

RT-11

May 1979

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**THE
SOFTWARE
DISPATCH**

digital

RT-11 SOFTWARE DISPATCH

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The RT-11 Software Dispatch complements the RT-11 V3B 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 V1
BASIC-11/RT-11 V2
BASIC/RT Extensions V1
COS-350/2780
CTS-300 V3, V4, V5
CTS-300 DICAM V1
CTS-300 DICAM II V1
CTS-300/DIS V1
DECnet/RT V1
FOCAL/RT-11 V1B
FORTRAN Graphics
Package V1.1

FORTRAN/RT-11 Extensions V1B
FORTRAN/RT-11 LSI Extensions V1
FORTRAN IV/RT-11 V2
GAMMA-11 F/B V2, V2C
Industrial BASIC/RT-11 V1
Lab Applications-11 V3
LSP-11 V1
MSB11 V1
MSB/FORTRAN IV V1
MU BASIC-11/RT-11 V1
PDL/RT-11 V1

PEAK-11 V2
PLOT 11/RT-11 V1.1
RT-11/03 FORTRAN
Extensions V1
REMOTE/RT-11 V1
RT-11 V3, V3B
RT-11 (CTS-300)/LSI-11
2780 V2
RT-11/2780 (CTS-300/
2780) V2
SSP-11/RT-11 V1

DISTRIBUTION

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Eleanor F. Hunter, Editor
Roxanne Alexander, Associate Editor

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SPR USER LETTER

The Dispatch SPR User Letter has been revised to reflect the new SPR form which has been available and has been in distribution for several months. This new SPR form can be readily identified by the priority section which uses a 1-5 numbering scheme rather than high, medium and low. 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 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. Your local office is provided status for submitted SPRs upon request by contacting SPR Administration.
4. Information is provided to the pertinent District Software Managers on High Priority SPRs that are submitted by customers in their districts.
5. SPRs marked PROBLEM/Error will have a response for supported Category A and B products. These SPRs should refer to suspected deficiencies in the software.
6. 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. Customer Name and Address and Problem Statement should always be typed or printed clearly.
2. An SPR should be submitted with only one problem on it. Putting more than one problem on an SPR can greatly lengthen the turn-around 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 most helpful to all concerned if problems with patches are reported as soon as possible.

CONT'D

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. Should you ever receive an unacceptable SPR response, please contact us or the appropriate SPR Center so that the response may be addressed.
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 Software Dispatch, May 1979

DECnet-RT V1.0
for RT-11 FB/XM V3.0
DOCUMENTATION

Seq 2.1 N

i of i

USER'S GUIDE DOCUMENTATION ERRORS (SPR 11-21942 WMD)

There are several documentation errors in the DECnet/RT User's Guide regarding the descriptions of the Macro Argument Blocks.

- 1) On page 8-38 following 'Argument Block:'
 - A) The ".chan" number cannot be 0 or NSP will return an error.
 - B) The "-3" in byte number nine should be a "-2".
 - C) There is an additional zero word at byte 0. Necessary for proper operation.
- 2) On page 8-36 following 'Argument Block:' there should be an additional two words of zero at bytes 16. and 18.

SYSTEM SUMMARY FOR RK07 DISKS (DG)

The GAMMA-11 V2C System Summary (SS) procedure does not report the correct number of free blocks on a disk pack if the pack has more than 32773. free blocks. It reports such packs as having no free blocks. Currently, this can only occur with RK07 packs.

Only users with RK07 drives need install the following patches.

In the following, the user types the underlined text; <CR> denotes the carriage return key; <LF> denotes the line feed key.

.R PATCH

FILE NAME--

*SYSSUM/C<CR>

*6102/ 12700 22700<LF>

6104/ 2400 6<LF>

6106/ 104374 103005<CR>

*6120/ 100001 401<CR>

*6144/ 6201 6001<CR>

*E

Checksum? 7031<CR>

RK06,7 and RL01 users should patch a sysgened version of FGAMMA as follows:

(NOTE: Change FGAMMA.REL to EGAMMA.REL below, if patching a copy of the GAMMA-11 V2C distribution disk.)

.R PATCH

FILE NAME--

*FGAMMA.REL/O/C<CR>

*13654;OR

<u>*3:0,4320/</u>	16767	<u>16700<LF></u>
3:0,4322/	163164	<u><LF></u>
3:0,4324/	163264	<u>22700<LF></u>
3:0,4326/	162767	<u>6<LF></u>
3:0,4330/	6	<u>101003<LF></u>
3:0,4332/	163246	<u>162700<LF></u>
3:0,4334/	3002	<u>6<LF></u>
3:0,4336/	5067	<u>401<LF></u>
3:0,4340/	163250	<u>5000<LF></u>
3:0,4342/	5067	<u>10067<LF></u>
3:0,4344/	163246	<u>163244<CR></u>
<u>*3:0,4512/</u>	6267	<u>6067<CR></u>

*E

Checksum? 25706<CR>

MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT GUIDELINES (1 MARCH 1979 CF)

The following patches and articles address the topic of MU BASIC-11 V2 performance when running in the background of the RT-11 FB monitor on Floppy Disk-based PDP-11/03 configurations. They offer ways of improving performance that are to some extent applicable to other hardware configurations as well. The most dramatic improvements, however, may be experienced on the 'low end' configuration.

Each patch or article specifies the area of MU BASIC-11 affected together with disadvantages, if any, of applying the patch or implementing the recommendations set out in the article.

One patch, in particular, can improve performance in different areas depending on the exact values applied, and it is only possible to supply rough guidelines as to the relative merits of these values (EXNO and WATIME).

