø
24Ø
^Y          (up-arrow/Y)
171422
^C          (up-arrow/C)
```

3. To apply the patch to DATANL.SAV type:

```
@DATANL.Ø05
```

PATCHING THE RT-11 MONITOR FOR GAMMA-11 (LM)

1. The RT-11 monitors distributed with Gamma-11 have been built from standard RT-11 sources. The system generation options were chosen such that the monitors do not absorb more memory space than is necessary.

   Gamma-11 users should apply the RT-11 patches as published in the RT-11 Software Dispatch.

   This article describes how Gamma-11 users should rebuild their RT-11 monitors after patching the sources.

2. The files required for building the monitors and device handlers from sources are on the Gamma-11 distribution disk.

   Users with magtape distribution will find the required files on the second tape of the kit.

   Patching the distribution kit is not recommended, so all RT-11 sources should be copied to another disk and the copies patched. In addition to the RT-11 sources, copy the following files from the Gamma-11 distribution kit.

   ```
   MONBLD.COM
   SYSTBL.*
   SYCND.*
   ```

3. To build the monitors and device handlers type the following:

   ASS XXn: SRC

   ASS YYm: BIN

   ASS ZZp: MAP

   where XXn is the device and unit number on which you have all the RT-11 sources.

   YYn is the device to contain the new monitors and device handlers.

   and ZZp is the device to contain the RT-11 map files.

   @MONBLD ; this will build all monitors and device handlers.

4. The files produced on the logical device BIN, should now be copied to a copy of the Gamma-11 distribution kit and a Gamma-11 system generation carried out.

CTS-3ØØ V6
  for RT-11 V4.Ø
DECFORM VØ6-ØØB
(PATCH 25)

Seq 51.Ø4.Ø3 M

1 of 2

DECFORM WITH VT100 TERMINAL CAUSES BAD CHARACTER ON TYPE-AHEAD

When running a DECFORM program on a VT100 terminal, a BAD CHARACTER message is generated if the user types ahead using the keypad while the screen is being refreshed.

Patch 25 corrects the problem with using the keypad during the refresh period such that the BAD CHARACTER message is not generated. Patch 25 also changes the version number of DECFORM to V06-00C.

Using the editor, create the following file exactly as shown. Name it as indicated in the comment line that is the first line of the file. Then, to install the patch, follow the procedure shown following the file.

Corrections are made to the source module using SLP (Source Language Patch) program. Please note that the last record in the file P025.PAT file is "/".

You must terminate each line in that file with a carriage return, including the last line "/".

```
;P025.PAT
-1,1
-359
TR0,
-362
        IF((VALUE.EQ.79).OR.(VALUE.EQ.91)) GOTO TR0
-435,435
VERSN,  EROR='DECFORM V06-00C '
/


.RENAME DECF0.DBL DECF0.OLD

.R SLP
*DECF0.DBL=DECF0.OLD,P025.PAT
*^C
```

CTS-3ØØ V6
  for RT-11 V4.Ø
ISMUTL VØ6-ØØ
(PATCH 26)

Seq 51.Ø8.Ø1 M

CORRECTIONS FOR ISAM UTILITY ERRORS

The following problems exist with ISMUTL

1. If an incorrect response is given to the "function selection", i.e., anything other than C[REATE], S[TATUS], R[EORGANIZE], or E[XIT] the message PLEASE TRY AGAIN is printed and the prompt is repeated. At this point if a correct answer is entered, ISMUTL does not recognize it as a valid response and repeats the PLEASE TRY AGAIN message.

   Patch 26 will cause ISMUTL to recognize the correct responses to the "function selection" regardless as to whether you have already entered an incorrect response or not.

2. If the user presses the carriage return key continuously in response to the "function selection", the program will terminate with an ERROR 7 - SUBSCRIPT ERROR.

   The carriage return key should cause the PLEASE TRY AGAIN message to be printed and the program to reissue the "function selection" question.

3. If the response to the "function selection" is greater than ten characters in length, ISMUTL will terminate with an ERROR 7 - SUBSCRIPT ERROR.

   Patch 26 corrects this such that the message PLEASE TRY AGAIN is generated and the prompt repeated in the above situation.

4. When ISMUTL is run and the CREATE option is chosen, if the [output] disk is write-protected the message "NO SPACE FOR FILE" is incorrectly generated when ISMUTL attempts to open the output file.

   Patch 26 causes ERROR 43 - DIR IO ERR to be generated under the above conditions.

5. When a detached program sends a message to ISMUTL to REORGANIZE or to CREATE an ISAM file, and the message does not specify that ISMUTL should chain to a user program, then ISMUTL will attempt to chain to a null program name.

   After installing Patch 26, when a detached program sends a message to ISMUTL without specifying a user program to chain to, ISMUTL terminates the session with a STOP and not a STOP PRGNAME.

Patch 26 also changes the version number of ISMUTL to V06-00A.

Using the editor, create the following three files exactly as shown. Name them as indicated in the comment line that is the first line of each file. Then, to install the patch, follow the procedure shown following the files.

Corrections are made to the source module using SLP (Source Language Patch) program. Please note that the last record in the file P023.PAT file is "/". You must terminate each line in that file with a carriage return, including the last line "/".

```
#P026A.PAT
-166,166
        WRITES (11,'CTS300 ISAM UTILITY PROGRAM, V06-00A ')
-220
        IF((TTYNM.EQ.-1).AND.(CHNFG.NE.1)) STOP
/



#P026B.PAT
-200
        IF (TEMP00.GE.11) GO TO NEWREQ
-211
NEWREQ,
-213
                TEMP00 = 1
/



#P026C.PAT
-84
        MSG43,  A10,    'DIR IO ERR'
-364,365
OPENH,  XCALL ERROR (TEMP00,TEMP05)
        IF (TEMP00.EQ.43) WRITES (11,MSG43)
        IF ((TEMP00.NE.43).AND.(WKFLG.EQ.0)) WRITES (11,MSG24)
\
        IF ((TEMP00.NE.43).AND.(WKFLG.GT.0).AND.(T.GT.DTFOT+1)) WRITES(11,MSG24)
/


.RENAME (UTL2,CRET1,CRET3).DBL *.OLD
 Files renamed:
DK:UTL2.DBL     to DK:UTL2.OLD
DK:CRET1.DBL    to DK:CRET1.OLD
DK:CRET3.DBL    to DK:CRET3.OLD

.R SLP
*UTL2.DBL=UTL2.OLD,P026A.PAT
*CRET1.DBL=CRET1.OLD,P026B.PAT
*CRET3.DBL=CRET3.OLD,P026C.PAT
*^C

.R DICOMP
*UTL2=UTL2/O

    NO  ERRORS DETECTED
*CRET1=CRET1/O

    NO  ERRORS DETECTED
*CRET3=CRET3/O

    NO  ERRORS DETECTED
*^C
```

CTS-3ØØ V6
  for RT-11 V4.Ø
ISMUTL VØ6-ØØ
(PATCH 26)

Seq 51.Ø8.Ø1 M

4 of 4

```
.R LINK
*ISMUTL=UTL2,FCGFX,DATE,DIBOL/C
*RORG1/O:1/C
*RORG2/O:1/C
*RORG3/O:1/C
*RORG4/O:1/C
*STAT/O:1/C
*CRET1/O:1/C
*CRET2,NUMQ/O:1/C
*CRET3/O:1
*ISMUTL.TSD/B:100000=UTL2,FCGFX,DATE,TDIBOL/C
*RORG1/O:1/C
*RORG2/O:1/C
*RORG3/O:1/C
*RORG4/O:1/C
*STAT/O:1/C
*CRET1/O:1/C
*CRET2,NUMQ/O:1/C
*CRET3/O:1
*^C

.R REDUCE
*ISMUTL/N
*^C
```

CTS-3ØØ VØ6
  for RT-11 V4.Ø
SUD VAØ6-ØØB
TSD VBØ6-ØØF
XMTSD VCØ6-ØØI
(PATCH 27)

Seq 51.16.Ø3 M
Seq 51.18.Ø7 M
Seq 51.2Ø.1Ø M

NO ERROR 22 RETURNED

Under SUD, TSD, and XMTSD, if an I-O error (error 22) occurs on a read statement in a DIBOL program and the read is repeated while the error condition still exists, it appears to the runtime system that the record has already been read, and no I-O error is returned to the program.

Patch 27 corrects this so that in the above situation an I-O error is detected and returned to the program. The version numbers change as follows: SUD to VA06-00C, TSD to VB06-00G, and XMTSD to VC06-00J.

Using the editor, create the following source files. Name them as indicated in the comment line that begins each file. Then, to install the patch, follow the procedure shown following the source files.

CTS-3ØØ VØ6
  for RT-11 V4.Ø
SUD VAØ6-ØØB
TSD VBØ6-ØØF
XMTSD VCØ6-ØØI
(PATCH 27)

Seq 51.16.Ø3 M
Seq 51.18.Ø7 M
Seq 51.2Ø.1Ø M

;P027A.MAC

```
        .TITLE  $IO
        .PSECT  $IO
        .GLOBL $RB,$EMTBL

P027:
        .=      .+4730
        MOV     PC,R2
        ADD     #P027A-.,R2
        JSR     PC,(R2)
        .=      P027+5266
        MOV     PC,R2
        ADD     #P027B-.,R2
        JSR     PC,(R2)
        .=      P027+5314
        MOV     PC,R2
        ADD     #P027C-.,R2
        JSR     PC,(R2)
        .=      P027+3150
        MOV     PC,R2
        ADD     #P027D-.,R2
        JSR     PC,(R2)
        .=      P027+5644
        MOV     PC,R2
        ADD     #P027E-.,R2
        JSR     PC,(R2)

        .PSECT  $P027
P027A:  CLRB    FREE
        MOV     (SP)+,R2
        MOV     R0,-(SP)
        MOV     R1,-(SP)
        MOV     R2,-(SP)
        MOV     #$EMTBL,R1
        RTS     PC
P027B:  CMPB    #1,@#52
        BEQ     5$
        BLOS    4$
        CLR     36(R3)
        RTS     PC
4$:     ADD     #14,(SP)
        RTS     PC
5$:     TSTB    FREE
        BEQ     8$
        MOV     BUFPT,30(R3)
        MOV     BUFCT,32(R3)
        MOV     CURBL,24(R3)
8$:     ADD     #12,(SP)
        RTS     PC
P027C:  MOVB    #1,FREE
        MOV     #$EMTBL,R4
        ADD     R5,R4
        MOV     (SP)+,R2
        MOV     R0,-(SP)
        MOV     R2,-(SP)
        RTS     PC
P027D:  JSR     PC,RDSAV
        MOV     24(R3),R2
        TST     30(R3)
        RTS     PC
```

CTS-3ØØ VØ6
  for RT-11 V4.Ø
SUD VAØ6-ØØB
TSD VBØ6-ØØF
XMTSD VCØ6-ØØI
(PATCH 27)

Seq 51.16.Ø3 M
Seq 51.18.Ø7 M
Seq 51.2Ø.1Ø M


```
P027E:  JSR     PC,RDSAV
        MOV     R1,24(R3)
        JSR     PC,$RB
        RTS     PC
RDSAV:  MOV     24(R3),CURBL
        MOV     30(R3),BUFPT
        MOV     32(R3),BUFCT
        RTS     PC
FREE:   .BLKW   1
CURBL:  .BLKW   1
BUFPT:  .BLKW   1
BUFCT:  .BLKW   1
        .END


#P027B.MAC

        .TITLE  $DIO
        .PSECT  $DIO
        .GLOBL  $JOB

P027:
        .=      .+3644
        JSR     PC,P027A
        .=      P027+3746
        JMP     P027B
        .=      P027+4056
        JMP     P027C
        .=      P027+4414
        JMP     P027D
        .=      P027+7332
        JMP     P027E

