RT-11

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THE SOFTWARE DISPATCH

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RT-11 SOFTWARE DISPATCH

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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

APL-11/RT V2
BASIC-11/RT-11 V2
CTS-300 V6
DECnet-RT 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

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SPR USER LETTER

Submitted by Sheila Hatchell, 8/11 Administration

The Dispatch SPR User Letter has been revised to reflect the new SPR form which is now available. These forms can be obtained from your local DIGITAL Office or SPR Center, or by requesting them from SPR 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
DUP.SAV VØ4.ØØE

Seq 7.2.6 N

1 of 1

USE OF INITIALIZE/RESTORE ON MEDIA SUPPORTING BAD BLOCK REPLACEMENT (DF)

INITIALIZE/RESTORE cannot be used on volumes which support bad block replacement if any bad blocks were encountered during the inadvertant initialization. Note that bad blocks can be encountered and replaced even if the /BAD or /REPLACE options are not used. This will occur if blocks were listed in the manufacturer's bad segment file. These blocks will be replaced every time the disk is initialized whether or not a bad block scan is done. For this reason there is no way of knowing whether any bad blocks were encountered and replaced. Therefore, the "unintialize" feature is not supported for any disks supporting bad block replacement.

This restriction was left out of the System User's Guide but will appear in change pages to be issued in the near future.

PROBLEMS WITH INIT/BAD AND COPY/DEVICE (DF)

. When INIT/BAD is used to cover bad blocks on a disk which supports bad block replacement, any blocks which appear in the manufacturer's bad sector file, but which are not determined to be bad by DUP, are replaced. These blocks should be covered by .BAD files. Replacement should only be done if the /REPLACE option is specified.

. If COPY/DEVICE is used with the options /START:Ø and /END:Ø specified on input, the entire disk is copied rather than only block Ø.

1. The following is a required patch to the DUP.SAV VØ4.ØØE utility program (previously modified in Seq 7.2.5). 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.ØØ5 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
1Ø6
^Z                                  (up-arrow/Z)
12754
4767
2Ø66
^Z                                  (up-arrow/Z)
15Ø46
12767
1
173554
1ØØ67
165426
2Ø7
^Z                                  (up-arrow/Z)
212Ø4
177422
^Z                                  (up-arrow/Z)
27ØØØ
4767
174
^Z                                  (up-arrow/Z)
272ØØ
32767
2ØØ
165260
```

```
1ØØ2
52715
1
52725
2
2Ø7
^Z                              (up-arrow/Z)
47170
14660
4737
14610
^Z                              (up-arrow/Z)
50540
112710
1
^Z                              (up-arrow/Z)
50610
12700
1720
122767
23
164760
1003
12767
2
173250
2Ø7
^Y                              (up-arrow/Y)
43130
^C                              (CTRL/C to exit)
```

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

```
@DUP.ØØ5
```

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

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

RT-11 V4.Ø
System Utilities
RESORC.SAV VØ4.ØØA

Seq 7.5.2 M

ADD CIS DETECTION CAPABILITY TO RESORC (JK)

The following patch to RESORC.SAV gives the RESORC utility the capability of detecting that the Commercial Instruction Set (CIS) is present on a PDP-11/24 or PDP-11/44. The user will be informed of this with use of the /H (hardware) switch as well as the /Z and /A switches of which the /H switch is a subset.

1. The following is a required patch to the RESORC.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 RESORC.SAV is on a mounted volume. Create the file, RESORC.ØØ2 as follows. Replace 'DK:' in the patch below with the name of the device that contains the program file.

```
R SIPP
DK:RESORC.SAV/A/C
Ø
2656
1Ø2
^Z                                  (up-arrow/Z)
7624
4767
63Ø2
^Z                                  (up-arrow/Z)
15560
167
37Ø
^Z                                  (up-arrow/Z)
16132
32704
2ØØ
14Ø3
12700
16202
104351
5737
177572
2Ø7
122700
```

```
3
1ØØ6
12ØØ5
16176
5737
177546
14Ø1
53ØØ
6Ø1ØØ
2Ø7
67ØØ3
66555
71145
64543
66141
44440
71556
71164
61565
64564
67157
51440
72145
24040
44503
24523
^Y                                  (up-arrow/Y)
176777
^C                                  (up-arrow/C)
```

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

   ```
   @RESORC.ØØ2
   ```

   The resulting version of the utility will be RESORC VØ4.ØB.

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

LIBR ERRORS (JK)

The following patch corrects two errors in the LIBR utility. The first of these errors is a result of a previous patch to LIBR described in Sequence 7.1Ø.1M of the July 198Ø Software Dispatch. If the first command line of a sequence of command lines contains a continuation switch with no input files, LIBR returns the version number and terminates the sequence.

The second error in LIBR concerns error messages. When LIBR encounters an error in any of its input files, it prints in the error message only the name of the first input file specified in the command string, regardless of which input file generated the error.

1. The following is a required patch to the LIBR.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 LIBR.SAV is on a mounted volume. Create the file, LIBR.ØØ2 as follows. Replace 'DK:' in the patch below with the name of the device that contains the program file.