There follows a brief summary of the patches and articles:

1. EXNO and WATIME (scheduling algorithm): changed from 20 and 5 (octal) to x and y respectively.
2. MUBS2E module (used when OPENing a file): moved from EDIT overlay to the ROOT segment.
3. RUN file LOGIC: small number of statements copied from EXECUTE overlay to EDIT overlay to minimize swapping for this command.
- 4a. INIT(H).B00 error recovery: logic changed to retain ownership of current user partition in the event of a mis-typed 'HELLO', in order to speed up response to a subsequent correctly typed 'HELLO'.
- 4b. Remove NOTICE file OPEN from INIT.B00: this will save the considerable response overhead incurred at login.
- 4c. COMPILE INIT.B00: this speeds up the login time when other patches are applied.
5. CONFIGURATION FILE CONSIDERATIONS: the significance of system buffers and USR swap status.
6. "OTHER" OVERLAY RESTORE: logic changed to not read in the "other" overlay segment automatically when returning to the ROOT.
7. OVERLAY CALL AT READY: logic changed to eliminate the call of the EDIT overlay when a terminal is waiting for input at READY.
8. FILE POSITIONING ON DISKETTES: advice regarding the optimal positioning of system files on diskette.

RT-11 SELF-PACED INSTRUCTION COURSE

The RT-11 Operating System Self-Paced Instruction Course is an efficient and convenient tool for training and/or retraining your programming staff on-site. Educational Services now offers this course for both RT-11 Version 3 and 3B customers.

The course includes four binders of learning materials, which may be purchased individually or as a complete package: RT-11 Concepts, MACRO, FORTRAN and BASIC.

The Version 3B package features updated information on the new RT-11 --

- DCL Commands (Concepts Binder)
- Utility Format (Concepts Binder)
- System Generation (Concepts Binder)
- System Scratch Block Area (MACRO and FORTRAN Binders)

The Version 3 package is available for the RT-11 V3 customer not planning to upgrade to V3B. This course is especially tailored for an RT-11 V3 software system.

These two courses may be ordered from any regional Educational Services Training Center. Orders may also be placed through Bedford Order Processing, Digital Equipment Corporation, area code (617) 275-5000, extension 276. Price information may be obtained from either of these sources.

<u>Order Number</u>	<u>Title</u>	<u>Components</u>
JB042-B	RT-11 Operating System, Version 3B, Package, (four binders)	4 binders-1500 pp
JB024-B	RT-11 Operating System, Version 3B, CONCEPTS	1 binder-440 pp
JB022-B	RT-11 Operating System, Version 3B, FORTRAN	1 binder-400 pp
JB020-B	RT-11 Operating System, Version 3B, MACRO	1 binder-600 pp
JB018-B	RT-11 Operating System, Version 3B, BASIC	1 binder-60 pp
JB040-B	CTS-300 Operating System, Version 5, Package (JB024-B, Version 3B, and JB016-B)	2 binders-700 pp
JB016-B	CTS-300 Operating System, Version 5, DIBOL	1 binder-260 pp

JB042-A	RT-11 Operating System, Version 3 Package, (four binders)	4 binders-1500 pp
JB024-A	RT-11 Operating System, Version 3 CONCEPTS	1 binder-440 pp
JB022-A	RT-11 Operating System, Version 3 FORTRAN	1 binder-400 pp
JB020-A	RT-11 Operating System, Version 3 MACRO	1 binder-600 pp
JB018-A	RT-11 Operating System, Version 3 BASIC	1 binder-60 pp
JB040-A	CTS-300 Operating System, Version 4, Package, (JB024-A, Version 3 and JB016-A)	2 binders-700 pp
JB016-A	CTS-300 Operating System, Version 4, DIBOL	1 binder-260 pp

RT-11 V03B-00
MONITOR
FB V03B-00E

Seq 21 0
1 of 2

OPTIONAL PATCH TO IMPROVE PERFORMANCE ON PDP-11/03 SYSTEMS (SPR 11-19980 BC)

The following optional patch is of particular advantage to users of DX based FB monitors on the 11/03, as it improves DX performance.

N O T E

This patch is machine dependent. It uses the MTPS and MFPS instructions which are implemented only on the PDP-11/03 and the PDP-11/34. Monitors patched this way will run only on one of these processors. If you use your monitor on processors other than these, you should not install this optional patch.

Patch to RT-11FB V03B-00E

.R PATCH <RET>

FILE NAME--

*xxMNFBSYS/A/C <RET>

*35162;0R

*0,13536/	4767	106766 <LF>
0,13540/	163524	4 <LF>
0,13542/	12666	105066 <LF>
0,13544/	4	5 <LF>
0,13546/	12746	106427 <LF>
0,13550/	340	<LF>
0,13552/	4767	401 <RET>
*0,13636/	5046	106427 <LF>
0,13640/	4767	0 <LF>
0,13642/	163332	240 <RET>
*0,13662/	12746	106427 <LF>
0,13664/	340	<LF>
0,13666/	4767	401 <RET>
*0,13706/	5046	106427 <LF>
0,13710/	4767	0 <LF>
0,13712/	163262	240 <RET>
*0,13746/	12746	106427 <LF>
0,13750/	340	<LF>
0,13752/	4767	401 <RET>
*0,14110/	5046	106427 <LF>
0,14112/	4767	0 <LF>
0,14114/	163060	240 <RET>
*0,14220/	5046	106427 <LF>
0,14222/	4767	0 <LF>
0,14224/	162750	240 <RET>

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RT-11 V03B-00
MONITOR
FB V03B-00E

Seq 21 0

2 of 2

```
*0,14410/      12746   106427 <LF>  
0,14412/      340     <LF>  
0,14414/      4767   401 <RET>  
*E
```

```
Checksum?      34203 <RET>
```

```
.Reboot
```

In the above patch, 'xx' represents the two character physical device name for your system volume.