        .PSECT  $P027
P027A:  MOVB    #1,27(R0)
        JSR     PC,P027+4310
        RTS     PC
P027B:  BNE     3$
        TSTB    2(R0)
        JMP     P027+3754
3$:     TSTB    27(R0)
        BEQ     6$
        MOV     R2,R3
        ASL     R3
        ASL     R3
        SUB     R2,R3
        ADD     #SAVE,R3
        MOV     (R3),10(R0)
        MOV     2(R3),12(R0)
        MOV     4(R3),16(R0)
6$:     JMP     P027+3764
P027C:  CLRB    27(R0)
        CMPB    2(R0),#376
        JMP     P027+4064
P027D:  JSR     PC,RDSAV
        TST     10(R0)
        JMP     P027+4420
```

CTS-3ØØ VØ6
  for RT-11 V4.Ø
SUD VAØ6-ØØB
TSD VBØ6-ØØF
XMTSD VCØ6-ØØI
(PATCH 27)

Seq 51.16.Ø3 M
Seq 51.18.Ø7 M
Seq 51.2Ø.1Ø M


```
P027E:  JSR     PC,RDSAV
        MOV     R1,16(R0)
        JMP     P027+7336
RDSAV:  MOV     R1,-(SP)
        MOV     R2,-(SP)
        MOV     $JOB,R1
        MOV     R1,R2
        ASL     R2
        ASL     R2
SUB     R1,R2
        ADD     $SAVE,R2
        MOV     10(R0),(R2)
        MOV     12(R0),2(R2)
        MOV     16(R0),4(R2)
        MOV     (SP)+,R2
        MOV     (SP)+,R1
        RTS     PC
SAVE:   .BLKW   48.
        .END
```

```
;P027C.MAC

        .TITLE  $KDIO
        .PSECT  $DIO
        .GLOBL  $JOB
P027:
        .=      .+3176
        JSR     PC,P027A
        .=      P027+3300
        JMP     P027B
        .=      P027+3410
        JMP     P027C
        .=      P027+3746
        JMP     P027D
        .=      P027+6606
        JMP     P027E

        .PSECT  $P027
P027A:  MOVB    #1,27(R0)
        JSR     PC,P027+3642
        RTS     PC

P027B:  BNE     3$
        TSTB    2(R0)
        JMP     P027+3306
3$:     TSTB    27(R0)
        BEQ     6$
        MOV     R2,R3
        ASL     R3
        ASL     R3
        SUB     R2,R3
        ADD     $SAVE,R3
        MOV     (R3),10(R0)
        MOV     2(R3),12(R0)
        MOV     4(R3),16(R0)
6$:     JMP     P027+3310
```

CTS-3ØØ VØ6
  for RT-11 V4.Ø
SUD VAØ6-ØØB
TSD VBØ6-ØØI
XMTSD VCØ6-ØØI
(PATCH 27)

Seq 51.16.Ø3 M
Seq 51.18.Ø7 M
Seq 51.2Ø.1Ø M


```
P027C:  CLRB    27(R0)
        CMPB    2(R0),#376
        JMP     P027+3416
P027D:  JSR     PC,RDSAV
        TST     10(R0)
        JMP     P027+3752
P027E:  JSR     PC,RDSAV
        MOV     R1,16(R0)
        JMP     P027+6612
RDSAV:  MOV     R1,-(SP)
        MOV     R2,-(SP)
        MOV     $JOB,R1
        MOV     R1,R2
        ASL     R2
        ASL     R2
        SUB     R1,R2
        ADD     #SAVE,R2
        MOV     10(R0),(R2)
        MOV     12(R0),2(R2)
        MOV     16(R0),4(R2)
        MOV     (SP)+,R2
        MOV     (SP)+,R1
        RTS     PC
SAVE:   .BLKW   48.
        .END
```

```
;P027V1.MAC

        .TITLE  DIRT
        .CSECT  $DIRT

        .=      .+11215
        .ASCII  /C/
        .END
```

```
;P027V2.MAC

        .TITLE  DTO
        .CSECT  DTO

        .=      .+4563
        .ASCII  /G/
        .END
```

```
;P027V3.MAC

        .TITLE  $KDTO
        .PSECT  DATXX

        .=      .+42
        .BYTE   'J
        .END
```

CTS-300 V06
  for RT-11 V4.0
SUD VA06-00B
TSD VB06-00F
XMTSD VC06-00I
(PATCH 27)

Seq 51.16.03 M
Seq 51.18.07 M
Seq 51.20.10 M


```
.RENAME (IO,DIO,KDIO).OBJ *.OLD
 Files renamed:
DK:IO.OBJ       to DK:IO.OLD
DK:DIO.OBJ      to DK:DIO.OLD
DK:KDIO.OBJ     to DK:KDIO.OLD

.RENAME (SDIRT,DTO,KDTO).OBJ *.OLD
 Files renamed:
DK:SDIRT.OBJ    to DK:SDIRT.OLD
DK:DTO.OBJ      to DK:DTO.OLD
DK:KDTO.OBJ     to DK:KDTO.OLD

.MACRO P027A,P027B,P027C
ERRORS DETECTED:  0
ERRORS DETECTED:  0
ERRORS DETECTED:  0

.MACRO P027V1,P027V2,P027V3
ERRORS DETECTED:  0
ERRORS DETECTED:  0
ERRORS DETECTED:  0

.R PAT
*IO.OBJ=IO.OLD/C:052514,P027A/C:053245

.R PAT
*DIO.OBJ=DIO.OLD/C:153725,P027B/C:063667

.R PAT
*KDIO.OBJ=KDIO.OLD/C:173651,P027C/C:063411

.R PAT
*SDIRT.OBJ=SDIRT.OLD/C:040077,P027V1/C:005605

.R PAT
*DTO.OBJ=DTO.OLD/C:126277,P027V2/C:003246

.R PAT
*KDTO.OBJ=KDTO.OLD/C:055061,P027V3/C:004717

.R CTSGEN          ;FOR SINGLE-USER DIBOL

.R CTSGEN          ;FOR NORMAL TSD

.R CTSGEN          ;FOR EXTENDED MEMORY TSD
```

CTS-300 V06
  for RT-11 V4.0
SUD VA06-00C
TSD VB06-00G
XMTSD VC06-00J
(PATCH 28)

Seq 51.16.04 M
Seq 51.18.08 M
Seq 51.20.11 M

DIBOL STACK OVERFLOW ON OPEN

Under SUD, TSD, and XMTSD, if a field which has been defined as A80 or greater is used in a DIBOL OPEN statement to contain the file specification, an Error 4 DIBOL STACK OVERFLOW is generated when the program is run.

Patch 28 corrects this problem so that in the above situation a field that contains the file specification may be defined as A80 or greater without resulting in an Error 4. It does not change existing limitations on file specifications (see the DIBOL Language Reference Manual, AA-1760F-TC, page xi). A file name, for example, is still limited to 6 characters.

Patch 28 changes the version number of SUD to VA06-00D, TSD to VB06-00H, and XMTSD to VC06-00K.

Using the editor, create the following source files. Name them as indicated in the comment line that begins each file. Then, to install the patch, follow the procedure shown following the source files.

```
;P028A.MAC

        .TITLE  $IO
        .PSECT  $IO
P028:
        .=      .+4244
        MOV     R2,-(SP)
        MOV     R4,R2
        .WORD   240
        .=      P028+4272
        JMP     P028A
        .=      P028+4302
        JMP     P028B

        .PSECT  $P028
P028A:  BEQ     P028B
        MOVB    (R1)+,(R3)+
        CMP     R2,R3
        BNE     3$
        TRAP    204
3$:     JMP     P028+4276
P028B:  MOVB    #'=,(R3)+
        MOV     (SP)+,R2
        JMP     P028+4306
        .END


;P028B.MAC

        .TITLE  $DIO
        .PSECT  $DIO
P028:
        .=      .+2072
        MOV     R4,R2
        BR      P028+2102
        .=      P028+2120
        JMP     P028A

        .PSECT  $P028
P028A:  BEQ     2$
        MOVB    (R1)+,(R3)+
        CMP     R2,R3
        BNE     3$
        TRAP    204
2$:     JMP     P028+2130
3$:     JMP     P028+2124
        .END
```

CTS-3ØØ VØ6
  for RT-11 V4.Ø
SUD VAØ6-ØØC
TSD VBØ6-ØØG
XMTSD VCØ6-ØØJ
(PATCH 28)

Seq 51.16.Ø4 M
Seq 51.18.Ø8 M
Seq 51.2Ø.11 M

3 of 4

```
;P028C.MAC

        .TITLE  $KDIO
        .PSECT  $DIO
P028:
        .=      .+1514
        MOV     R4,R2
        BR      P028+1524
        .=      P028+1542
        JMP     P028A

        .PSECT  $P028
P028A:  BEQ     2$
        MOVB    (R1)+,(R3)+
        CMP     R2,R3
        BNE     3$
        TRAP    204
2$:     JMP     P028+1550
3$:     JMP     P028+1546
        .END


;P028V1.MAC

        .TITLE  DIRT
        .CSECT  $DIRT

        .=      .+11215
        .ASCII  /D/
        .END


;P028V2.MAC

        .TITLE  DTO
        .CSECT  DTO

        .=      .+4563
        .ASCII  /H/
        .END


;P028V3.MAC

        .TITLE  $KDTO
        .PSECT  DATXX

        .=      .+42
        .BYTE   'K
        .END
```

CTS-3ØØ VØ6
  for RT-11 V4.Ø
SUD VAØ6-ØØC
TSK VBØ6-ØØG
XMTSD VCØ6-ØØJ
(PATCH 28)

Seq 51.16.Ø4 M
Seq 51.18.Ø8 M
Seq 51.2Ø.11 M


```
.RENAME (IO,DIO,KDIO).OBJ *.OLD
 Files renamed:
DK:IO.OBJ       to DK:IO.OLD
DK:DIO.OBJ      to DK:DIO.OLD
DK:KDIO.OBJ     to DK:KDIO.OLD

.RENAME (SDIRT,DTO,KDTO).OBJ *.OLD
 Files renamed:
DK:SDIRT.OBJ    to DK:SDIRT.OLD
DK:DTO.OBJ      to DK:DTO.OLD
DK:KDTO.OBJ     to DK:KDTO.OLD