```
R SIPP
DK:LIBR.SAV/A/C
Ø
3132
1Ø2
^Z                                  (up-arrow/Z)
421Ø
1Ø3451
^Z                                  (up-arrow/Z)
4266
4767
1266
^Z                                  (up-arrow/Z)
4662
4767
7Ø6
1ØØ67
175Ø4
1Ø367
17572Ø
```

```
12700
1000
60003
10367
175010
60003
10367
174766
12767
177777
175004
5067
175002
12704
1360
5714
1417
16767
175652
174764
10401
12700
1404
12710
1000
10460
2
16760
174430
4
104375
103420
5764
12
1431
12701
1372
12700
1404
12710
1001
10160
^Z                                  (up-arrow/Z)
5530
5027
0
5767
173650
1003
5767
```

```
173672
14Ø3
261
6Ø67
177754
2Ø7
52767
1
177744
162Ø4
12
2Ø7
6Ø67
177732
1Ø3766
6167
177724
1ØØ4Ø3
5726
167
175524
4567
174134
1ØØØ3Ø
^Z                                  (up-arrow/Z)
13Ø7Ø
5713
^Z                                  (up-arrow/Z)
14576
45Ø2
^Z                                  (up-arrow/Z)
23166
177Ø32
^Y                                  (up-arrow/Y)
14ØØØ1
^C                                  (up-arrow/C)
```

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

```
@LIBR.ØØ2
```

   The resulting version of the utility will be LIBR VØ4.ØØB.

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

RT-11 V4.Ø
Spooling Package
QUEUE.REL

Seq 16.1.2 F

1 of 1

NARROW BANNER PAGES FROM QUEUE (LCP)

QUEUE outputs banner pages formatted for 11" x 14" forms. The following patch will cause QUEUE to output banner pages formatted for 9 1/2" wide forms. Note that once patched, QUEUE will only output the narrow banner pages. If both sizes of forms are used, keep a backup copy of QUEUE.REL (unpatched) to use with standard, 11" x 14" forms.

1. The following is a feature patch to the QUEUE.REL utility program (previously modified in Seq 6.12.1 M).

   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 QUEUE.REL is on a mounted volume. Create the file, QUEUE.ØØ2 as follows. Replace 'DK:' in the patch below with the name of the device that contains the program file.

```
R SIPP
QUEUE.REL/C
46ØØ
53
15
12
Ø
^Z                                  (up-arrow/Z)
242
5Ø15
^Z                                  (up-arrow/Z)
^Z                                  (up-arrow/Z)
1243Ø
Ø
24Ø
^Y                                  (up-arrow/Y)
5252Ø2
^C                                  (CTRL/C to exit)
```

3. To apply the patch to QUEUE.REL type:

   ```
   @QUEUE.ØØ2
   ```

   There is no new version number for QUEUE.REL.

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

BASIC-11/RT-11 V2.Ø
for RT-11 V4

Seq. 35.1.23 N

PROBLEM WITH BASIC-11 PATCH Q

Note: A problem has been found in BASIC-11 Patch Q published in the January Software Dispatch. While it solves the stated problem, it creates another one. If Patch Q is installed and a CHAIN is done between two compiled programs that have COMMON data, and string variables are part of the COMMON data, the contents of the string variables will be destroyed.

For the present, we are retracting Patch Q for BASIC-11. The patches following it in sequence should be installed normally.

The condition that Patch Q was created to fix (OLD of a compiled program followed by certain immediate mode commands) will, for the present, be classed as a restriction. Since the situation is quite easy to avoid, once one is aware of the problem, we forsee no serious inconvenience. When a revised patch Q can be developed it will be published in the Software Dispatch.

BASIC-11 V2.Ø
for RT-11 V4.Ø
DOCUMENTATION

Seq 35.3.9 N

1 of 1

NEW MANUAL AVAILABLE FOR BASIC-11/RT-11 (FM)

A new manual is now available for BASIC-11/RT-11: BASIC-11/RT-11 Installation Guide and Release Notes; Order No. AA-K724A-TC.

This manual supersedes the BASIC-11/RT-11 Installation Guide (DEC-11-LIBTA-A-D) and its update (DEC-11-LIBTA-A-DN1). The new manual describes the procedure for installing BASIC-11 on Version 4 of RT-11, and documents corrections made to BASIC-11.

MU BASIC-11/RT-11 V2.Ø
for RT-11 V4
INTERPRETER
MUBS1.OBJ, MUBS1X.OBJ

Seq 36.1.27 M

1 of 2

CARD READER EOF - PATCH X FOR MULTI USER BASIC-11

Problem:

If successive programs are read into MU BASIC using the command "OLD CR:PROG" with EOF cards between the programs, the EOF is not recognized properly and the first card of the next program is lost.

Procedure:

1. Create the two files PAØØX1.MAC and PAØØX2.MAC as shown below:

PAØØX1.MAC