RT-11 V03B-00
 MONITOR
 DDMNFB.SYS V03B-00E
 PDMNFB.SYS V03B-00E

Seq 23 0

1 of 2

OPTIONAL PATCH TO IMPROVE PERFORMANCE ON PDP-11/03 AND PDT SYSTEMS FOR DD AND PD FB MONITORS (SPR 11-19980 BC,BD)

Optional patch to improve performance on PDP-11/03 and PDT systems for DD and PD FB monitors (11-19980 BC,BD)

The following optional patch is of particular advantage to users of DD based FB monitors on the 11/03 and PDT FB monitors, as it improves DEctape II and PDT system performance.

N O T E

This patch is machine dependent. It uses the MTPS and MFPS instructions which are implemented only on the PDP-11/03, PDP-11/34 and PDT series. Monitors patched this way will run only on one of these processors. If you use your monitor on processors other than these, you should not install this optional patch.

Patch to RT-11FB V03B-00E

.R PATCH <RET>

FILE NAME--

*xxMNFBSYS/A/C <RET>

*35202;0R

*0,13536/	4767	106766 <LF>
0,13540/	163504	4 <LF>
0,13542/	12666	105066 <LF>
0,13544/	4	5 <LF>
0,13546/	12746	106427 <LF>
0,13550/	340	<LF>
0,13552/	4767	401 <RET>
*0,13636/	5046	106427 <LF>
0,13640/	4767	0 <LF>
0,13642/	163312	240 <RET>
*0,13662/	12746	106427 <LF>
0,13664/	340	<LF>
0,13666/	4767	401 <RET>
*0,13706/	5046	106427 <LF>
0,13710/	4767	0 <LF>
0,13712/	163242	240 <RET>
*0,13746/	12746	106427 <LF>
0,13750/	340	<LF>
0,13752/	4767	401 <RET>
*0,14110/	5046	106427 <LF>
0,14112/	4767	0 <LF>
0,14114/	163040	240 <RET>
*0,14220/	5046	106427 <LF>
0,14222/	4767	0 <LF>
0,14224/	162730	240 <RET>

RT-11 V03B-00
MONITOR
DDMNFB.SYS V03B-00E
PDMNFB.SYS V03B-00E

Seq 23 0

2 of 2

```
*0,14410/      12746   106427 <LF>  
0,14412/       340     <LF>  
0,14414/       4767    401 <RET>  
*E
```

```
Checksum?      34203 <RET>
```

.Reboot

In the above patch, 'xx' = DD for DEctape II FB monitor
and 'xx' = PD for PDT FB monitor.

RT-11 SOFTWARE DISPATCH
CUMULATIVE INDEX
MAY 1979

This is a complete listing of all articles for current versions of RT-11 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!

Retracted articles are indicated: RETRACTION.

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

M = Mandatory patch. These are critical patches which each customer is required to install.

O = Optional patch. These articles are applicable only if the reported problems have occurred at the customer site or if they are unique to his operation.

R = Restriction. These problems are not patchable in released software. Restrictions are reviewed and corrected when possible as part of the normal release cycle.

N = NOTE. This information may be helpful to the user.

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
APL-11 V1		
APL.SAV PROGRAM PATCHES		
ERRONEOUS "DEFINITION ERROR" DURING FUNCTION EDITING	01 M	Nov 77
LOSS OF LOWER-CASE ON RE-ENTRY TO APL-11	02 M	Nov 77
APL WORKSPACE	03 R	Nov 77
"SYSTEM ERROR" S GENERATED BY NULL LINE ELEMENTS	04	Dec 77
INTERNAL MEMORY ALLOCATION PROBLEMS	05 M	Dec 77
ERROR FOR SCALAR RESULT OF DECODE OR INNER PRODUCT OPERATION	06 M	Feb 78
SYSTEM ERROR ON PARAMETER RETURN	07 M	May 78
BASIC-11/RT-11 V2		
RESEQUENCE PRODUCES AN INCORRECT PROGRAM UNDER CERTAIN CONDITIONS	01 M	Aug 78
PRINT USING	02 M	Jun 78
MAX SIZE OF LINE ENTERED TO BASIC-11	03 M	Jun 78
REM STATEMENT CONTAINING LEFT PARENTHESIS CAUSES SUBSEQUENT SPACES AND PERIODS TO BE REMOVED	04 R	Jun 78
RUN (NH) COMMAND MAY GIVE AN ERROR MESSAGE	05 M	Jul 78
TERMINAL MAY HANG	06 M	Jul 78
DATA FILES	07 M	Jul 78
SAVE DEV: AND REPLACE DEV:	08 M	Jul 78
SINGLE PRECISION HANG AND NUMERIC CONVERSION PROBLEM (PATCH F)	09 M	Aug 78
CONVERSION PROGRAM	10 M	Sep 78
OVERLAYING WHILE IN A SUBROUTINE	11 R	Nov 78
OPERATION OF CTRL/C, AND RCTRLC AND SYS (6) FUNCTIONS AND THE CTRL/C COMMAND	12 N	Nov 78
BASIC-11/RT-11 V2 CONVERSION PROGRAM PATCH 1	13 M	Feb 79
OPERATION OF OLD, RUN, CHAIN AND OVERLAY WHEN THE SPECIFIED FILE IS NOT FOUND	14 N	Feb 79
CREATING AND ACCESSING VIRTUAL ARRAY FILES	15 N	Feb 79
REPLICATION OF PATCHES	16 N	Feb 79
PRINT USING - PATCH A	17 M	Feb 79
RESEQ - PATCH B	18 M	Feb 79
EDITING A DIM #n STATEMENT - PATCH C	19 M	Feb 79
DOUBLE PRECISION HANG - PATCH D	20 M	Feb 79
SAVE dev: AND REPLACE dev: - PATCH E	21 M	Feb 79
SINGLE PRECISION HANG AND NUMERIC CONVERSION PROBLEM - PATCH F	22 M	Feb 79
SAVE .XXX & UNSAVE .XXX - PATCH G	23 M	Feb 79
NEW - PATCH H	24 M	Feb 79
STORAGE OF THE NULL CHARACTER IN STRING VARIABLES AND VIRTUAL STRING ARRAYS	25 N	Feb 79
USE OF COMPILE COMMAND	26 N	Feb 79
RESEQ - PATCH I	27 M	Mar 79
LISTNH /OLD - PATCH J	28 M	Mar 79
SYS(1) - PATCH K	29 M	Mar 79