.MACRO P028A,P028B,P028C
ERRORS DETECTED:  0
ERRORS DETECTED:  0
ERRORS DETECTED:  0

.MACRO P028V1,P028V2,P028V3
ERRORS DETECTED:  0
ERRORS DETECTED:  0
ERRORS DETECTED:  0

.R PAT
*IO.OBJ=IO.OLD/C:112666,P028A/C:022537

.R PAT
*DIO.OBJ=DIO.OLD/C:032272,P028B/C:017446

.R PAT
*KDIO.OBJ=KDIO.OLD/C:052154,P028C/C:017604

.R PAT
*SDIRT.OBJ=SDIRT.OLD/C:042012,P028V1/C:005606

.R PAT
*DTO.OBJ=DTO.OLD/C:127156,P028V2/C:003247

.R PAT
*KDTO.OBJ=KDTO.OLD/C:056222,P028V3/C:004720

.R CTSGEN          ;FOR SINGLE-USER DIBOL

.R CTSGEN          ;FOR NORMAL TSD

.R CTSGEN          ;FOR EXTENDED MEMORY TSD
```

RT-11 V4.0
CUMULATIVE INDEX
NOVEMBER 1981

This is a complete listing of all articles for RT-11 V4.0 and related products. In the case of subordinate software, missing sequence numbers may pertain to problems unique to interaction with previous versions of the same product or other major operating systems.

IMPORTANT!

Unassigned articles are indicated: UNASSIGNED.

Flags are currently being installed for all articles. The flags and definitions are as follows:

M = Mandatory Patch. These patches correct errors in the software product. All users are required to apply these patches to maintain consistent "user level" unless the accompanying article specifies otherwise.

F = Optional Feature Patch. These patches extend or configure functionality into the product. These functions will be treated as a supported part of the product for the duration of the current release and will be incorporated with any future release, unless otherwise stated.

R = Restriction. These articles discuss areas that will not be patched in the current release because they require major modification or because they are not consistent with the design of the product. Restrictions, except those described as permanent, are reviewed and modified when possible as part of the normal release cycle.

N = NOTE. These articles provide explanatory information that supplements the manual set and provide more detailed information about a program or package. They also provide procedural information to make it easier to use a program or package.

+ = Articles appeared in the RT-11 Software Dispatch Review, March 1980.

*The "Autopatch Kit" column in the list which follows indicates the first RT-11 V4.0 Autopatch Kit in which the associated patch was included. Unless otherwise indicated, the patches also appear in subsequent Autopatch Kits as well. Note that Autopatch Kit "A" is the latest kit available from the SDC.

Component	Autopatch Kit	Sequence	Mon/Yr
RT-11 V4.0			
MONITOR PATCHES			
ISSUING .SETTOP #-2 AND .EXIT UNDER XM MONITOR MAY CORRUPT SYSTEM DISK	A	1.1.1 M	Jul 80
IMPLEMENTING INTERNAL HANDLER QUEUEING IN FB AND XM MONITORS	A	1.1.2 M	Jul 80
ADDING HIGH SPEED RING BUFFER SUPPORT	A	1.1.3 M	Jul 80
CORRUPTION OF CSI TEXT UNDER XM MONITOR	A	1.1.4 M	Jul 80
MISSING COLON IN BOOT XX CAUSES SYSTEM HALT	A	1.1.5 M	Jul 80
TYPING ^U WHILE IN A ^X SEQUENCE UNDER A SYSTEM JOB	A	1.1.6 M	Sep 80
ABNORMAL TERMINATION OF FG JOB WHICH IS USING CSI	A	1.1.7 M	Nov 80
MISCELLANEOUS MRRT-11 BUGS	A	1.1.8 M	Nov 80
MRRT-11 MINIMAL FILE SUPPORT PROBLEM	A	1.1.9 M	Nov 80
INCORRECT LIMIT CHECKS ON PRIVILEGED BACKGROUND JOBS USING VIRTUAL OVERLAYS	A	1.1.10 M	Nov 80
MULTI-TERMINAL MONITORS DON'T ALWAYS PROCESS CTRL/F PROPERLY	A	1.1.11 M	Nov 80
MONITOR CHANGES AND CORRECTIONS	A	1.1.12 M	Dec 80
MONITOR CORRECTIONS	B	1.1.13 M	Jan 81
MONITOR UPDATES	B	1.1.14 M	Feb 81
ABORT I/O IN PROGRESS HANDLER BIT	B	1.1.15 M	Apr 81
CORRECTIONS FOR DISTRIBUTED AND SYSTEM GENERATED MONITORS	C	1.1.16 M	Jun 81
PRINT COMMAND RESTRICTION		1.1.17 R	Jul 81
UPDATES TO MONITOR FILES	D	1.1.18 M	Oct 81
DEVICE HANDLER SOURCES			
DEVICE HANDLER NOTES			
RL02s AT REV. LEVEL "F" FAIL DURING RT-11 SYSGEN		6.1.1 N	Oct 80

COMPONENT	AUTOPATCH KIT	SEQUENCE	MON/YR
DD.MAC			
DD PRIMARY BOOTSTRAP PROBLEM	A	6.4.1 M	Jul 80
DL.MAC			
PATCH XM VERSION OF DL HANDLER .SPFUN GET SIZE ROUTINE	A	6.5.1 M	Dec 80
ERRORS ON RL01 DISK DRIVES AFTER DISK PACKS ARE CHANGED	B	6.5.2 M	Jan 81
DM.MAC			
ERRORS IN DM OFFSET POSITIONING AND ERROR LOGGING	A	6.6.1 M	Jul 80
DY.MAC			
DELETED DATA MARK MAY BE LOST IF BUFFER STARTS ON PAR BOUNDARY	D	6.11.1 M	Aug 81
LP.MAC			
LP SET NOHANG MAY CRASH SYSTEM	A	6.12.1 M	Sep 80
LS.MAC			
LS SET NOHANG MAY CRASH SYSTEM	A	6.13.1 M	Sep 80
PROBLEMS WITH LS HANDLER	B	6.13.2 M	Jan 81
USING AN LA120 TERMINAL AS A LINE PRINTER WITH THE LS HANDLER		6.13.3 N	Jul 81
SET LS NOHANG IS CURRENTLY INOPERATIVE	C	6.13.4 M	Jul 81
RACE CONDITION IN LS HANDLER	D	6.13.5 M	Aug 81
PD.MAC			
CORRECTION TO PDT ERROR LOGGING SUPPORT	B	6.16.1 M	Apr 81
MAG TAPE HANDLERS			
BUFFER CLEARING ON SHORT READ IN XM MONITOR	A	6.20.1 M	Jul 80
LINKING AN XM, NON-FILESTRUCTURED TS HANDLER GENERATES AN UNDEFINED GLOBAL	A	6.20.2 M	Aug 80
INCORRECT READ ERROR RECOVERY IN MT HANDLER	A	6.20.3 M	Sep 80
TS-11 DOES NOT RECOVER FROM SOFT ERROR ON WRITE EOF	C	6.20.4 M	Jul 81
SYSTEM UTILITIES			
PIP.SAV			
ERRORS IN PIP	A	7.1.1 M	Sep 80
COPY/PREDELETE COMMAND		7.1.2 N	Sep 80
MATCHING FILE SPEECIFICATIONS ERRORS	B	7.1.3 M	Feb 81
COPY/BINARY/WAIT AND LOG HEADER PROBLEMS	B	7.1.4 M	Apr 81
COPY/PREDELETE AND COPY/NOREPLACE WORK INCORRECTLY WITH /WAIT	C	7.1.5 M	Jun 81
ERROR WITH RENAME/NOREPLACE	C	7.1.6 M	Jul 81
/POSITION:N SWITCH FOR MAGTAPE INPUT WORKS INCORRECTLY		7.1.7 M	Oct 81
COPY/BINARY STOPS PROCESSING AFTER ENCOUNTERING AN OBJ LIBRARY FILE		7.1.8 M	Nov 81
COPYING FILES TO UNINITIALIZED DISKS		7.1.9 N	Nov 81
DUP.SAV			
MISSING COLON IN BOOT XX CAUSES SYSTEM HALT	A	7.2.1 M	Jul 80
SQUEEZE CREATES <UNUSED> ENTRIES OF LENGTH ZERO BEFORE .BAD FILES	A	7.2.2 M	Aug 80
PROBLEMS WITH COPY/DEVICE AND INITIALIZE	A	7.2.3 M	Dec 80
BOOTSTRAPPING AN UNPATCHED MONITOR FROM A PATCHED SYSTEM	B	7.2.4 N	Jan 81
.SPFUN RETURN BUFFER PROCESSED INCORRECTLY FOR RK06/7	B	7.2.5 M	Jan 81
USE OF INITIALIZE/RESTORE ON MEDIA SUPPORTING BAD BLOCK REPLACEMENT		7.2.6 N	May 81
PROBLEMS WITH INIT/BAD AND COPY/DEVICE	C	7.2.7 M	May 81
PROBLEMS WITH INITIALIZE COMMAND	C	7.2.8 M	Jun 81
ATTEMPT TO RESTORE UNCLOSED TENTATIVE FILES FAILS	C	7.2.9 M	Jul 81
/V WITH NO DEVICE SPECIFICATION GIVES WRONG ERROR MESSAGE	D	7.2.10 M	Sep 81
OUTPUT ERROR DURING COPY/DEVICE TO MAGTAPE CAUSES SYSTEM ERROR		7.2.11 M	Oct 81
USE OF COPY/DEV/FILE WITHOUT FILE SPECIFICATION		7.2.12 M	Nov 81
DIR.SAV			
DIR/OUT COMMAND PRODUCES DEVICE NOT ACTIVE MESSAGE	A	7.3.1 M	Jul 80
DIR/VOL GIVES ?MON-F-TRAP TO 4	A	7.3.2 M	Dec 80
LOSS OF LAST PRINT CHARACTER IN DIRECTORY LISTING	D	7.3.3 M	Sep 81
RESORC.SAV			
RESORC MAY REPORT INCORRECT JOB NAMES ON A SHOW JOBS COMMAND	A	7.5.1 M	Aug 80
ADD CIS DETECTION CAPABILITY TO RESORC	B	7.5.2 M	May 81
PROBLEM WITH IDENTIFYING 11/23 PROCESSOR	D	7.5.3 M	Sep 81

COMPONENT	AUTOPATCH KIT	SEQUENCE	MON/YR
LINK.SAV			
LINK BYTE RELOCATION AND DIRECTORY SIZE	A	7.9.1 M	Jul 80
LINK MAP PROCESSING ERROR	A	7.9.2 M	Aug 80
LINK MAP ERROR AND MULTIPLE DEFINITION LIBRARIES	A	7.9.3 M	Oct 80
RT-11 V4 LINKER RESTRICTION	B	7.9.4 R	Jan 81
LINK TRANSFER ADDRESS CALCULATION BUGS	B	7.9.5 M	Mar 81
LINK ADDITIONS AND CORRECTIONS	D	7.9.6 M	Aug 81
LINK UPGRADE		7.9.7 M	Nov 81
LIBR.SAV			
A LIBR COMMAND WITH NO FILE-SPEC CAN CAUSE A SYSTEM CRASH	A	7.10.1 M	Jul 80
LIBR ERRORS	C	7.10.2 M	Jul 81
LIBR CORRUPTS FORM LIBRARY DIRECTORY	C	7.10.3 M	Jun 81
FILEX.SAV			
FILEX WILDCARD TRANSFERS CAUSE MONITOR TRAP	A	7.11.1 M	Aug 80
FILEX CREATES ZERO FILLED INTERCHANGE RECORDS	A	7.11.2 M	Sep 80
SIZE CALCULATION PROBLEM IN FILEX	D	7.11.3 M	Aug 81
RECORDS DROPPED BY FILEX	D	7.11.4 M	Sep 81
SRCCOM.SAV			
COMPARING TWO FILES MAY CAUSE TRAP TO 4	A	7.12.1 M	Aug 80
BLANK LINE COMPARISON FOR SLIDING MATCH	A	7.12.2 M	Dec 80
BINCOM.SAV			
BINCOM GENERATES ERRONEOUS ERROR MESSAGE	B	7.13.1 M	Apr 81
ERRONEOUS DOUBLE PRECISION CALCULATION IN BINCOM	C	7.13.2 M	Jun 81
DUMP.SAV			
BLOCK NUMBERS OUTPUT FROM DUMP	D	7.14.1 M	Aug 81
SLP.SAV			
TERMINATION OF PATCHING SESSION WITH SLP FATAL ERRORS	A	7.15.1 M	Nov 80
SLP GENERATES FATAL ERROR TRAP	B	7.15.2 M	Jan 81
SLP ERROR	B	7.15.3 M	Mar 81
SIPP.SAV			
CORRUPTION OF MULTI-BLOCK LOG FILES	A	7.16.1 M	Jul 80
PAT.SAV			
USE OF THE PAT UTILITY WITH RT-11 V3B PATCHES		7.17.1 N+	Mar 80
HELP.SAV			
PROBLEMS WITH HELP UTILITY	A	7.19.1 M	Nov 80
EDIT.SAV			
EDIT MISHANDLES OUTPUT FILE FULL ERROR	B	7.20.1 M	Nov 81
SYSTEM SUBROUTINE LIBRARY (SYSLIB)			
SYSLIB.OBJ			
PATCH TO ICSI	A	8.1.1 M	Oct 80
IASIGN REDEFINITIONS	A	8.1.2 M	Oct 80
ILUN RESTRICTION		8.1.3 R	Feb 81
VIRTUAL OVERLAY HANDLER CORRECTION		8.1.4 M	Nov 81
SYSTEM MACRO LIBRARY			
.SPFUN PROGRAMMED REQUEST	A	9.1.1 M	Dec 80
ABORT I/O PROGRESS SUPPORT FOR SYSMAC	B	9.1.2 M	Apr 81
.CMKT PROGRAMMED REQUEST	C	9.1.3 M	Jun 81
SYSTEM GENERATION PACKAGE			
SYSGEN CREATES ONE MORE DEVICE SLOT THAN REQUESTED	A	10.3.1 M	Dec 80
ASSEMBLY ERROR AFTER SYSGEN	B	10.3.2 M	Mar 81
DOCUMENTATION			
RT-11 SYSTEM RELEASE NOTES			
RT-11 V4.0 DOCUMENTATION CORRECTIONS AND ADDITIONS		11.2.1 N	Jul 80
DOCUMENTATION CORRECTIONS		11.2.2 N	Aug 80
CHANGES TO DUP /I OPTION		11.2.3 N	Apr 81
INCORRECT DUP CUSTOMIZATION PATCHES		11.2.4 N	Sep 81

COMPONENT	AUTOPATCH KIT	SEQUENCE	MON/YR
RT-11 INSTALLATION AND SYSTEM GENERATION GUIDE			
RT-11 V4.0 DOCUMENTATION CORRECTIONS AND ADDITIONS		11.3.1 N	Jul 80
CORRECTION TO AN OPTIONAL PATCH TO LINK		11.3.2 N	Aug 80
DOCUMENTATION ERROR: REFERENCE TO RL02 OMITTED FROM SYSGEN DIALOGUE		11.3.3 N	Oct 80