```
                .TITLE  MUBS1
                .CSECT  MUBS1
                LOC=    .
                SURWØ=  LOC+1546
                CHKEOF= LOC+6324
                BLOCEX= LOC+6266
                .=      LOC+6166

                JMP     PAØØX
        PAØØXA:

                .PSECT  PAØØX,RO,I
                .GLOBL  PAØØX
        PAØØX:  JSR     PC,     CHKEOF
                BCC     1Ø$
                RTS     PC
        1Ø$:    JSR     PC,     SURWØ
                JMP     PAØØXA
                .END
```

PAØØX2.MAC

```
                .TITLE  BSPAT
                .PSECT  BASPCH,RO,I
                .=      .+4
                .ASCII  /ØX/
                .END
```

MU BASIC-11/RT-11 V2.Ø
for RT-11 V4
INTERPRETER
MUBS1.OBJ, MUBS1X.OBJ

2. Assemble the two files:

```
.MACRO PAØØX1
.MACRO PAØØX2
```

3. Run the RT-11 program PAT:

```
.R PAT
*MUBS1=MUBS1,PAØØX1

.R PAT
*MUBS1X=MUBS1X,PAØØX1

.R PAT
*BSPAT=BSPAT,PAØØX2
```

4. Relink MU BASIC-11 using a LINK indirect command file (e.g., MUBAS.COM). This will create version 2.ØX of multi user BASIC-11.

MU BASIC-11/RT-11 V2.Ø
for RT-11 V4
INTERPRETER
MUBS1.OBJ, MUBS1X.OBJ, MUBS3.OBJ

Seq 36.1.28 M
1 of 2

CLOSE GIVES ILLEGAL FILES SPEC - PATCH Y FOR MULTI USER BASIC-11

Problem:

If one user is opening and closing several virtual arrays and another user is opening, accessing, and closing a regular data file, a spurious "ILLEGAL FILE SPECIFICATION" error may occur.

Procedure:

1. Create the three files PAØØY1.MAC, PAØØY2.MAC, and PAØØY3.MAC as shown below:

PAØØY1.MAC

```
                .TITLE  MUBS1
                .CSECT  MUBS1
                .GLOBL  PAØØY1,PAØØY2,SETOVL,FAC2
                LOC=    .
                .=      LOC+1776
                JMP     PAØØY2
        PAØØY1:

                .PSECT  PAØØØY,RO,I
        PAØØY2: JSR     PC,     SETOVL
                MOV     RØ,     FAC2(R5)
                JMP     PAØØY1

                .END
```

PAØØY2.MAC

```
                .TITLE  MUBS3
                .PSECT  BASSCD,RO,I
                .GLOBL  PAØØY2
                LOC=.
                .=LOC+1156
                NOP
                NOP
                NOP
                NOP
                .=LOC+1172
                JMP     PAØØY2

                .END
```

PAØØY3.MAC

```
.TITLE  BSPAT
.PSECT  BASPCH,RO,I
.=      .+4
.ASCII  /ØY/

.END
```

2. Assemble the three files:

```
.MACRO PAØØY1
.MACRO PAØØY2
.MACRO PAØØY3
```

3. Run the RT-11 program PAT:

```
.R PAT
*MUBS1=MUBS1,PAØØY1

.R PAT
*MUBS1X=MUBS1X,PAØØY1

.R PAT
*MUBS3=MUBS3,PAØØY2

.R PAT
*BSPAT=BSPAT,PAØØY3
```

4. Relink MU BASIC-11 using a LINK indirect command file (e.g., MUBAS.COM). This will create version 2.ØY of multi user BASIC-11.

MU BASIC-11/RT-11 V2.Ø Seq 36.1.29 M
for RT-11 V4
INTERPRETER 1 of 2
BSFUNC.OBJ

TTYSET GIVES TRAP TO 1Ø - MU BASIC PATCH Z

Problem:

If the statement A=TTYSET(x,y) is executed and x is greater than 255, MUBASIC will trap to 1Ø.

Procedure:

1. Create the three files PAØØZ1.MAC, PAØØZ2.MAC, and PAØØZ3.MAC as shown below:

PAØØZ1.MAC

```
            .TITLE  BSFUNC
            .PSECT  BSFDSP,RW,D
            .GLOBL  PAØØZ1,PAØØZ2,PAØØZ3
            LOC=.
            .=LOC+1214
PAØØZ3:
            .=LOC+1226
            JMP     PAØØZ2
PAØØZ1:
            .END
```

PAØØZ2.MAC

```
            .PSECT  OPFNID,RO,I
            .GLOBL  FAC2,PAØØZ1,PAØØZ2,PAØØZ3

            .PSECT  PAØØØZ,RO,I
PAØØZ2:  CMP     FAC2(R5), #255.
            BHIS    1Ø$
            MOV     #254.,  R3
            JMP     PAØØZ1
1Ø$:        JMP     PAØØZ3
            .END
```

PAØØZ3.MAC