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
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DOUBLE PRECISION INTEGER VARIABLES - PATCH M	31 M	May 79
FILESIZE 0 - PATCH N	32 M	May 79
BASIC/RT-11 EXTENSIONS V1		
"IPK" SUBROUTINE	01 M	Aug 77
SAMPLING A/D CHANNEL NO. 15	02 R	Aug 77
SAMPLING AR11	03 M	Sep 77
"CLRD" AND "PUTD" ROUTINES	04 M	Nov 77
"SETR" AND "WAIT" COMBINATION MAY FAIL	05	Apr 78
BASIC/RT-11 EXTENSION BUILD PROCEDURE RESTRICTION	06 R	Mar 79
CTS-300 V3		
CTS-300 V03 RELEASE NOTES	01	Apr 77
USE OF RSTAT WITH ISAM FILES	02 R	Aug 77
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DECFORM		
DECFORM ERRORS	01	Apr 77
REPLACEMENT PAGES	02	Apr 77
SEARCHMODE AND RENAM PROBLEM - NEW VERSION NUMBER	03	Jun 77
EXTRA CHARACTERS AT STATEMENT END	04	Jun 77
FOCOMP INCORRECTLY ALLOCATES AN EXTRA CHARACTER	05	Nov 77
REPLACEMENT PAGES	06	Aug 77
DECFORM RESTRICTIONS	07	Sep 77
CONDITIONAL GOTO AND CONDITIONAL SKIP	08	Oct 77
DECFORM PROBLEMS AND RESTRICTIONS	09 R	Nov 77
HANG ON EXIT	10	Jan 78
TWO PROBLEMS IN FOCOMP	11 M	Feb 78
EOF AFTER CHANGED RECORD	12 M	Mar 78
LOST RECORD ON DUPLICATE KEY	13 M	Apr 78
MESSAGE FOR SPEED READERS	14 M	Apr 78
EXCITING DECFORM VIA FIVE-PART QUESTION	15 M	May 78
DOCUMENTATION		
MULTIVOLUME FILES ON MAGTAPE	01 N	Feb 78
PAGE CORRECTION	02	Apr 78
DOCUMENT ERROR	03	Apr 78
DICOMP		
IMPROPER GLOBAL INFORMATION	01	Jul 77
COMMENT CAUSES ERROR	02	Aug 77
FILEX		
RESTRICTION ON FILEX	01	Sep 77
FILEX INFORMATION AND RESTRICTION	02 R	Mar 78
OUT ERR WITH 128-CHARACTERS RECORDS	03 M	Jul 78
BLANK RECORDS	04 M	Sep 78
ISMUTL		
INDEXING PROBLEM	01	Jul 77
WRONG RECORD COUNT	02	Jul 77
CTS-300 SYSTEM REFERENCE MANUAL	03	Oct 77
INCORRECT APPEND CALCULATION	04	Sep 77
ERR 16 IN REORG	05	Oct 77
THREE PROBLEMS IN ISMUTL	06 M	Jan 78
REPLACEMENT PAGES	07 N	Feb 78
WRONG FILE SPACE ALLOCATION	08 M	Apr 78
ERRONEOUS ERROR MESSAGE	09 M	Apr 78
ERROR 28	10 M	Apr 78
LEGAL CHARACTERS IN ISAM RECORDS	11 R	May 78
DUPLICATE KEYS IN THE INPUT FILE	12 M	Jun 78
MORE INPUT RECORDS THAN SPECIFIED	13 M	Jul 78
THREE PROBLEMS IN ISMUTL	14 M	Sep 78
FOUR PROBLEMS IN ISMUTL	15 M	Oct 78
PROBLEM WITH SEVEN DATA VOLUMES	16 M	Jan 79
LPTSPL		
NO CONTINUE AFTER PROGRAM ABORT	01 M	May 78