INCORRECT LINK MAPS FOR DISTRIBUTED MONITORS		11.3.4 N	Dec 80
INCORRECT PATCH FOR CHANGING QUEUE WORK FILE SIZE		11.3.5 N	Dec 80
CHANGING DEFAULT			Apr 81
INTRODUCTION TO RT-11			
RT-11 V4.0 DOCUMENTATION CORRECTIONS AND ADDITIONS		11.4.1 N	Jul 80
RT-11 SYSTEM USER'S GUIDE			
RT-11 DOCUMENTATION CORRECTIONS AND ADDITIONS		11.5.1 N	Jul 80
CORRECTIONS TO SLP CHAPTER: RT-11 SYSTEM USER'S GUIDE		11.5.2 N	Oct 80
DIFFERENCES BETWEEN DEVICE COPYING COMMANDS		11.5.3 N	Dec 80
RT-11 SYSTEM MESSAGE MANUAL			
RT-11 V4.0 DOCUMENTATION CORRECTIONS AND ADDITIONS		11.6.1 N	Jul 80
CORRECTIONS TO SLP MESSAGES IN "RT-11 SYSTEM MESSAGE MANUAL"		11.6.2 N	Nov 80
NEW SLP ERROR MESSAGE		11.6.3 N	Feb 81
PIP ERROR MESSAGES MISSING		11.6.4 N	Oct 81
RT-11 POCKET GUIDE			
RT-11 V4.0 DOCUMENTATION CORRECTIONS AND ADDITIONS		11.7.1 N	Jul 80
RT-11 PROGRAMMER'S REFERENCE MANUAL			
DOCUMENTATION CORRECTIONS		11.8.1 N	Sep 80
INCORRECT PROGRAMMED REQUEST EXAMPLES		11.8.2 N	Mar 81
RT-11 SOFTWARE SUPPORT MANUAL			
RT-11 V4.0 DOCUMENTATION CORRECTIONS AND ADDITIONS		11.9.1 N	Jul 80
SOFTWARE SUPPORT MANUAL CORRECTION		11.9.2 N	Jun 81
ERROR IN DESCRIPTION OF .DRSET MACRO		11.9.3 N	Sep 81
DEBUGGING UTILITIES			
VDT.OBJ			
NOTES ON USING ODT OR VDT IN AN XM ENVIRONMENT		12.2.1 N	Jan 81
BATCH PACKAGE			
BATCH.SAV			
PATCH BATCH TO USE MONITOR SUFFIX	A	15.1.1 M	Oct 80
SPOOLING PACKAGE			
QUEUE.REL			
SUPERFLUOUS LINEFEED FROM QUEUE	B	16.1.1 M	Mar 81
NARROW BANNER PAGES FROM QUEUE	C	16.1.2 F	May 81
/R FOLLOWING /S IF NO OUPTUT QUEUED MAY CAUSE FATAL ERROR IN QUEUE	D	16.1.3 M	Aug 81
QUEMAN.SAV			
PROBLEMS WITH QUEMAN	B	16.2.1 M	Jan 81
KEYPAD EDITOR			
KED			
MAKE TERMINAL SETUP OPTIONAL IF MTATCH FAILS	A	17.1.1 F	Aug 80
PROVIDE A .CHAIN INTERFACE FOR KED	A	17.1.2 F	Aug 80
PROVIDE REASONABLE ACTIONS AND ERROR MESSAGES WHEN DEALING WITH DEGENERATE FILES	A	17.1.3 M	Oct 80
SEARCH FAILS IF TARGET IF FIRST OR LAST STRING IN THE FILE	A	17.1.4 M	Nov 80
KNOWN ERRORS AND RESTRICTIONS		17.1.5 R	Dec 80
"SET SEARCH EXACT JUNK" COMMAND CRASHES KED	C	17.1.6 M	Jul 81
REPEATED USE OF THE "APPEND" FUNCTION CRASHES KED	C	17.1.7 M	Jul 81
DISABLE REVERSE VIDEO DISPLAY BY KED	C	17.1.8 F	Jul 81
FILE SAMPLE.KED OMITTED FROM DISTRIBUTION		17.1.9 N	Aug 81
KED DOCUMENTATION CORRECTION		17.1.10 N	Nov 81

COMPONENT	AUTOPATCH KIT	SEQUENCE	MON/YR
K52			
MAKE TERMINAL SETUP OPTIONAL IF MTATCH FAILS	A	17.2.1 F	Aug 80
PROVIDE A .CHAIN INTERFACE FOR K52	A	17.2.2 F	Aug 80
PROVIDE REASONABLE ACTIONS AND ERROR MESSAGES WHEN DEALING WITH DEGENERATE FILES	A	17.2.3 M	Oct 80
SEARCH FAILS IF TARGET IS FIRST OR LAST STRING IN THE FILE	A	17.2.4 M	Nov 80
KNOWN ERRORS AND RESTRICTIONS		17.2.5 R	Dec 80
"SET SEARCH EXACT JUNK" COMMAND CRASHES K52	C	17.2.6 M	Jul 81
REPEATED USE OF THE "APPEND" FUNCTION CRASHES K52	C	17.2.7 M	Jul 81
NO EQUIVALENT PATCH FOR K52 FOR SEQ 17.1.8		17.2.8 N	Aug 81
FILE SAMPLE.KED OMITTED FROM DISTRIBUTION		17.2.9 N	Aug 81
AUTOMATED PATCHING FACILITY PACKAGE			
PACKAGE NOTES			
AUTOPATCH SERVICE FOR RT-11		19.1.1 N	Jun 81
FMS-11/RT-11 V1.1			
ANNOUNCING FMS-11/RT-11 V1.1		33.1 N	Aug 80
FRED V1.1			
ZERO IMPURE AREA SIZE PROBLEM		33.3.1 M	Sep 81
BASIC-11/RT-11 V2.0			
INTERPRETER			
REPUBLICATION OF PATCHES		35.1.1 N+	Mar 80
PRINT USING - PATCH A	A	35.1.2 M+	Mar 80
RESEQ - PATCH B	A	35.1.3 M+	Mar 80
EDITING A DIM #n STATEMENT - PATCH C	A	35.1.4 M+	Mar 80
DOUBLE PRECISION HANG - PATCH D	A	35.1.5 M+	Mar 80
SAVE dev: AND REPLACE dev: - PATCH E	A	35.1.6 M+	Mar 80
SINGLE PRECISION HANG AND NUMERIC CONVERSION PROBLEM - PATCH F	A	35.1.7 M+	Mar 80
SAVE .XXX & UNSAVE .XXX - PATCH G	A	35.1.8 M+	Mar 80
NEW - PATCH H	A	35.1.9 M+	Mar 80
RESEQ - PATCH I	A	35.1.10 M+	Mar 80
LISTNH / OLD - PATCH J	A	35.1.11 M+	Mar 80
SYS(1) - PATCH K	A	35.1.12 M+	Mar 80
CALL - PATCH L	A	35.1.13 M+	Mar 80
DOUBLE PRECISION INTEGER VARIABLES - PATCH M	A	35.1.14 M+	Mar 80
FILESIZE 0 - PATCH N	A	35.1.15 M+	Mar 80
INTEGERS IN DOUBLE PRECISION BASIC-11		35.1.16 N+	Mar 80
REM STATEMENTS ON MULTI-STATEMENT LINES - PATCH O	A	35.1.17 M+	Mar 80
INT FUNCTION - PATCH P FOR SINGLE USER BASIC-11	A	35.1.18 M	Nov 80
RETRACTED		35.1.19 M	May 81
PRINT USING - PATCH R FOR SINGLE USER BASIC-11	B	35.1.20 M	Jan 81
OMITTING TRIG FUNCTIONS FROM BASIC-11	B	35.1.21 N	Jan 81
STRING CONCATENATION - PATCH S FOR SINGLE USER BASIC-11	B	35.1.22 M	Mar 81
PROBLEM WITH BASIC-11 PATCH Q		35.1.23 N	May 81
UTILITIES			
CONVERSION PROGRAM		35.2.1 M+	Mar 80
BASIC-11/RT-11 V2 CONVERSION PROGRAM PATCH 1		35.2.2 M+	Mar 80
DOCUMENTATION			
OVERLAYING WHILE IN A SUBROUTINE		35.3.1 R+	Mar 80
OPERATION OF CTRLC, RCTRLC AND SYS(6) FUNCTIONS AND THE CTRL/C COMMAND		35.3.2 N+	Mar 80
OPERATION OF OLD, RUN, CHAIN, AND OVERLAY WHEN THE SPECIFIED FILE IS NOT FOUND		35.3.3 N+	Mar 80
CREATING AND ACCESSING VIRTUAL ARRAY FILES		35.3.4 N+	Mar 80
STORAGE OF THE NULL CHARACTER IN STRING VARIABLES AND VIRTUAL STRING ARRAYS		35.3.5 N+	Mar 80
USE OF COMPILE COMMAND		35.3.6 N+	Mar 80
STRING MANIPULATION IN ASSEMBLY LANGUAGE ROUTINES		35.3.7 N+	Mar 80
MAXIMUM ARRAY SUBSCRIPT SIZE		35.3.8 N+	Mar 80
NEW MANUAL AVAILABLE FOR BASIC-11/RT-11		35.3.9 N	May 81

COMPONENT	AUTOPATCH KIT	SEQUENCE	NOW IN
MU BASIC-11/RT-11 V2.0			
INTERPRETER			
CHAINING WITH COMMON - PATCH A	36.1.1 M+		Mar 80
VIRTUAL FILE I/O - PATCH B	36.1.2 M+		Mar 80
SYS(1,n) FUNCTION - PATCH C	36.1.3 M+		Mar 80
RESEQ - PATCH D	36.1.4 M+		Mar 80
VALUES IN PATCHES A, B, C	36.1.5 N+		Mar 80
LISTNH / OLD - PATCH E	36.1.6 M+		Mar 80
CALL - PATCH F	36.1.7 M+		Mar 80
DOUBLE PRECISION INTEGER VARIABLES - PATCH G	36.1.8 M+		Mar 80
INPUT #/PRINT # - PATCH H	36.1.9 M+		Mar 80
OLD OF A ZERO BLOCK FILE - PATCH I	36.1.10 M+		Mar 80
ADDITION TO PATCH B - PATCH J	36.1.11 M+		Mar 80
DEVICE MNEMONIC PROBLEM - PATCH K	36.1.12 M+		Mar 80
CLOSE - PATCH L	36.1.13 M+		Mar 80
REM STATEMENTS ON MULTI-STATEMENT LINES - PATCH M	36.1.14 M+		Mar 80
DEASSIGNING A TERMINAL - PATCH N	36.1.15 M+		Mar 80
INTEGERS IN DOUBLE PRECISION MU BASIC-11	36.1.16 N+		Mar 80
USE OF SYS(1,n) FUNCTION WHEN ',n' IS OMITTED - PATCH O	36.1.17 M+		Mar 80
DISABLING CR/LF USING TTYSET - PATCH P	36.1.18 M+		Mar 80
HANDLER FETCH ERROR MAY LEAD TO MONITOR FAULT - PATCH Q	36.1.19 M+		Mar 80
REMOTE LINES - PATCH R FOR MULTI-USER BASIC-11	36.1.20 M		Nov 80
INT FUNCTION - PATCH S FOR MULTI-USER BASIC-11	36.1.21 M		Nov 80
PRINT USING - REVISED PATCH T FOR MULTI USER BASIC-11	36.1.22 M		Apr 81
RETRACTED	36.1.23 MM		Jan 81
OMITTING TRIG FUNCTIONS FROM MU BASIC-11	36.1.24 N		Jan 81
SYS(1) FUNCTION - PATCH V FOR MULTI USER BASIC-11	36.1.25 M		Jan 81
STRING CONCATENATION - PATCH W FOR MULTI USER BASIC-11	36.1.26 M		Mar 81
CARD READER EOF - PATCH X FOR MULTI USER BASIC-11	36.1.27 M		May 81
CLOSE GIVES ILLEGAL FILES SPEC - PATCH Y FOR MULTI USER BASIC-11	36.1.28 M		May 81
TTSET GIVES TRAP TO 10 - MU BASIC PATCH Z	36.1.29 M		May 81
PROBLEM WITH MU BASIC-11 PATCH U	36.1.30 N		Jul 81
UTILITIES			
MU BASIC-11/RT-11 V2 CONFIGURATION PROGRAM PATCH 1	36.2.1 M+		Mar 80
MU BASIC-11/RT-11 V2 CONVERSION PROGRAM	36.2.2 F+		Mar 80
DOCUMENTATION			
OPERATION OF CTRLC, RCTRLC AND SYS(6) FUNCTIONS AND THE CTRL/C COMMAND	36.3.1 N+		Mar 80
MEMORY REQUIREMENTS OF OPTIONAL FUNCTIONS, ETC.	36.3.2 N+		Mar 80
OPERATION OF OLD, RUN, CHAIN AND OVERLAY WHEN THE SPECIFIED FILE IS NOT FOUND	36.3.3 N+		Mar 80
CREATING AND ACCESSING VIRTUAL ARRAY FILES	36.3.4 N+		Mar 80
STORAGE OF THE NULL CHARACTER IN STRING VARIABLES AND VIRTUAL STRING ARRAYS	36.3.5 N+		Mar 80
USE OF COMPILE COMMAND	36.3.6 N+		Mar 80
STRING MANIPULATIONN IN ASSEMBLY LANGUAGE ROUTINES	36.3.7 N+		Mar 80
ERROR IN TABLE 4-1 OF THE USER'S GUIDE	36.3.8 N+		Mar 80
RESTRICTION ON USR RESIDENCY WHEN RUNNING IN FOREGROUND	36.3.9 N+		Mar 80
MAXIMUM ARRAY SUBSCRIPT SIZE	36.3.10 N+		Mar 80
ASSEMBLING SOURCE FILES (SOURCE LICENSE HOLDERS ONLY)	36.3.11 N+		Mar 80
USE OF PATCH UTILITY	36.3.12 N+		Mar 80
APL-11 V2.0			
PACKAGE NOTES			
APL IS AVAILABLE IN THE DECUS LIBRARY	38.1.1 N		Sep 81
FORTRAN IV/RT-11 V2.1			
COMPILER			
PATCH 1	44.1.1 M+		Mar 80
PATCH 2	44.1.2 M+		Mar 80
PATCH 3	44.1.3 M+		Mar 80
REGISTER ALLOCATION - PATCH 8	44.1.4 M+		Mar 80
FORTRAN FAILS TO COMPILE DO-LOOPS - PATCH 11	44.1.5 M+		Mar 80

COMPONENT	AUTOPATCH KIT	SEQUENCE	MON/YR
COMMON SUBEXPRESSION OPTIMIZATION - PATCH 17		44.1.6 M+	Mar 80
BYTE COMPARISON AND COMMON SUBEXPRESSION OPTIMIZATION - PATCH 20		44.1.7 M+	Mar 80
DIRECT ACCESS READ - PATCH 21		44.1.8 M+	Mar 80
COMPLEX VARIABLE TO CONSTANT COMPARISON - PATCH 22		44.1.9 M+	Mar 80
OTS			
PATCH 4		44.2.1 M+	Mar 80
CARRIAGE CONTROL OPTION - PATCH 5		44.2.2 M+	Mar 80
OPEN FAILURE WITH TYPE='OLD' - PATCH 6		44.2.3 M+	Mar 80
FORTRAN LIBRARY FUNCTION ERRTST - PATCH 7		44.2.4 M+	Mar 80
SMALLER EXECUTION-TIME PROGRAMS		44.2.5 N+	Mar 80
FORTRAN OTS - PATCH 9		44.2.6 M+	Mar 80
I/O FROM A FORTRAN COMPLETION ROUTINE - PATCH 10		44.2.7 M+	Mar 80
CALL CLOSE (FORTRAN LIBRARY SUBROUTINE) - PATCH 12		44.2.8 M+	Mar 80
UNFORMATTED BYTE I/O - PATCH 13		44.2.9 F+	Mar 80
LIST DIRECTED INPUT ERRORS - PATCH 14		44.2.10 M+	Mar 80
DISP='DELETE' OPTION - PATCH 15		44.2.11 M+	Mar 80
FORMATTED RECORD OUTPUT - PATCH 16		44.2.12 M+	Mar 80
CALL ASSIGN CARRIAGE CONTROL - PATCH 18		44.2.13 M+	Mar 80
NON-PLAS VIRTUAL ARRAY INITIALIZATION - PATCH 19		44.2.14 M+	Mar 80
DOCUMENTATION			
FORTRAN IV V2.1 MAINTENANCE RELEASE		44.3.1 N+	Mar 80
INSTALLING FORTRAN IV V2.1 UNDER RT-11 V4		44.3.2 N	Aug 80