```
            .TITLE  BSPAT
            .PSECT  BASPCH,RO,I
            .=      .+4
            .ASCII  /ØZ/

            .END
```

2. Assemble the three files:

```
.MACRO PAØØZ1
.MACRO PAØØZ2
.MACRO PAØØZ3
```

3. Run the RT-11 program PAT:

```
.R PAT
*BSFUNC=BSFUNC,PAØØZ1

.R PAT
*MUOFID=MUOFID,PAØØZ2

.R PAT
*BSPAT=BSPAT,PAØØZ3
```

4. Relink MU BASIC-11 using a LINK indirect command file (e.g., MUBAS.COM). This will create version 2.ØZ of multi user BASIC-11.

This article is being republished for sequencing purposes only.

DEFAULT CARRIAGE CONTROL FOR IMPLIED SEQUENTIAL ACCESS FILES (PAT 7)

PROBLEM:

The FORTRAN OTS does not properly set the default carriage control to FORTRAN when sequential access is the default file access type.

SOLUTION:

1. Type in the following MACRO file: PATØ7.MAC

PATØ7.MAC:

```
        .TITLE  $OPEN
        .IDENT  /ØØ6/
        .PSECT  OTS$O
S=.
.=S+55Ø
        BIT     #32ØØ,@RØ
        .END
```

2 Assemble the patch using MACRO-11

```
.R MACRO.SAV
*PATØ7=PATØ7
*^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
*OTSCOM=OTSCOM/C:151756,PATØ7/C:65Ø3
```

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.

```
        WRITE(21,1)
1       FORMAT('ØWHEN ZERO DOES NOT APPEAR AS THE FIRST')
        WRITE(21,2)
2       FORMAT(' CHARACTER ON THE LINE ABOVE THE PATCH IS SUCCESSFUL')
        END
```

Which should produce a file of one block in length. The file FTN21.DAT should contain the following:

```
WHEN ZERO DOES NOT APPEAR AS THE FIRST
CHARACTER ON THE LINE ABOVE THE PATCH IS SUCCESSFUL
```

RT-11 V4.0
CUMULATIVE INDEX
MAY 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.

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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
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LS.MAC			
LS SET NOHANG MAY CRASH SYSTEM	A	6.13.1 M	Sep 80
PROBLEMS WITH LS HANDLER	A	6.13.2 M	Jan 81
PD.MAC			
CORRECTION TO PDT ERROR LOGGING SUPPORT		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
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		7.1.3 M	Feb 81
COPY/BINARY/WAIT AND LOG HEADER PROBLEMS		7.1.4 M	Apr 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		7.2.4 N	Jan 81
.SPFUN RETURN BUFFER PROCESSED INCORRECTLY FOR RK06/7		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		7.2.7 M	May 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
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		7.5.2 M	May 81
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		7.9.4 R	Jan 81
LINK TRANSFER ADDRESS CALCULATION BUGS		7.9.5 M	Mar 81
LIBR.SAV			
A LIBR COMMAND WITH NO FILE-SPEC CAN CAUSE A SYSTEM CRASH	A	7.10.1 M	Jul 80
LIBR ERRORS		7.10.2 M	May 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
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

Component	Autopatch Kit	Sequence	Mon/Yr
BINCOM.SAV			
BINCOM GENERATES ERRONEOUS ERROR MESSAGE		7.13.1 M	Apr 81
SLP.SAV			
TERMINATION OF PATCHING SESSION WITH SLP FATAL ERRORS	A	7.15.1 M	Nov 80
SLP GENERATES FATAL ERROR TRAP		7.15.2 M	Jan 81
SLP ERROR		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		7.20.1 M	Jan 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
SYSTEM MACRO LIBRARY			
.SPFUN PROGRAMMED REQUEST	A	9.1.1 M	Dec 80
ABORT I/O PROGRESS SUPPORT FOR SYSMAC		9.1.2 M	Apr 81
SYSTEM GENERATION PACKAGE			
SYSGEN CREATES ONE MORE DEVICE SLOT THAN REQUESTED	A	10.3.1 M	Dec 80
ASSEMBLY ERROR AFTER SYSGEN		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
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 NUMBER OF DIRECTORY SEGMENTS		11.3.6 N	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
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

Component	Autopatch Kit	Sequence	Mon/Yr
RT-11 SOFTWARE SUPPORT MANUAL			
RT-11 V4.0 DOCUMENTATION CORRECTIONS AND ADDITIONS		11.9.1 N	Jul 80
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		16.1.1 M	Mar 81
NARROW BANNER PAGES FROM QUEUE		16.1.2 F	May 81
QUEMAN.SAV			
PROBLEMS WITH QUEMAN		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
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
FMS-11/RT-11 V1.1			
ANNOUNCING FMS-11/RT-11 V1.1		33.1 N	Aug 80
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
"OLD" OF COMPILED PROGRAM - PATCH Q FOR SINGLE USER BASIC-11		35.1.19 M	Jan 81
PRINT USING - PATCH R FOR SINGLE USER BASIC-11		35.1.20 M	Jan 81
OMITTING TRIG FUNCTIONS FROM BASIC-11		35.1.21 N	Jan 81
STRING CONCATENATION - PATCH S FOR SINGLE USER BASIC-11		35.1.22 M	Mar 81
PROBLEM WITH BASIC-11 PATCH Q		35.1.23 N	May 81

Component	Autopatch Kit	Sequence	Mon/Yr
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
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
"OLD" OF COMPILED PROGRAM - PATCH U FOR MULTI USER BASIC-11		36.1.23 M	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
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

Component	Autopatch Kit	Sequence	Mon/Yr
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
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
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
OTS			
THE OTS DOES NOT SET DEFAULT CARRIAGE CONTROL FOR SERIAL LINE PRINTER		45.2.1 M	Jan 81
THE LUN IS NOT SAVED WHEN AN ERROR OCCURS WHILE OPENING A FILE		45.2.2 M	Jan 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		45.2.3 F	Feb 81
BOUNDARY CONDITION ON FORMATTED I/O CORRUPTS I/O (PAT 6)		45.2.4 M	Mar 81
DEFAULT CARRIAGE CONTROL FOR IMPLIED SEQUENTIAL ACCESS FILES (PAT 7)		45.2.5 M	May 81
STANDALONE FORTRAN YIELDS RUN-TIME ERROR 64 (PAT 8)		45.2.6 M	Apr 81
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

Component	Autopatch Kit	Sequence	Mon/Yr
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		
DECFORM V06-00			
PROBLEM WITH DECFORM AND THE VT100		51.4.1 M	Nov 80
DKED			
TWO PROBLEMS WITH DKED		51.7 M	Aug 80
DKED SELECT/CUT AND KEYPAD ERRORS		51.7.2 M	Sep 80
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
TDIBOL			
PROBLEM WITH XCALL PAK		51.17 M	Aug 80
PROBLEM UNPACKING DATA		51.17.2 M	Sep 80
TSD			
CORRECTIONS TO DIBOL RUN TIME SYSTEMS		51.18.1 M	Jan 81
PROBLEMS WITH XCALL RENAM AND ERROR 6		51.18.02 M	Feb 81
XMTSD			
CONFLICT BETWEEN XMTSD AND RT-11 OVER CHANNEL 16		51.20 M	Aug 80
CORRECTIONS TO DIBOL RUN TIME SYSTEMS		51.20.02 M	Jan 81
PROBLEMS WITH XCALL RENAM AND ERROR 6		51.20.03 M	Feb 81
PATCH FOR XMTSD WITH CIS		51.20.04 M	Apr 81
DOCUMENTATION			
CTS-300 VERSION 6 IS RELEASED		51.21 N	Aug 80
TWO RT-11 PATCHES MODIFIED FOR CTS-300 USE		51.21.02 N	Oct 80
RT-11 PATCH TO LS.MAC MODIFIED FOR CTS-300 USE		51.21.03 N	Feb 81
ADDITIONS TO CTS-300 DOCUMENTATION ON PRINT UTILITY		51.21.04 N	Mar 81
LIST OF SEQUENCE NUMBERS FOR CTS-300 V6		51.21.05 N	Mar 81
LS.MAC			
SPECIAL CTS-300 PATCH FOR LS.MAC		51.23.01 M	Feb 81
CORRECTION TO CTS-300 PATCH 11 (SEQ 51.23.1 M TO LS.MAC)		51.23.02 M	May 81

Component	Autopatch Kit	Sequence	Mon/Yr
SYSTBL.CND			
RT-11 PATCH TO SYSTBL.CND MODIFIED FOR CTS-300 USE		51.25.01 M	Mar 81
RT-11 PATCH SEQ 10.3.2 M TO SYSTBL.CND MODIFIED FOR CTS-300 USE		51.25.02 M	Apr 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: CTS-300, Version 6.0
Commercial Transaction System-300

SPD 12.9.12

DESCRIPTION:

CTS-300 is a disk based, single-user/multiuser system designed to support commercial applications on small PDP-11 based DEC Datasystems or equivalent configurations. CTS-300 applications are written in DIBOL, DIGITAL's own Business Oriented High-Level Language. DIBOL is similar to COBOL in that it has a Data Division and a Procedure Division, although DIBOL is a more concise language. DIBOL provides the application programmer with the ability to do data manipulation, arithmetic expression evaluation, table subscripting, record redefinition, external calls to other programs, spooling, sequential and random access, and indexed access to files. Exception conditions cause control to transfer to a user-specified statement, where the cause of the condition can be determined.

The following table illustrates the user/job capacity versus minimum configurations under some of the Datasystems:

	D150 (PDT150)	D320 (11/03)	D330 (11/23)	D340 (11/24)	D350 (1134A)
No. of users	1	1-4	1-8	1-12	1-12
No. of jobs	1-4	1-4	1-16	1-16	1-16
Memory	32-60K bytes	32-56K bytes	32-248K bytes	32-248K bytes	32-248K bytes
Disk capacity	512K bytes	1-32M bytes	10-42M bytes	10-266 bytes	10-266M bytes

Although 12 users is the stated limit, most application environments should use caution beyond the eighth user because terminal response time is likely to degrade as more users are added to the system. Particular care needs to be exercised with program size, overlay technique, file size and layout, etc.

CTS-300 is available in fully supported mode *only* on other equivalently configured systems that meet minimum requirements.

CTS-300 is a packaged software system consisting of the RT-11 Operating System, a choice of three run-time systems, and a number of utilities. Since RT-11 is included in this package, a CTS-300 licensee can order any RT-11 dependent product without reordering a specific license for RT-11.

Although CTS-300 is a layered product, it should be noted that DIBOL will not run concurrently with other languages.

Run-Time Systems (RTS)

SUD — Single-user DIBOL RTS allows one DIBOL user or job to be run on a system. It is designed for an entry level system running in 32K bytes of memory. SUD runs on all RT-11 monitor (SJ, FB, XM). SUD also runs as the background job in the FB monitor with a line printer spooler running in the foreground. Control returns to the monitor upon completion of the SUD program.

TSD — Time Shared DIBOL RTS allows one to two DIBOL users or two to four DIBOL jobs to run simultaneously. It is designed for a medium-sized system running in 56K bytes of memory. File sharing facilities at the record level permit multiple users to share and update the same data files. TSD is an executive that normally is run on an SJ monitor SYSGENed for multiterminal support. TSD controls loading of DIBOL programs, program scheduling, detached programs, file-sharing, record I/O, intertask communication, as well as other less visible functions. A DIBOL line printer spooler also runs in the TSD environment. Program completion, or the detaching of a program, returns control to the TSD executive.

XMTSD — Extended Memory TSD RTS allows one to 12 DIBOL users or one to 16 DIBOL jobs to run simultaneously (up to 12 could be attached to terminals with the remainder running in a detached environment). Designed for larger systems running in 128K to 248K bytes of memory using the XM monitor, XMTSD has the same features and capability found in TSD. In addition, XMTSD offers multiuser program development. When XMTSD is loaded in the foreground of the XM monitor, the background is reserved for queuing and executing indirect command files. These files can contain compile and link instructions. Programs can be created and modified by running a CRT oriented editor called DKED, which executes as a DIBOL job. More than one copy of DKED can run concurrently.

NOTE: Relinking is required when changing from SUD to TSD or XMTSD or vice versa.

CTS-300 Utility Programs

CTSGEN — The CTS-300 Generator Program is an interactive DIBOL-11 utility program that tailors the system to a user's needs. It can create a SUD, TSD or XMTSD RTS to match the specific hardware and software of the installation. Through CTSGEN a user specifies such items as the total number of terminals, jobs, messages, and files open at one time. Support for DDT and forced job start-up are also among the choices available.

DDT — The DIBOL Debugging Technique is a system utility that allows for user/programmer interaction with a DIBOL program while it is executing. Using DDT, a programmer can set predetermined stopping points to halt the program, examine and/or alter the contents of variables, and trace through lines of a DIBOL program. These features allow a programmer to locate problems, correct data values, and test any programming errors directly, before reediting and recompiling.

DECFORM — The DECFORM Data Entry utility is a program generator that processes screen format directives and produces a DIBOL program that, when compiled and executed, performs specified data entry functions. In addition to defining screen formats, auto-duplication, alphabetic or decimal checking, range checking, field totaling, cross-field validation, and auto-increment characteristics, DECFORM makes possible additions, inquiries, changes, and verifications to sequentially ordered files or Indexed Sequential Access Method (ISAM) files. Deletions are possible only with ISAM files. DECFORM is primarily a tool to facilitate and reduce program development efforts. Its major use is in data file creation, modification, and inquiry.

DKED — DKED is a version of RT-11's keyboard editor (K52) that runs as a job only under XMTSD. It is a text editor, designed to run in VT52 mode on a VT52 or VT100, and is used to create and modify ASCII text files.