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
SINGLE USER DIBOL		
SPURIOUS I/O ERRORS DURING ISAM STORE	01	Jun 77
CHANGE READS STATEMENT TO ACCEPT 8-BIT ASCII	02	Apr 77
LOCASE CONVERTS UNDERLINE TO RUBOUT	03	Jun 77
ISAM RECORDS CROSSING BLOCK BOUNDARIES	04	Aug 77
PROBLEM WITH 32KB OR LESS	05	Sep 77
REPLACEMENT PAGES	06	Oct 77
"NOT ENOUGH MEMORY" CONDITION	07 M	Jan 78
RECORDS BEING LOST	08 M	Feb 78
RUNNING V3 ON LSI	09 M	Apr 78
LP NO OUTPUT, ERROR 22 ON CLOSE	10 M	Jan 79
SORTG		
TAGSORTS NOT ALLOWED ON ISAM FILES	01	May 77
CORRECTION TO VERSION "A" PATCH	02	Oct 77
SORTM		
I/O ERROR INTERPRETED AS AN INPUT END OF FILE	01	Apr 77
NEGATIVE NUMBERS IN SORT/MERGE	02	Oct 77
SORTING CARETS	03 M	Jan 78
INCORRECT RECORD COUNT	04 M	Feb 78
FIRST RECORD OUT OF ORDER	05 M	Mar 78
ERR 16 IN TSD	06 M	Jul 78
MERGE WITH DESCENDING KEY	07 M	Sep 78
TSD		
CHANGE READS STATEMENT TO ACCEPT 8-BIT ASCII	01	Apr 77
REPLACEMENT PAGES	02	Apr 77
PROGRAM SIZE CALCULATIONS FOR TSD	03	May 77
I/O RACE CONDITION	04	Jun 77
GARBLED OUTPUT DUE TO ALPHA OR DECIMAL DISPLAYS	05	May 77
PROBLEM WITH RENAM	06	Jun 77
LOCASE CONVERTS UNDERLINE TO RUBOUT	07	Jun 77
ISAM FILE SHARING PROBLEM	08	Jun 77
IMPOSSIBLE TRAP ON OVERLAYING	09	Jun 77
ISAM RECORDS CROSSING BLOCK BOUNDARIES	10	Aug 77
RECORDS BEING LOST	11 M	Feb 78
PERMANENTLY LOCKED GROUP	12 M	Mar 78
RUNNING V3 ON LSI	13 M	Apr 78
CLOSING ISAM FROM AN EXTERNAL SUBROUTINE	14 M	Apr 78
PROBLEM WITH ISAM INPUT	15 M	Apr 78
LP NO OUTPUT, ERROR 22 ON CLOSE	16 M	Jan 79
CTS-300 V3 AND CTS-300/DIS V3.5		
ISAM REPAIR PROGRAM	01 0	Mar 78
CTS-300 V4		
DECFORM		
ADDITIONAL INFORMATION ON MATH OPTION	01 N	Dec 77
UNDEFINED GLOBALS WITH DECFORM	02	Jan 78
TWO PROBLEMS IN FOCOMP	03 M	Feb 78
EOF AFTER CHANGED RECORD	04 M	Mar 78
LOST RECORD ON DUPLICATE KEY	05 M	Apr 78
MESSAGE FOR SPEED READERS	06 M	Apr 78
EXITING DECFORM VIA FIVE-PART QUESTION	07 M	Jun 78
TOO FEW DATA FIELDS RETURNED	08 M	Jun 78
USR NOSWAP CAUSES TRAP TO 4	09 M	Aug 78
RANDOM ERRORS WITH FIELD CHECK	10 M	Oct 78
ALTERNATE KEYPAD MODE	11 M	Nov 78
DICOMP		
TRAP TO 4 UNDER XM	01 M	Feb 78
TRAP TO 10 UNDER FB	02 M	Feb 78
DON'T WASTE PAPER	03 M	Jul 78
DOCUMENTATION		
REPLACEMENT PAGES	01 N	Dec 77
DOCUMENTATION CHANGES TO CTS-300 SYSTEM USER'S GUIDE	02 N	Jun 78
DOCUMENTATION CHANGES TO DECFORM USER'S GUIDE	03 N	Jun 78

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
ISMUTL		
THREE PROBLEMS IN ISMUTL	01 M	Dec 77
WRONG FILE SPACE ALLOCATION	02 M	Apr 78
ERRONEOUS ERROR MESSAGE	03 M	Apr 78
ERROR 28	04 M	Apr 78
LEGAL CHARACTERS IN ISAM RECORDS	05 R	May 78
DUPLICATE KEYS IN THE INPUT FILE	06 M	Jun 78
MORE INPUT RECORDS THAN SPECIFIED	07 M	Jul 78
THREE PROBLEMS IN ISMUTL	08 M	Sep 78
FOUR PROBLEMS IN ISMUTL	09 M	Oct 78
PROBLEM WITH SEVEN DATA VOLUMES	10 M	Jan 79
LPTSPL		
JOB MISHANDLING	01 M	Jan 78
LPTSPL HANGS IF STARTED DETACHED	02 M	Nov 78
REDUCE		
MULTIPLE FILE PROBLEM	01 M	Jan 78
BAD FILE CAUSES SYSTEM HALT	02 M	Sep 78
WILD CARD PROBLEMS	03 M	Nov 78
DEFAULT DEVICE WITH SHORT COMMAND	04 M	Dec 78
SINGLE USER DIBOL		
PROBLEM WITH CLOSING A FILE	01 M	Dec 77
RANDOM ACCESS PROBLEM	02 M	Jan 78
MINUS ZERO	03 M	Jan 78
LPQUE DOES NOT WORK	04 M	Jan 78
CHANNEL 1	05 M	Jan 78
FIELD EDITING	06 M	Jan 78
WRONG ERROR MESSAGE	07 M	Feb 78
MINUS ZERO	08 M	Feb 78
S.U. DIBOL WORKS ONLY UNDER XM	09 M	Feb 78
RECORDS BEING LOST	10 M	Feb 78
NO SINGLE USER ON 11/10	11 M	Feb 78
RENAME PROBLEM	12 M	Apr 78
NO MAGTAPE IN V4	13 M	Apr 78
ABORT ON SECOND LPQUE STATEMENT	14 M	Jun 78
XCALL VERSN BEGETS TRAP TO 4 (See TSD, Seq 34 M)	15 M	Jun 78
LPNUM CAUSES FILE NOT FOUND	16 M	Jun 78
BAD OPEN	17 M	Jul 78
MONITOR TRAP WITH DIVIDE	18 M	Jul 78
RECORD NUMBERS GREATER THAN 65,535	19 M	Jul 78
PROBLEM ACCEPTING FROM A FILE	20 M	Jul 78
NO CTRL/C TRAP UNDER SUD	21 M	Aug 78
DIRECT CURSOR POSITIONING UNDER SUD	22 M	Aug 78
TTSTS DOES NOT WORK UNDER SINGLE USER DIBOL	23 M	Sep 78
CTRL/C TRAP AND TTSTS	24 M	Oct 78
ERR 23 WITH CARD READER	25 M	Oct 78
VERY LARGE RECORD NUMBERS	26 M	Nov 78
GARBAGE TO THE LP	27 M	Nov 78
LP NO OUTPUT, ERROR 22 ON CLOSE	28 M	Jan 79
SORTG		
KDTYP MISSING	01 M	Feb 78
THREE SORT PROBLEMS	02 M	Nov 78
SORTM		
SORTING CARETS	01 N	Dec 77
TAGSORTS WITH MULTIPLE KEYS	02 M	Jan 78
FIRST RECORD OUT OF ORDER	03 M	Mar 78
ERR 16 IN TSD	04 M	Jul 78
THREE SORT PROBLEMS	05 M	Nov 78
MERGE DOES NOT ACCEPT EMPTY FILES	06 M	Jan 79
SORTP		
NO PROTECTION FROM MIXING DATA MODES	01 M	Jun 78
STATUS.TSD		
WRONG JX INFORMATION	01 M	Dec 77
PENDING MESSAGES	02 M	Jan 78
PROBLEM DURING JOB STARTUP	03 M	Mar 78