FORTRAN IV/RT-11 V2.5

COMPILER			
ANNOUNCING PDP-11 FORTRAN IV/RT-11 V2.5		45.1.1 N	Sep 80
THE COMPILER INCORRECTLY PARSES SOME EXPRESSIONS IN I/O LISTS	A	45.1.2 M	Nov 80
THE COMPILER INCORRECTLY CONVERTS INTEGER TO BYTE IN LOGICAL EXPRESSIONS	A	45.1.3 M	Nov 80
THE COMPILER GENERATES INCORRECT CODE FOR EQUIVALENCED ARRAYS (PAT 12)	D	45.1.4 M	Sep 81
THE COMPILER INCORRECTLY INTERPRETS COMMENTS WITH TABS (PAT 17)		45.1.5 M	Nov 81
MISSING END IN MAIN PROGRAM CAN CAUSE COMPILER CRASH (PAT 18)		45.1.6 M	Nov 81
OTS			
THE OTS DOES NOT SET DEFAULT CARRIAGE CONTROL FOR SERIAL LINE PRINTER	B	45.2.1 M	Jan 81
THE LUN IS NOT SAVED WHEN AN ERROR OCCURS WHILE OPENING A FILE	B	45.2.2 M	Jul 81
PATCH TO ALLOW THE PLACEMENT OF THE FORTRAN OTS WORK AREA BETWEEN THE PROGRAM'S HIGH LIMIT AND THE BASE OF THE FIRST VIRTUAL OVERLAY FOR PRIVILEGED FORTRAN JOBS	B	45.2.3 F	Feb 81
BOUNDARY CONDITION ON FORMATTED I/O CORRUPTS I/O (PAT 6)	B	45.2.4 M	Mar 81
DEFAULT CARRIAGE CONTROL FOR IMPLIED SEQUENTIAL ACCESS FILES (PAT 7)	C	45.2.5 M	Jul 81
STANDALONE FORTRAN YIELDS RUN-TIME ERROR 64 (PAT 8)	B	45.2.6 M	Apr 81
DISPOSE = 'KEEP' NOT RECOGNIZED WITH READONLY OPEN PARAMETER (PAT 9)	C	45.2.7 M	Jul 81
THE DATE ROUTINE DOES NOT PERMIT BYTE ALIGNED PARAMETERS (PAT10)	C	45.2.8 M	Jul 81
IMPLICIT READ FAILURE MAY HALT PROCESSOR (PAT 11)	C	45.2.9 M	Jul 81
FPU DOUBLE PRECISION SINE/COSINE MODULE ERRORS (PAT 13)	D	45.2.10 M	Sep 81
EMBEDDED BLANKS OVERRIDE THE ICNT PARAMETER IN THE ASSIGN ROUTINE		45.2.11 M	Oct 81
THE DEFAULT CARRIAGE CONTROL FOR THE ASSIGN ROUTINE IS INCORRECT		45.2.12 M	Oct 81
CORRECTION FOR UNIT CLOSING (PAT 16)		45.2.13 M	Nov 81

GAMMA V3.1

FGAMMA-FRAMES 3 TO 10 OF GSA STUDY SOMETIMES CORRUPT SYSTEM MAY HANG WHEN DISK SQUEEZED		49.2.1 M	Jul 81
		49.2.2 M	Oct 81
ISOMETRIC DISPLAY IMAGES USE INCORRECT INTENSITY LEVELS		49.5.1 M	Oct 81
SLICE - LAST POINT IS NOT PLOTTED		49.5.2 M	Nov 81
PATCHING THE RT-11 MONITOR FOR GAMMA-11		49.11.1 M	Nov 81

COMPONENT	AUTOPATCH KIT SEQUENCE	MON/YR
DECnet-RT V1.1		
NETGEN		
FULL DUPLEX, EXTENDED MEMORY DUP DRIVER WON'T BUILD	50.3.1 M	Aug 80
DDCMP		
DDCMP BRANCH OUT OF RANGE AND Q ELEMENT RETURN PROBLEMS	50.5.1 M	Aug 80
NSP		
NSP CORRUPTS PHYSICAL LINE ERROR CODE	50.6.1 M	Aug 80
NFT		
NFT INCORRECTLY ALLOCATES RT-11 QUEUE ELEMENTS	50.9.1 M	Jun 80
FAL		
FAL INCORRECTLY ALLOCATES RT-11 QUEUE ELEMENTS	50.10.1 M	Jun 80
FAL MAY HANG ON ASCII TRANSFERS OF UNFILLED BLOCKS	50.10.2 M	Aug 80
FAL WILL NOT ALLOW ACCESS COMPLETE AFTER CONTROL CONNECT	50.10.3 M	Aug 80
NFARS		
DAP ROUTINES DO NOT REPORT PHYSICAL LINE ERRORS	50.11.1 M	Nov 80
DAP ATTEMPTS TO MULTIPLY RETURN BUFFERS ON ERROR	50.11.2 M	Aug 80
DAP SEND ONE CHARACTER ON ZERO LENGTH TRANSMITS	50.11.3 M	Nov 80
DAPAST CLEARS THE USER CHANNEL NUMBER TOO SOON	50.11.4 M	Aug 80
FORTRAN USER INTERFACES		
NOTES ON THE USE OF THE DECnet-RT FORTRAN INTERFACES	50.16.1 M	Jun 80
MACRO USER INTERFACES		
NOTES ON DECnet-RT MACRO PROGRAMMING	50.16.2 N	Jun 80
CTS-300 V6.0		
DBUILD		
CORRECTION FOR THREE DECFORM PROBLEMS	51.2.1 M	Oct 81
DECFORM		
PROBLEM WITH DECFORM AND THE VT100	51.4.1 M	Nov 80
CORRECTION FOR THREE DECFORM PROBLEMS	51.4.2 M	Oct 81
DECFORM WITH VT100 TERMINAL CAUSES BAD CHARACTER ON TYPE-AHEAD	51.4.3 M	Nov 81
DIBOL		
TWO CORRECTIONS TO XCALL PAK/UNPAK	51.5.1 M	Aug 81
DICOMP		
FOUR DICOMP ERRORS FIXED	51.6.1 M	Oct 81
DKED		
TWO PROBLEMS WITH DKED	51.7 M	Aug 80
DKED SELECT/CUT AND KEYPAD ERRORS	51.7.2 M	Sep 80
DKED INCORRECTLY HANDLES CONTINUED LINES	51.7.3 M	Oct 81
ISMUTL		
CORRECTIONS FOR ISAM UTILITY ERRORS	51.8.1 M	Nov 81
LPTSPL		
TSD SPOOLER GETS CONFUSED	51.9.1 M	Nov 80
SORTM		
SORT SENDS MESSAGES INDISCRIMINATELY	51.14.1 M	Jan 81
SUD		
CORRECTIONS TO DIBOL RUN TIME SYSTEMS	51.16.1 M	Jan 81
PROBLEMS WITH XCALL RENAM AND ERROR 6	51.16.2 M	Feb 81
NO ERROR 22 RETURNED	51.16.3 M	Nov 81
DIBOL STACK OVERFLOW ON OPEN	51.16.4 M	Nov 81
TDIBOL		
PROBLEM WITH XCALL PAK	51.17 M	Aug 80

COMPONENT	AUTOPATCH KIT	SEQUENCE	MON/YR
PROBLEM UNPACKING DATA			
TWO CORRECTIONS TO XCALL PAK/UNPAK		51.17.2 M	Sep 80
		51.17.3 M	Aug 81
TSD			
CORRECTIONS TO DIBOL RUN TIME SYSTEMS		51.18.1 M	Jan 81
PROBLEMS WITH XCALL RENAM AND ERROR 6		51.18.2 M	Feb 81
INCORRECT TERMINAL WIDTHS AND CIS PROBLEM		51.18.3 M	Aug 81
CORRECTION TO TSD/XMTSD		51.18.4 M	Sep 81
CORRECTION FOR ISAM PROBLEM		51.18.5 M	Oct 81
"SEND" STARTS MULTIPLE JOBS		51.18.6 M	Oct 81
NO ERROR 22 RETURNED		51.18.7 M	Nov 81
DIBOL STACK OVERFLOW ON OPEN		51.18.8 M	Nov 81
XMTSD			
CONFLICT BETWEEN XMTSD AND RT-11 OVER CHANNEL 16		51.20 M	Aug 80
CORRECTIONS TO DIBOL RUN TIME SYSTEMS		51.20.2 M	Jan 81
PROBLEMS WITH XCALL RENAM AND ERROR 6		51.20.3 M	Feb 81
PATCH FOR XMTSD WITH CIS		51.20.4 M	Apr 81
INCORRECT TERMINAL WIDTHS AND CIS PROBLEM		51.20.5 M	Aug 81
XMTSD HANGS WHEN LP IS OFF-LINE		51.20.6 M	Sep 81
CORRECTION TO TSD/XMTSD		51.20.7 M	Sep 81
CORRECTION FOR ISAM PROBLEM		51.20.8 M	Oct 81
"SEND" STARTS MULTIPLE JOBS		51.20.9 M	Oct 81
NO ERROR 22 RETURNED		51.20.10 M	Nov 81
DIBOL STACK OVERFLOW ON OPEN		51.20.11 M	Nov 81
DOCUMENTATION			
CTS-300 VERSION 6 IS RELEASED		51.21 N	Aug 80
TWO RT-11 PATCHES MODIFIED FOR CTS-300 USE		51.21.2 N	Oct 80
RT-11 PATCH TO LS.MAC MODIFIED FOR CTS-300 USE		51.21.3 N	Feb 81
ADDITIONS TO CTS-300 DOCUMENTATION ON PRINT UTILITY		51.21.4 N	Mar 81
LIST OF SEQUENCE NUMBERS FOR CTS-300 V6		51.21.5 N	Mar 81
SOME NOTES ON RT-11 PATCH SEQ 6.13.3 M TO LS.MAC FOR CTS-300 USERS		51.21.6 M	Jul 81
SOME NOTES ON RT-11 PATCH SEQ 6.13.4 M TO LS.MAC FOR CTS-300 USERS		51.21.7 N	Aug 81
SOME NOTES ON RT-11 PATCH SEQ 6.13.5 M TO LS.MAC FOR CTS-300 USERS		51.21.8 N	Aug 81
LS.MAC			
SPECIAL CTS-300 PATCH FOR LS.MAC		51.23.1 M	Feb 81
CORRECTION TO CTS-300 PATCH 11 (SEQ 51.23.1 M) TO LS.MAC		51.23.2 M	Jun 81
SYSTBL.CND			
RT-11 PATCH TO SYSTBL.CND MODIFIED FOR CTS-300 USE		51.25.1 M	Mar 81
RT-11 PATCH SEQ 10.3.2 M TO SYSTBL.CND MODIFIED FOR CTS-300 USE		51.25.2 M	Apr 81
GAMMA-11 V3.0			
BGAMMA/FGAMMA			
PROBLEMS WITH GAMMA-11 V3.0		54.1.1 M	Jun 81
FGAMMA-FRAMES 3 TO 10 OF GSA STUDY SOMETIMES CORRUPT		54.1.2 M	Jul 81
ISOMETRIC DISPLAY IMAGES USE INCORRECT INTENSITY LEVELS		54.1.3 M	Sep 81
SYSTEM MAY HANG WHEN DISK SQUEEZED		54.1.4 M	Oct 81
CTS-300 DICAM (3271) V3.1			
INCORRECT ACK SENT IN CONVERSATIONAL MODE		55.1.1 M	Jul 81
LOOP WHEN CLOSE IS ISSUED WITH OUTSTANDING I/O REQUESTS		55.1.2 M	Jul 81
CTS-300 RDCP (2780/3780) V2.0			
ABNORMAL TERMINATION AND LISTING PROBLEMS		56.1.1 M	Dec 80
SUBSCRIPT ERROR IN RDCP EDITOR		56.1.2 M	Dec 80
MEMORY CORRUPTION PROBLEM		56.1.3 M	Dec 80

digital
Software Product Description

PRODUCT NAME: MU BASIC-11/RT-11, Version 2.1 **SPD 12.20.7**

DESCRIPTION:

BASIC is a conversational programming language developed at Dartmouth College that uses simple English language-like statements and familiar mathematical notations to perform operations.

MU BASIC-11/RT-11 is an interpreter operating under any RT-11 monitor with multiterminal capability (up to eight terminals).

Features

- One to four users on PDP-11/03, PDP-11/23, LSI-11, or PDT-11/150 systems
- One to eight users with equal size memory partitions on larger PDP-11s; no swapping
- Ability to use extended memory beyond 56KB with RT-11 XM monitor
- A variety of program manipulation commands, including commands for saving, editing, running, and retrieving BASIC programs
- Support for real (single or double precision) integer and string data types
- Ability to run in either the foreground or background under the RT-11 FB monitor concurrently with another job; supports all RT-11 supported devices (except VT11)
- Support for all terminals supported by RT-11
- User identification and file protection scheme to control system access and utilization (optional); public and group libraries for file sharing; privileged user capability
- All peripheral devices can be used by any user at any terminal; however, the ASSIGN and DEASSIGN commands permit restricted use of a non-public device to a single user
- Limited ability for a user to ASSIGN a terminal (that is currently not in use) as an input or output device
- Sequential data storage using the RT-11 file system. The maximum number of simultaneously open files is limited only by available memory and RT-11 channel considerations
- Virtual arrays on disk (integer, real, and string) for processing quantities of data too large to fit in available memory, or for performing random-access I/O
- Program chaining and overlaying with COMMON to accommodate large programs
- Formatted output with PRINT USING statement
- String support, complete with string arrays and functions
- A CALL statement that allows easy interfacing of assembly language routines. These routines can be called by name and passed multiple arguments. These routines must be included at link time.
- Immediate mode execution for desk calculator operation and program debugging
- Privileged mode to protect applications programs

MINIMUM HARDWARE REQUIRED:

Any valid RT-11, Version 4.0 (FB, SJ, or XM monitor with multiterminal support) configuration with

- RK11, RX11, or RL11 controller and drive
- Line frequency clock
- 56K bytes of memory

Total memory required depends on the number of users, length of programs, BASIC features included, devices used, and number of simultaneously open files. A maximum of four users are supported for PDP-11/03, PDP-11/23, LSI-11, or PDT-11/150 based systems.