DICOMP — DICOMP is the DIBOL compiler. It translates DIBOL source programs into interpretive code that, when linked, can be executed by the three RTS.

DMS-300 — Data Management Services provide capabilities for handling sequential, random, or keyed records in files. Records in an ISAM file can be keyed by a symbolic value. DMS-300 also supports file sharing and multivolume files. Sequential and random file processing are standard in every RTS. ISAM is an option. DIBOL has special language statements to use these file access methods efficiently.

ISMUTL — ISAM files are created and maintained by means of the ISAM Utility Program. Its three major functions are CREATE, STATUS, and REORGANIZE.

- CREATE is used to create a new ISAM file. Options are provided to create an empty ISAM file or convert a sequential file to an ISAM file. The CREATE function can be carried out without operator intervention.
- STATUS provides a concise view of the current structure of the file: length of keys, records, and groups, levels of indexing, and information about the use of load exclusion and overflow areas in the data file.
- REORGANIZE is used to reorganize an ISAM file for more efficient operation. It is used when most of the groups in the file are filled and the overflow area or append area is filled. The effect of REORG is to redistribute the records of the file so it appears to be a newly created file.

LPTSPL — The Line Printer Spooler is a utility program that prints data files and program source files. In response to an LPQUE statement, the spooler program receives information on the file to be printed. The spooler queues the file and begins to print it when the line printer is available. In the SUD RTS, the spooler outputs to one line printer. In the TSD and XMTSD RTS, the spooler is a DIBOL program consisting of a queue manager and four satellite programs that output to as many as four line printers.

SORT/MERGE — The SORT/MERGE utility permits the user to define the parameters for the sorting and/or merging of data files. A DIBOL program is then generated by the system to perform the required sort and/or merge. The user can specify up to eight key fields to control the ordering of the output records, in either ascending or descending sequence. A wide range of operating parameters, such as the number of work files to be used, is provided to enable the user to achieve maximum sort efficiency.

STATUS — The job and system state program, STATUS, retrieves and displays information about the TSD or XMTSD RTS. STATUS passes the following information to a line printer or a terminal:

- Available free core
- List of active jobs
- Detailed information of a specified active job
- Detailed information of pending messages
- List of pending line printer jobs
- Characteristics of the current RTS

MINIMUM HARDWARE REQUIRED:

CTS-300 is intended to run primarily on DEC Datasystem 150s and 300s; it will operate however on other similarly configured hardware with the following minimum:

- A VT05, VT50H, VT52, VT100, or LA36 console terminal. A VT50H, VT52, or VT100 terminal (in VT52 mode) is required for use with DECFORM, ISMUTL, STATUS utilities.

The Extended Instruction Set (EIS or equivalent) for XMTSD

Memory management hardware is needed in the D330 and D350 series to use extended memory (memory above 56K bytes); it is needed, as well, in any 11/23, 11/24, 1134A, 11/44, or 11/60 processor intending to use extended memory.

Memory required for SUD — 32K bytes; TSD — 56K bytes; XMTSD — 128K bytes

OPTIONAL HARDWARE:

The following options are available for D150 systems:

- Additional memory up to a system total of 60K bytes
- LA180 or LA120 Serial Printer
- VT100 Advanced Video Option (VT1XX-AB)

The following options are available for D320 systems:

- Additional memory up to a system total of 56K bytes
- VT100 Advanced Video Option (VT1XX-AB)
- Up to a system total of four VT05, VT50H, VT52, VT100, LA36 or LA120 terminals
- Up to four LAV11 or LPV11 line printers
- Up to four DLV11 asynchronous line interfaces (one per terminal)
- One DZV11 asynchronous line multiplexer with up to four lines
- RKV disk cartridge system with controller
- RK05 disk cartridge drives up to eight
- RLV disk cartridge system with controller
- RL disk cartridge drives up to four, two of which can be RL02 add-ons
- Up to two RXV floppy disk systems, with four drives total

The following options are available for special D323S and D325S systems:

- Additional memory up to a system total of 56K bytes
- VT100 advanced video option (VT1XX-AB)
- Up to a system total of four VT05, VT50H, VT52, VT100, LA36, or LA120 terminals
- Up to four LA11 or LP11 line printers
- Up to four DL11 asynchronous line interfaces (one per terminal)
- One DZ11 asynchronous line multiplexer with up to four lines
- RL disk cartridge system with controller
- RL disk cartridge drives up to four
- Up to two RX floppy disk systems, with four drive total

The following options are available for D330 systems:

- Additional memory up to a system total of 248K bytes
- VT100 advanced video options (VT1XX-AB)
- Up to a system total of eight VT05, VT50H, VT52, VT100, LA36 or LA120 terminals
- Up to four LAV11 or LPV11 line printers
- Up to eight DLV11 serial asynchronous line interfaces (one per terminal) for eight lines total
- Up to two DZV11 asychronous line multiplexers for eight lines total
- RLV disk cartridge system with controller
- RL disk cartridge drives up to four
- Up to two RXV floppy disk systems, with four drives total

NOTE: Due to limited expansion space inside a base 11/23 CPU system box, additional hardware options can require an expander box and cabinet.

The following options are available for D340 and D350 systems:

- Additional memory to a system total of 248K bytes
- VT100 advanced video option (VT1XX-AB)