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
TSD		
PROBLEM WITH MULTIPLE ISAM FILES	01 M	Dec 77
TNMBR TRAPS TO 4	01a M	Jan 79
RANDOM ACCESS PROBLEM	02 M	Jan 78
MINUS ZERO	03 M	Jan 78
DELETE CAUSES STACK OVERFLOW	04 M	Jan 78
FIELD EDITING	05 M	Jan 78
PROBLEM WITH ISAM INPUT	06 M	Jan 78
SEND CAUSES STACK OVERFLOW	07 M	Feb 78
STATUS GIVES FALSE REPORT	08 M	Feb 78
FILE SHARING	09 M	Feb 78
CHANNEL IN USE PROBLEM	10 M	Feb 78
PROGRAMS CREATED IN REGION 0	11 M	Feb 78
IMPLICIT JOB STARTUP PROBLEM	12 M	Feb 78
PENDING MESSAGES DESTROY SYMBOL TABLE	13 M	Feb 78
TERMINALS IGNORED	14 M	Feb 78
TROUBLE WITH TSD UNDER FB	15 M	Feb 78
MEMORY FAULT WITH SEND/RECV	16 M	Feb 78
PERMANENTLY LOCKED GROUP	17 M	Mar 78
SLOW TERMINAL I/O	18 M	Mar 78
PROBLEM WITH FORCED JOB AND TERMINAL NUMBER	19 M	Mar 78
INCORRECT CHECK FOR FREE SPACE	20 M	Mar 78
SYSGEN/TSDGEN PROBLEM	21 M	Mar 78
OPENING LP: GENERATES ERRORS	22 M	Mar 78
RECORDS BEING LOST	23 M	Apr 78
BAD I/O, FLAG NOT CLEARED	24 M	Apr 78
CLOSING ISAM FROM EXTERNAL SUBROUTINE	25 M	Apr 78
DISPLAY FROM DETACHED PROGRAM TO DETACHED TERMINAL	26 M	Apr 78
NO MAGTAPE IN V4	27 M	Apr 78
BASE LEVEL 2	28 M	Apr 78
R6 STACK OVERFLOW	29 M	May 78
TSD HANGS IF LP GOES OFF LINE	30 M	Jun 78
SLEEP PAST MIDNIGHT, NEVER WAKE UP	31 M	Jun 78
LOWER CASE CONVERTS TO UPPER CASE	32 M	Jun 78
THREE PROBLEMS IN XMTSD	33 M	Jun 78
XCALL VERSN BEGETS TRAP TO 4 (See Single User DIBOL, Seq 15 M)	34 M	Jun 78
SLAVE REFUSES TO WORK	35 M	Jun 78
MORE LP: NOHANG DIFFICULTIES	36 M	Jun 78
MORE TRAPS TO 4 AND 10	37 M	Jun 78
NO ALIGN OR DELETE WITH LPQUE	38 M	Jun 78
TRAP TO 10 CAUSED BY OPEN ISAM FILE	39 M	Jun 78
NO ROOM FOR BUFFER CAUSES TRAP TO 4/10	40 M	Jun 78
MAGTAPE READ DOES NOT WORK	41 M	Jul 78
MONITOR TRAP WITH DIVIDE	42 M	Jul 78
RECORD NUMBERS GREATER THAN 65,535	43 M	Jul 78
BAD BINARY FILE	44 M	Jul 78
STOP CHAIN FAILURE	45 M	Aug 78
SKIPPED TERMINALS CAUSE FORCED JOB STARTUP PROBLEM	46 M	Aug 78
SKIPPED TERMINALS CAUSE "SEND" PROBLEM	47 M	Aug 78
ANOTHER EXTENDED MEMORY ALLOCATION PROBLEM	48 M	Aug 78
REMOTE TERMINAL PROBLEM	49 M	Aug 78
SEND TO -2 SOMETIMES FAILS	50 M	Aug 78
WASTED SPACE	51 M	Aug 78
CANNOT INTERRUPT TIGHT I/O LOOPS	52 M	Aug 78
PROBLEM WITH SEND	53 M	Sep 78
CTRL/C TRAP AND TTSTS	54 M	Oct 78
ATTACH SOMETIMES GETS CONFUSED	55 M	Oct 78
SHUFFLER/LINE PRINTER CONFLICT	56 M	Oct 78
VERY LARGE RECORD NUMBERS	57 M	Nov 78
STORES TO AN ISAM FILE CAN CAUSE I/O ERROR	58 M	Nov 78
GARBAGE TO THE LP:	59 M	Nov 78
LP NO OUTPUT, ERROR 22 ON CLOSE	60 M	Jan 79
TWO PROBLEMS WITH TSD/XMTSD	61 M	Mar 79
TSDGEN		
HARDWARE FORM FEEDS AND TSD	01 M	Nov 78
SET TT SCOPE GETS RESET	02 M	Nov 78