DECtape II is not supported as the system device.

OPTIONAL HARDWARE:

Supports any device supported by the prerequisite software (except VT11).

KT11 Memory Management Unit

PREREQUISITE SOFTWARE:

One of the following:

- RT-11, Version 4.0 Operating System with multiterminal support. Multiterminal support must be added to RT-11 through system generation; this procedure is included in an MU BASIC-11/RT-11 installation.
- RT-11, Version 4.0 FB, SJ, or XM monitors
- RT^2, Version 4.0 with multiterminal support

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

DIGITAL SUPPORTED

MU BASIC-11/RT-11 is a DIGITAL Supported Software Product.

SOFTWARE INSTALLATION:

DIGITAL INSTALLED

DIGITAL installation is required for Software Product Support. There is no charge for installation if performed at the time of system installation, DIGITAL installed software products, except for operating systems, are subject to an add-on installation fee when purchased subsequent to system installation.

SOFTWARE PRODUCT SUPPORT:

MU BASIC-11/RT-11 includes standard warranty services as defined in the Software Support Categories Addendum of this SPD.

ORDERING INFORMATION:

All binary licensed software, including any subsequent updates, is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the software) only for use on such CPU.

All source licensed software is furnished only under the terms and conditions of a separate Software Program Sources License Agreement between Purchaser and DIGITAL.

Options with no support services are only available after the purchase of one supported license.

A single-use, license-only option is a license to copy the software previously obtained under license.

Sources and/or listings options are only available after the purchase of at least one supported license and after a source license agreement is in effect.

The following key (E, G, H, Q, R, Y, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ921-AE = binaries on RK05 Disk Cartridge.

E = RK05 Disk Cartridge
G = TU58 DECtape II Cartridge*
H = RL02 Disk Cartridge
Q = RL01 Disk Cartridge
R = Microfiche
Y = RX01 Floppy Diskette
Z = No hardware dependency

* The TU58 is to be used in a stand-alone, lightly loaded environment. If used as a file device in a heavily loaded environment, it can degrade system performance.

QJ921 -A— Single-use license, binaries documentation, support services (media: E, G, H, Q, Y)

QJ921 -D— Single-use license-only option, no binaries, no documentation, no support services (media: Z)

Sources/Listings Options

QJ921 -E— Sources (media: E, Q, Y)

QJ921 -F— Listings (media: R)

Update/Unsupported Options

Users of RT-11 whose specified Support Category warranty has expired may order under license the following software option as an update to an earlier version. The option may also be purchased for use on a second or subsequent CPU, in conjunction with a binary, single-use, license-only option. Options are distributed in binary form on the appropriate medium and include no installation or other services unless specifically stated.

QJ921 -H— Binaries, documentation (media: E, G, H, Q, Y)

QJ921 -H— Right to copy for single-use, no binaries, no documentation (media: Z)

Sources/Listings Update Options

The following options are available to licensed users as updates to sources and/or listings options. The update is distributed in source form on the appropriate medium and includes no installation or other services unless specifically stated.

QJ921 -N— Sources (media: E, Q, Y)

QJ921 -N— Listings (media: R)

Miscellaneous Options

QJ921 -G— Documentation-only kit (media: Z)

ADDITIONAL SERVICES:

The following post-warranty Software Product Services for this software product are available to licensed customers:

- Self-Maintenance Service
- Basic Service
- DECsupport Service

The prerequisite being the purchase of the equivalent level RT-11 Software Product Service. Customers should contact their local DIGITAL office for additional information on the availability of these services.

digital
Software Product Description

PRODUCT NAME: LSP-11, Version 1.2
Laboratory Subroutine Package

SPD 15.44.3

DESCRIPTION:

The Laboratory Subroutine Package (LSP) is a set of FORTRAN-callable subroutines that perform a variety of standard analytical tasks commonly encountered in the laboratory. All of the subroutines are dedicated to processing data that has been acquired by other laboratory data acquisition software.

The Laboratory Subroutine Package provides the user with the following data manipulation subroutines.

- Peak processing
- Envelope processing
- Interval histogramming with reference points
- Fast Fourier transform
- Phase angle and amplitude spectrum
- Power spectrum
- Correlation function

MINIMUM HARDWARE REQUIRED:

One of the following:

- Any valid RT-11 Operating System configuration supporting FORTRAN IV/RT-11 with at least 32K bytes of memory
- Any valid mapped RSX-11M Operating System configuration supporting either FORTRAN IV/IAS-RSX or FORTRAN-77/RSX with at least a 32K byte user available partition
- Hardware configuration must contain a device capable of reading distribution media

OPTIONAL HARDWARE:

- PDP-11 Extended Instruction Set
- PDP-11 Extended Arithmetic Element

PREREQUISITE SOFTWARE:

- RT-11 Operating System, Version 4.0 with FORTRAN IV/RT-11, Version 2.5
- RSX-11M Operating System, Version 3.2 with either FORTRAN IV/IAS-RSX, Version 2.5 or FORTRAN-77/RSX, Version 4.0

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

DIGITAL SUPPORTED

LSP-11 is a DIGITAL Supported Software Product.

SOFTWARE INSTALLATION:

CUSTOMER INSTALLED

LSP-11 is a software product engineered to be installed by the customer and includes other Software Product Support services listed below.

SOFTWARE PRODUCT SUPPORT:

LSP-11 includes standard warranty services as defined in the Software Support Categories Addendum of this SPD.

ORDERING INFORMATION:

All binary licensed software, including any subsequent updates, is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the software) only for use on such CPU.

All source licensed software is furnished only under the terms and conditions of a separate Software Program Sources License Agreement between Purchaser and DIGITAL.

Options with no support services are only available after the purchase of one supported license.

A single-use, license-only option is a license to copy the software previously obtained under license.

The following key (D, E, H, M, Q, T, Y, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ724-AD = binaries on 9-track 800 BPI Magtape (NRZI).

D = 9-track 800 BPI Magtape (NRZI)
E = RK05 Disk Cartridge
H = RL02 Disk Cartridge
M = 9-track 1600 BPI Magtape (PE)
Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
Y = RX01 Floppy Diskette
Z = No hardware dependency

For RT-11 Systems

QJ624 -A— Single-use license, binaries, documentation, support services (media: E, H, Q, Y)

QJ624 -D— Single-use license-only option, no binaries, no documentation, no support services (media: Z)

For RSX-11M Systems

QJ724 -A— Single-use license, binaries, documentation, support services (media: D, E, H, M, Q, T)

QJ724 -D— Single-use license-only option, no binaries, no documentation, no support services (media: Z)

Update/Unsupported Options

Users of LSP-11 whose specified Support Category warranty has expired may order under license the following software option as an update to an earlier version. The option may also be purchased for use on a second or subsequent CPU, in conjunction with a binary, single-use, license-only option. Options are distributed in binary form on the appropriate medium and include no installation or other services unless specifically stated.

For RT-11 Systems

QJ624 -H— Binaries, documentation (media: E, H, Q, Y)

QJ624 -H— Right to copy for single-use, no binaries, no documentation (media: Z)

For RSX-11M Systems

QJ724 -H— Binaries, documentation (media: D, E, H, M, Q, T)

QJ724 -H— Right to copy for single-use, no binaries, no documentation (media: Z)

ADDITIONAL SERVICES:

The following post-warranty Software Product Services for this software product are available to licensed customers:

- Self-Maintenance Service
- Basic Service
- DECsupport Service

The prerequisite being the purchase of the equivalent level RSX-11M or RT-11 Software Product Service. Customers should contact their local DIGITAL office for additional information on the availability of these services.

digital
Software Product Description

PRODUCT NAME: SSP-11, Version 1.3
PDP-11 Scientific Subroutine Package

SPD 15.45.7

DESCRIPTION:

The Scientific Subroutine Package (SSP) is a collection of over 100 mathematical and statistical routines commonly required in scientific programming. The subroutines are written in FORTRAN and contain no I/O statements.

Many of the larger statistical routines are provided as a collection of several smaller routines. This enables easier incorporation in larger programs requiring overlays.

SSP-11 Subroutine

ABSNT	Detection of missing data
ARRAY	Vector storage double dimensioned storage conversion
AUTO	Autocovariances
AVCAL	AND operation
AVDAT	Data storage allocation
BESI	I Bessel function
BESJ	J Bessel function
BESK	K Bessel function
BESY	Y Bessel function