- Up to a system total of twelve VT05, VT50H, VT100, LA34, LA36, LA38, or LA120 terminals
- Up to four LS11, LA11, or LP11 line printers
- Up to sixteen DL11 asynchronous line interfaces (one per terminal) for sixteen lines total
- Up to two DZ11 multiplexers with up to eight lines each
- RK11 disk cartridge system with controller
- RK05 disk cartridge drives up to eight
- RL disk cartridge system with controller
- RL disk cartridge drives up to four
- RPR11 disk pack system with up to eight drives
- Up to two RX floppy disk systems, with four drives total
- RK611 disk pack system
- RK06 disk pack drives up to eight, or
  RK711 disk pack system
  RK07 disk pack drive up to eight

NOTE: A mix of up to eight RK06s and RK07s total is possible

- CR11 card reader
- TME11 magnetic tape controller with up to eight TU10 transports or TJE16 controller with up to two TS03 transports.

NOTE: CTS-300 will run on the 11/24 and 11/44 processors, but can not access memory beyond 256K bytes.

PREREQUISITE SOFTWARE:

None

OPTIONAL SOFTWARE:

DIBS-11
DAP/CTS-300
CTS-300 RDCP 2780/3780
CTS-300 DICAM/3271

TRAINING CREDITS:

TWO (2) — Training credits apply only to options that include support services. Consult the latest Educational Services Catalog at your local DIGITAL office for available courses, course requirements, and guidelines.

SUPPORT CATEGORY:

DIGITAL SUPPORTED

CTS-300 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

CTS-300 includes standard warranty services as defined in the Software Support Categories Addendum of this SPD.

CTS-300 installation requires a system generation. To help customers, DIGITAL will perform the initial system generation if the system disk is an RL01, RL02, RK05, RK06 or RK07. When requested by the customer, DIGITAL will install floppy disk systems, on a time and materials basis.

Software reliability is maintained at a high standard through the use of a number of DIGITAL-provided tools, which allow the user to correct faulty software components. The *RT-11 Software Dispatch* is the official publication that contains both articles describing known problems and instructions for patching the affected software components. The Automated Patching (Auto Patch) facility provides a means of applying patches by using the computer to read command files. This avoids errors that can occur when patches are keyed manually. Auto Patch kits are available on a periodic basis, as an optional, separate service.

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 (E, H, Q, T, V, X, Y, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ354-AV = distribution on RK07 Disk Cartridge.

E = RK05 Disk Cartridge
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Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
V = RK07 Disk Cartridge
X = RX02 Double Density Diskette
Y = RX01 Floppy Diskette
Z = No hardware dependency

The French translation of the CTS-300 User Documentation is also available.

This software is available with a valid DEC Datasystem 150, 315, 320, 330, 340, or 350 that includes support services. License-only CTS-300 is available only with a valid DEC Datasystem 150, 320, 330, 340, or 350 that does not include software support services.

D150	Floppy Disk Based (RX01)
DS352	RX01 Floppy Disk Based
DS356	RPR02 Disk Pack Based
D315	RX02 Floppy Disk Based
D322	RX01 Floppy Disk Based
D323	RX02 Floppy Disk Based
D324	RK05 Cartridge Disk Based
D325	RL01 Cartridge Disk Based
D333	RX02 Floppy Disk Based
D335	RL01 Cartridge Disk Based
D336	RL02 Cartridge Disk Based
D346	RL02 Cartridge Disk Based
D348	RK07 Cartridge Disk Based
D354	RK05 Cartridge Disk Based
D355	RL01 Cartridge Disk Based
D356	RL02 Cartridge Disk Based
D357	RK06 Cartridge Disk Based
D358	RK07 Cartridge Disk Based

CTS-300 is also offered with full DIGITAL support services only on hardware configurations that meet minimum system requirements. A customer would order the following line item:

QJ354 -A— Single-use license, binaries, documentation, support services (media: E, H, Q, T, V, X, Y)

A partial listing of other DIGITAL packaged systems that meet CTS-300 requirements is listed below. For a more complete configuration guide, refer to the RT-11, Version 4.0 SPD (12.1).

D522A-D
D522E-D
D528A-D
D528E-D
D532, D535, D538
D542, D548
DM30-LLB, DM30-HHB
RE37-HHB
SE30-HHB, SE30-LLB, SE30-MMA
SE40-HHA, SE40-MMA

SE60-HHA
SE-FXHH
SE-FXMM
SM20-LLA
SM30-HHB, SM30-LLB, SM30-MMA
SM40-HHA, SM40-MMA
SM60-HHA, SM60-HHB, SM60-LLA, SM60-MMA
SM-FXMM
SP30-HVA, SP30-LLA
SP60-HVA
SR20-LLA, SR20-SSA
SR30-LLB, SR30-SSB
SR60-LLA
SR-FXMM
SR-FXSS
SR-VXLLB, SR-VXSSA, SR-VXSSB
SR-WXLLA, SR-WXSSA

Update Options

Users of previous CTS-300 versions whose specified Support Category warranty has expired may order under license the following software update at the prevailing rate for such update. The update is distributed in binary form on the appropriate medium and includes no installation or other services are included unless specifically stated.

QJ354 -H— Binaries and documentation (media: E, H, Q, T, V, X, Y)

QJ354 -H— Right to copy for single use, no binaries, no documentation (media: Z)

Miscellaneous Options

QJ354 -G— English documentation-only kit (media: Z)

QJ365 -G— French documentation-only kit (media: Z)

ADDITIONAL SERVICES:

Post-warranty Software Product Services are available for licensed customers. Customers should contact their local DIGITAL office for additional information.

QJ367 -3— CTS-300 Auto Patch option (media: E, H, Q, T, V, X, Y)

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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

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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).*

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