CTS-300 V5

TSD		
TWO PROBLEMS: FILE CORRUPTION POSSIBILITY AND REPETITIVE I/O ERRORS	01 M	Apr 79
OPENING NON-STANDARD HANDLERS	02 M	Apr 79
ANOTHER FILE CORRUPTION POSSIBILITY	03 M	Apr 79
DECFORM		
TWO PROBLEMS WITH FOCOMP	01 M	May 79
SUD		
TWO PROBLEMS: OPENING 0 LENGTH FILE IN SUD AND OPENING LP IN I MODE	01 M	May 79
LINE PRINTER PROBLEM AND PROBLEM WITH LARGE ISAM FILE	02 M	May 79
SORTM		
MERGE DOES NOT ACCEPT EMPTY FILES	01 M	Apr 79

CTS-300/DIS V3.5

USE OF RSTAT WITH ISAM FILES	01 R	Nov 77
DECFORM		
SEARCHMODE AND RENAM PROBLEM - NEW VERSION NUMBER	01	Oct 77
MICRO CODE CAUSES TRAP TO 10	02	Oct 77
DECFORM RESTRICTIONS	03	Nov 77
EXTRA CHARACTERS AT STATEMENT END	04	Nov 77
FOCOMP INCORRECTLY ALLOCATES AN EXTRA CHARACTER	05	Nov 77
CONDITIONAL GOTO AND CONDITIONAL SKIP	06	Nov 77
DECFORM PROBLEMS AND RESTRICTION	07	Nov 77
HANG ONE EXIT	08 M	Jan 78
TWO PROBLEMS IN FOCOMP	09 M	Feb 78
EOF AFTER CHANGED RECORD	10 M	Mar 78
NEGATIVE NUMBER ENDING IN ZERO	11 M	Mar 78
LOST RECORD ON DUPLICATE KEY	12 M	Apr 78
MESSAGE FOR SPEED READERS	13 M	Apr 78
EXITING DECFORM VIA FIVE-PART QUESTION	14 M	May 78
DICOMP		
IMPROPER GLOBAL INFORMATION	01	Nov 77
COMMENT CAUSES ERROR	02	Nov 77
DOCUMENTATION		
MULTIVOLUME FILES ON MAGTAPE	01 N	Feb 78
PAGE CORRECTION	02 N	Apr 78
DOCUMENT ERROR	03 N	Apr 78
FILEX		
RESTRICTION ON FILEX	01 R	Nov 77
FILEX INFORMATION AND RESTRICTION	02 R	Mar 78
OUT ERR WITH 128-CHARACTERS RECORDS	03 M	Jul 78
BLANK RECORDS	04 M	Sep 78
ISMUTL		
INDEXING PROBLEM	01	Nov 77
INCORRECT APPEND CALCULATION	02	Nov 77
ERR 16 IN REORG	03	Nov 77
WRONG RECORD COUNT	04	Nov 77
THREE PROBLEMS IN ISMUTL	05	Jan 78
REPLACEMENT PAGES	06 N	Feb 78
WRONG FILE SPACE ALLOCATION	07 M	Apr 78
ERRONEOUS ERROR MESSAGE	08 M	Apr 78
ERROR 28	09 M	Apr 78
LEGAL CHARACTERS IN ISAM RECORDS	10 R	May 78
DUPLICATE KEYS IN THE INPUT FILE	11 M	Jun 78
MORE INPUT RECORDS THAN SPECIFIED	12 M	Jul 78
THREE PROBLEMS IN ISMUTL	13 M	Sep 78
FOUR PROBLEMS IN ISMUTL	14 M	Oct 78
PROBLEM WITH SEVEN DATA VOLUMES	15 M	Jan 79
LPTSPL		
NO CONTINUE AFTER PROGRAM ABORT	01 M	May 78