BOUND	Selections of observations within bounds
CADD	Add column of one matrix to column of another matrix
CANOR	Canonical correlation
CCPY	Copy column of matrix into vector
CCUT	Partition column-wise
CEL1	Elliptic integrals of the first kind
CEL2	Elliptic integrals of the second kind
CHISQ	CHI square test for a contingency table
CINT	Interchange two columns
CORRE	Means, standard deviations, and correlations
CROSS	Cross covariances
CS	Fresnel integrals
CSRT	Sort matrix columns
CSUM	Sum the columns of a matrix
CTAB	Tabulate the columns of a matrix
CTIE	Adjoin two matrices column-wise
DCLA	Replace diagonal with scalar
DCPY	Copy diagonal of matrix into vector
DISCR	Discriminant functions
DMATX	Means and dispersion matrix
EIGEN	Eigenvalues and eigenvectors of a real, symmetric matrix
EXPI	Exponential integral
EXSMO	Triple exponential smoothing
FORIF	Fourier analysis of a given function
FORIT	Fourier analysis of a tabulated function
GAMMA	Gamma function
GAUSS	Normal random numbers
GDATA	Data generation
GMADD	Add two general matrices
GMPRD	Product of two general matrices
GMSUB	Subtract two general matrices
GMTRA	Transpose of a general matrix
GTPRD	Transpose product of two general matrices
KRANK	Kendall rank correlation
LEP	Legendre polynomial
LOAD	Factor loading
LOC	Location in compressed-stored matrix
MADD	Add two matrices
MATA	Transpose product of matrix by itself
MCPY	Matrix copy
MEANQ	Mean square operation
MFUN	Matrix transformation by function
MOMEN	First four moments
MPRD	Matrix product (row into column)
MSTR	Storage conversion
MSUB	Subtract two matrices
MTRA	Transpose a matrix
MULTR	Multiple regression and correlation
NROOT	Eigenvalues and eigenvectors of a special nonsymmetric matrix

ORDER	Rearrangement of integer correlations
PADD	Add two polynomials
PADDM	Multiply polynomial by constant and add to another polynomial
PCLA	Replace one polynomial by another
PLCD	Complete linear synthetic division
PDER	Derivative of a polynomial
PDIV	Divide one polynomial by another
PILD	Evaluate polynomial and its derivative
PINT	Integral of a polynomial
PGCD	Greatest common divisor of two polynomials
PMPY	Multiply two polynomials
PNORM	Normalize coefficient vector of polynomial
POLRT	Real and complex roots of a real polynomial
PSUB	Subtract one polynomial from another
PQSD	Quadratic synthetic division of a polynomial
PVAL	Value of a polynomial
PVSUB	Substitute variable polynomial by another polynomial
QATR	Integral of a given function by trapezoidal rule using Romberg's extrapolation method
QSF	Integral of equidistantly tabulated function by Simpson's Rule
QTEST	Cochran Q-test
RADD	Add row of one matrix to row of another matrix
RCPY	Copy row of matrix into vector
RANK	Rank observations
RECP	Reciprocal function for MFUN
RCUT	Partition by row
RKGS	Solution of a system of first order differential equations with given initial values by the Runge-Kutta method
RINT	Interchanges two rows
RK2	Tabulated integral of first order differential equation by Runge-Kutta method
RK1	Integral of first-order differential equation by Runge-Kutta method
RSUM	Sum the rows of a matrix
RTAB	Tabulate the rows of a matrix
RSRT	Sort matrix rows
RTMI	Determine root within a range by Mueller's iteration
RTIE	Adjoin two matrices row-wise
RTWI	Refine estimate of root by Wegstein's iteration
RTNI	Refine estimate of root by Newton's iteration
SCLA	Matrix clear and add scalar
SADD	Add scalar to matrix
SDIV	Matrix divided by a scalar
SCMA	Scalar multiply column and add to another column
SICI	Sine/cosine integral
SIMQ	Solution of simultaneous linear algebraic equations
SMO	Application of filter coefficients (weights)
SMPY	Matrix multiplied by a scalar
SANK	Spearman rank correlation
SRMA	Multiply a row by a scalar and add to another row
SSUB	Subtract scalar from matrix
SUBMX	Build subset matrix
SUBST	Subset selection from observation matrix
TAB1	Tabulation of data (one variable)
TAB2	Tabulation of data (two variables)
TALLY	Totals, means, standard deviations, minimums, and maximums
TPRD	Transpose product
TRACE	Cumulative percentage of eigenvalues
TTSTT	Tests on population means
TWOAV	Friedman 2-way analysis of variance
UTEST	Mann-Whitney U-test
VARMX	Varimax rotation
WTEST	Kendall coefficient of concordance
XCPY	Copy submatrix from given matrix

MINIMUM HARDWARE REQUIRED:

- Any valid RT-11 Operating System configuration supporting FORTRAN IV/RT-11 with at least 32K bytes of memory
- Any valid mapped RSX-11M Operating System configuration supporting either FORTRAN IV/IAS-RSX or FORTRAN-77/RSX with at least 32K byte user available partition
- Hardware configuration must include a device capable of reading distribution media

OPTIONAL HARDWARE:

None

PREREQUISITE SOFTWARE:

- RT-11 Operating System, Version 4.0 with FORTRAN IV/RT-11, Version 2.5
- RSX-11M Operating System, Version 3.2 with either FORTRAN IV/IAS-RSX, Version 2.5 or FORTRAN-77/RSX, Version 4.0

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

DIGITAL SUPPORTED

SSP-11 is a DIGITAL Supported Software Product.

SOFTWARE INSTALLATION:

CUSTOMER INSTALLED

SSP-11 is a software product engineered to be installed by the customer and includes other Software Product Support services listed below.

SOFTWARE PRODUCT SUPPORT:

SSP-11 includes standard warranty services as defined in the Software Support Categories Addendum of this SPD.

ORDERING INFORMATION:

All binary licensed software, including any subsequent updates, is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the software) only for use on such CPU.

All source licensed software is furnished only under the terms and conditions of a separate Software Program Sources License Agreement between Purchaser and DIGITAL.

Options with no support services are only available after the purchase of one supported license.

A single-use, license-only option is a license to copy the software previously obtained under license.

The following key (D, E, H, M, Q, T, Y, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ962-AD = binaries on 9-track 800 BPI Magtape (NRZI).

D = 9-track 800 BPI Magtape (NRZI)
E = RK05 Disk Cartridge
H = RL02 Disk Cartridge
M = 9-track 1600 BPI Magtape (PE)
Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
Y = RX01 Floppy Diskette
Z = No hardware dependency

For RT-11 Systems

QJ960 -A— Single-use license, binaries, documentation, support services (media: E, H, Q, Y)

QJ960 -D— Single-use license-only option, no binaries, no documentation, no support services (media: Z)

For RSX-11M Systems

QJ962 -A— Single-use license, binaries, documentation, support services (media: D, E, H, M, Q, T)

QJ962 -D— Single-use license-only option, no binaries, no documentation, no support services (media: Z)

Update/Unsupported Options

Users of SSP-11 whose specified Support Category warranty has expired may order under license the following software option as an update to an earlier version. The option may also be purchased for use on a second or subsequent CPU, in conjunction with a binary, single-use, license-only option. Options are distributed in binary form on the appropriate medium and include no installation or other services unless specifically stated.

For RT-11 Systems

QJ960 -H— Binaries, documentation (media: E, H, Q, Y)

QJ960 -H— Right to copy for single use, no binaries, no documentation (media: Z)

For RSX-11M Systems

QJ962 -H— Binaries, documentation (media: D, E, H, M, Q, T)

QJ962 -H— Right to copy for single-use, no binaries, no documentation (media: Z)

ADDITIONAL SERVICES:

The following post-warranty Software Product Services for this software product are available to licensed customers:

- Self-Maintenance Service
- Basic Service
- DECsupport Service

The prerequisite being the purchase of the equivalent level RSX-11M or RT-11 Software Product Service. Customers should contact their local DIGITAL office for additional information on the availability of these services.

SOFTWARE PROBLEMS OR ENHANCEMENTS

Questions, problems, and enhancements to DIGITAL software should be reported on a Software Performance Report (SPR) form and mailed to the SPR Center at one of the following Digital Offices: *(SPR forms are available from the SPR Center).*

Areas Covered	SPR Center
United States; remainder of Far East, Middle East, Africa Latin America	Corporate Administrative Systems Group P.O. Box F Maynard, MA 01754
Canada	Digital Equipment of Canada, Ltd. P.O. Box 13000 Kanata, Ontario Canada, K2K 2A6
United Kingdom, Bahrein, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Qatar, Oman, Saudi Arabia, Syria, United Arab Emirates, Yemen. Arab Republic	Digital Equipment Co. Ltd. 2 Cheapside GB - Reading, Berkshire RG1 7AA England
Australia, New Zealand	Digital Equipment Aust. Pty. Ltd. P.O. Box 384 Chatswood, New South Wales 2067 Australia
Brazil	Digital Equipment Comercio e Industria Ltda. Avenida Augusto Severo, 156-A 20021 Rio de Janeiro, RJ Brazil
Caribbean	Digital Equipment Latin America P.O. Box 11038 Fernandez Juncos Station Santurce 00910 Puerto Rico
France	Digital Equipment France Cidex L225 18 Rue Saarinen F-94528, Rungis France
Italy	Digital Equipment S.p.A. Viale Fulvio Testi, 11 Ang. Via Gorki 105 I-20092 Cinisello Balsamo Milan Italy
Japan	Digital Equipment Corp. Intl. Japan Sunshine 60, P.O. Box 1135 1-1 Higashi Ikebukuro 3-Chome, Toshima-Ku, Tokyo, 170 Japan
Belgium, Holland, Luxemburg	Digital Equipment B.V. Kaap Hoorndreef 38 NL-3563 AV Utrecht Holland

Sweden	Digital Equipment AB P.O. Box 1250 S-17124 Solna 1 Sweden
Denmark	Digital Equipment Corp. AS Kristineberg 3 DK-2100 Copenhagen 0 Denmark
Finland	Digital Equipment Corp. Oy PL 16 SF-02201, Espoo 20 Finland
Norway	Digital Equipment Corp. A/S Pottemakerveien 8 N-Oslo 5 Norway
Austria, East Germany, West Germany, Poland, Hungary, Rumania, Czechoslovkia, Russia, Bulgaria	Digital Equipment Corp. GmbH Rheinstrasse 28 D - 8000 Munich 40 West Germany
Israel	Decsys, Computers Ltd. 4, Yirmiyahu Str. IL-63505 Tel Aviv Israel
Greece, Portugal, Spain, Switzerland, Yugoslavia, (Morocco, Algeria, Tunisia, Cyprus, Turkey, Malta)	Digital Equipment Corp. SA 9, Route des Jeunes Case Postale 191 CH-1211 Geneva 26 Switzerland
Mexico	Digital Equipment de Mexico, S.A. de C.V. Ave. Lopez Mateos 427, 1st. Floor Guadalajara Jalisco Mexico
China	Digital Computer Hong Kong Ltd. 1303-1309 Dominian Ctr. 43-59 Queen's Road East Wanchai Hong Kong

DECUS

WHY YOU SHOULD JOIN DECUS

- SYMPOSIA
- PROGRAM LIBRARY
- TECHNICAL PUBLICATIONS
- SPECIAL USER GROUPS

DECUS (the Digital Equipment Computer Users Society), a worldwide association of customers and employees, provides a forum for the exchange of useful information, new program packages, and other innovations among those who use and supply the products of Digital Equipment Corporation.

Founded in 1961, DECUS is one of the largest and most active associations of its type in the world. Its objectives are to advance the effective utilization of computers, computer peripheral equipment, and software manufactured and marketed by Digital Equipment Corporation, by promoting the interchange of information concerning their uses; advance the art of computation through mutual education and exchange of ideas of information; establish standards and provide channels to facilitate the exchange of computer programs among DECUS members; provide feedback to the computer industry on equipment and software needs; and to reduce the duplication of development efforts.

DECUS membership is free--upon application--to owners of DIGITAL computers and to their computer-interested employees. Membership carries important benefits and opportunities; among them are access to the program library; membership in local, regional, and national organizations; invitations to symposia dedicated to optimal use of DIGITAL equipment; opportunity to present papers and workshops on your own new ideas; and, finally, access to special interest groups dedicated to particular uses, languages, operating systems, and hardware configurations.

The program library maintained by DECUS contains over 1700 active software packages written and submitted by members and DIGITAL employees, and available to members for the media fee and reproduction cost only. Programs in the library range from enhanced editors and cross compilers to statistics packages and games. Of particular interest to college and university customers, for example, might be a package of programs for registration, class scheduling, dormitory management, and annual giving records. A laboratory user could take advantage of various statistical packages, or programs that perform Fourier transforms or least squares fitting. There are programs for circuit analysis, resonance simulation, blood-count evaluation, and stress testing, and scores of others which medical, scientific, or engineering customers could employ. Business people can find accounting packages, data analysis and payroll programs among the library's offerings. In addition, of course, there is a wide range of text editing, display graphics, and enhanced utility programs available.

Local, regional, and national DECUS organizations give members the opportunity to meet other DIGITAL customers and employees in an informal setting. From the monthly local meeting to the semiannual national symposium, the members can discuss their ideas, can learn what others are doing, and can give DIGITAL feedback necessary in improvement and future development of important products. Often, the national meetings in the various countries also provide the stage for major new product announcements by the company, and a showplace for interesting developments in both hardware and software technology. At any meeting a member might describe ideas and programs he has implemented, or fine tuning that has been achieved for a particular application. Members give papers, participate in panel discussions, lead workshops, or conduct demonstrations for the benefit of other members.

DECUS also publishes newsletters focusing on special interest, technical books that contain the compilation of symposia presentations; and a society newsletter.

Many members derive a particular benefit from joining DECUS Special Interest Groups. Special Interest Groups often meet as subsets of regional and national meetings, or they may meet on their own, to discuss their special interest. Here, all RSTS/E users, or everyone interested in COBOL, for example, can have a chance to get together and discuss topics of mutual importance. At present there are more than 20 Special Interest Groups (SIGs) in the U.S. alone. Many of the SIGs print newsletters and disseminate valuable technical information to members. The SIGs really are the front-line of mutual help and problem solving.

DIGITAL provides DECUS with administrative personnel and office space around the world, but the organization is run by its members, who act as speakers for conferences, planners for meetings, editorial and production talent for newsletters and minutes, and the inventors of the ideas and new programs necessary to keep the library up to date. Belonging to DECUS is a valuable adjunct to owning DIGITAL equipment on both the program exchange and the information exchange fronts.

continued

To obtain a DECUS membership form, complete the form below and return it to the appropriate chapter office.

CHAPTER	ADDRESS
AUSTRALIA (Australia, Brunei, Indonesia, Malaysia, New Zealand, Singapore)	DECUS Australia P.O. Box 384 Chatswood NSW 2067 Australia
CANADIAN (Canada)	DECUS Canada P.O. Box 13000 Kanata, Ontario K2K 2A6 Canada
EUROPEAN (Europe, Middle East, North Africa, Russia)	DECUS Europe P.O. Box 510 12, avenue des Morgines CH-1213 Petit-Lancy 1/GE Switzerland
U.S. (U.S. and all other countries)	DECUS U.S. Chapter One Iron Way Marlboro, Massachusetts 01752 U.S.A.

Please send me a DECUS membership form.

NAME: _____
(First) (Last/Family Name)

COMPANY: (INSTALLATION) _____

ADDRESS: _____

_____

_____

_____
(City, Town, State/Province, and Zip/Postal Code)

COUNTRY: _____

TELEPHONE: _____ TELEX _____

I obtained this form from _____

July 1980

DIGITAL EQUIPMENT CORPORATION, Corporate Headquarters: Maynard, Massachusetts 01754, Telephone: (617)897-5111—SALES AND SERVICE OFFICES: UNITED STATES—ALABAMA, Huntsville • ARIZONA, Phoenix and Tucson • CALIFORNIA, El Segundo, Los Angeles, Oakland, Ridgecrest, San Diego, San Francisco (Mountain View), Santa Ana, Santa Clara, Stanford, Sunnyvale and Woodland Hills • COLORADO, Englewood • CONNECTICUT, Fairfield and Meriden • DISTRICT OF COLUMBIA, Washington (Lanham, MD) • FLORIDA, Ft. Lauderdale and Orlando • GEORGIA, Atlanta • HAWAII, Honolulu • ILLINOIS, Chicago (Rolling Meadows) • INDIANA, Indianapolis • IOWA, Bettendorf • KENTUCKY, Louisville • LOUISIANA, New Orleans (Metairie) • MARYLAND, Odenton • MASSACHUSETTS, Marlborough, Waltham and Westfield • MICHIGAN, Detroit (Farmington Hills) • MINNESOTA, Minneapolis • MISSOURI, Kansas City (Independence) and St. Louis • NEW HAMPSHIRE, Manchester • NEW JERSEY, Cherry Hill, Fairfield, Metuchen and Princeton • NEW MEXICO, Albuquerque • NEW YORK, Albany, Buffalo (Cheektowaga), Long Island (Huntington Station), Manhattan, Rochester and Syracuse • NORTH CAROLINA, Durham/Chapel Hill • OHIO, Cleveland (Euclid), Columbus and Dayton • OKLAHOMA, Tulsa • OREGON, Eugene and Portland • PENNSYLVANIA, Allentown, Philadelphia (Bluebell) and Pittsburgh • SOUTH CAROLINA, Columbia • TENNESSEE, Knoxville and Nashville • TEXAS, Austin, Dallas and Houston • UTAH, Salt Lake City • VIRGINIA, Richmond • WASHINGTON, Bellevue • WISCONSIN, Milwaukee (Brookfield) • INTERNATIONAL—ARGENTINA, Buenos Aires • AUSTRALIA, Adelaide, Brisbane, Canberra, Melbourne, Perth and Sydney • AUSTRIA, Vienna • BELGIUM, Brussels • BOLIVIA, La Paz • BRAZIL, Rio de Janeiro and Sao Paulo • CANADA, Calgary, Edmonton, Halifax, London, Montreal, Ottawa, Toronto, Vancouver and Winnipeg • CHILE, Santiago • DENMARK, Copenhagen • FINLAND, Helsinki • FRANCE, Lyon, Grenoble and Paris • GERMAN FEDERAL REPUBLIC, Cologne, Frankfurt, Hamburg, Hannover, Munich, Nuremburg, Stuttgart and West Berlin • HONG KONG • INDIA, Bombay • INDONESIA, Djakarta • IRELAND, Dublin • ITALY, Milan, Rome and Turin • IRAN, Tehran • JAPAN, Osaka and Tokyo • MALAYSIA, Kuala Lumpur • MEXICO, Mexico City • NETHERLANDS, Utrecht • NEW ZEALAND, Auckland and Christchurch • NORWAY, Oslo • PUERTO RICO, Santurce • SINGAPORE • SPAIN, Madrid • SWEDEN, Gothenburg and Stockholm • SWITZERLAND, Geneva and Zurich • UNITED KINGDOM, Birmingham, Bristol, Epsom, Edinburgh, Leeds, Leicester, London, Manchester and Reading • VENEZUELA, Caracas •