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
SINGLE USER DIBOL		
LOCASE CONVERTS UNDERLINE TO RUBOUT	01	Oct 77
ISAM RECORDS CROSSING BLOCK BOUNDARIES	02	Nov 77
PROBLEM IN 32K OR LESS	03	NOV 77
"NOT ENOUGH MEMORY" CONDITION	04	Jan 78
SPURIOUS I/O ERRORS CURING ISAM STORE	05	Jan 78
RECORDS BEING LOST	06 M	Feb 78
LP NO OUTPUT, ERROR 22 ON CLOSE	07 M	Jan 79
SORTG		
TAGSORTS NOT ALLOWED ON ISAM FILES	01	Oct 77
CORRECTION TO VERSION "A" PATCH	02	Nov 77
SORTM		
NEGATIVE NUMBERS IN SORT/MERGE	01	Nov 77
SORTING CARETS	02 N	Jan 78
INCORRECT RECORD COUNT	03 M	Feb 78
FIRST RECORD OUT OF ORDER	04 M	Mar 78
ERR 16 IN TSD	05 M	Jul 78
MERGE WITH DESCENDING KEY	06 M	Sep 78
TSD		
I/O RACE CONDITION	01	Nov 77
ERRONEOUS PATCH TO TSD	01a	Nov 77
INCORRECT JOB NUMBER AT STARTUP TIME	02	Sep 77
PROBLEM WITH RENAM	03	Sep 77
LOCASE CONVERTS UNDERLINE TO RUBOUT	04	Oct 77
ISAM FILE SHARING PROBLEM	05	Nov 77
IMPOSSIBLE TRAP ON OVERLAYING	06	Nov 77
ISAM RECORDS CROSSING BLOCK BOUNDARIES	07	Nov 77
RECORDS BEING LOST	08 M	Feb 78
PERMANENTLY LOCKED GROUP	09 M	Mar 78
CLOSING ISAM FROM AN EXTERNAL SUBROUTINE	10 M	Apr 78
PROBLEM WITH ISAM INPUT	11 M	Apr 78
LP NO OUTPUT, ERROR 22 ON CLOSE	12 M	Jan 79
DECnet-RT V1		
DAP		
DAP ROUTINES DO NOT ARBITRATE DAP SEGMENT SIZE PROPERLY	07 M	Jan 79
NOTES ON CHANGES TO DAP INTERFACE	09 N	Feb 79
CORRECT BUFFER POINTER ERROR	16.11 M	May 79
DDCMP		
DDCMP LINE COUNTERS OVERFLOW TO ZERO	01 O	Jul 78
DMC		
DMC LINE COUNTERS OVERFLOW TO ZERO	01 O	Jul 78
DOCUMENTATION		
USER'S GUIDE DOCUMENTATION ERRORS	2.1	May 79
FAL		
CORRECT FAL PROCESSING OF END OF STREAM MESSAGE	01 M	Jan 79
FAL INCORRECTLY ALLOCATES DISC SPACE FOR FILES	02 M	Feb 79
FAL INCORRECTLY HANDLES REMOTE FILE REQUESTS	04 M	Feb 79
FORTRAN INTERFACE		
DIFFERENCES IN RT AND RSX FORTRAN INTERFACE IMPLEMENTATIONS	01 N	Jul 78
USE OF THREADED AND INLINE FORTRAN COMPILER OPTIONS	04 R	Jan 79
FORTRAN REMOTE OPEN FOR WRITE MODIFIES FILE ATTRIBUTES	05 N	Jan 79
MODEM CONTROL		
SUPPORT OF ASYNCHRONOUS HALF DUPLEX MODEMS	01 R	Jul 78
NFARS		
DAP ROUTINES CHANGE MODE DURING FILE TRANSFER	02 M	Feb 79
CHECK FOR BLOCK MODE TRANSFER	03 M	Feb 79
DAP DEFAULTS DO NOT ALLOW RECORDS TO SPAN BLOCKS	06 O	Jan 79
ASCII FILE ACCESS TO VAX/RSX SYSTEMS	08 M	Feb 79
INVALID FILE TYPE SENT TO VAX IN ASCII TRANSFER	10 M	Mar 79

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
NSP PROTOCOL VIOLATION IN NODE INITIALIZATION	01 M	Jan 79
NFT NFT ASCII FILE TRANSFER TO VAX/RSX SYSTEMS	03 M	Feb 79
LOGICAL BLOCK NUMBERS NOW START AT ONE	17.5 M	May 79

FEP-11, FORTRAN ENHANCEMENT PKG.
ALSO PERTAINS TO: RT-11/FORTRAN UPGRADE PKG. FOR MINC

FEP-11 INITIAL PROBLEMS, SOLUTIONS AND HINTS	01 M	May 79
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FOCAL/RT-11 V1B

FOR COMMAND WITHOUT AN ARGUMENT	01 M	Oct 75
OPERATE COMMAND CAUSES ERROR	04 M	Aug 76
FCLK ROUTINE GIVES INCORRECT TIME	05 O	Aug 76
"LIBRARY ASK" COMMAND	06 O	Feb 77
"/Z" SWITCH	07 M	Aug 77
@START NOT WORKING WHEN DOWN-LINE LOADING	08 M	Mar 78
LIBRARIES FROM FOCAL SOURCE DISK MUST BE REFORMATTED	09 N	Aug 78
CLOCK PROBLEM FOR PAPER TAPE (STAND-ALONE) FOCAL USERS	10 M	Nov 78

FORTRAN IV/RT-11 V2

COMPILER		
DISPOSE = 'KEEP' OPTION	01 R	Jan 79
CRASH DUMPS	02 N	Jan 79
SYNTAX ERRORS IN SOURCE PROGRAM MAY CAUSE COMPILER TO ABORT	03 M	Jan 79
SIMRT	04 M	Jan 79
SIMRT CONTINUED	05 M	Jan 79
KNOWN FORTRAN IV V2 BUGS	06 N	Jan 79
USE OF THE FIND STATEMENT	07 M	Jan 79
RAISING COMPLEX NUMBERS	08 M	Jan 79
EXTRA CHARACTERS MAY RESULT IN COMPILER TRAPPING	09 M	Jan 79
TRANSMITTING ASCII DATA	10 R	Jan 79
IN-LINE CODE	11 N	Jan 79
ERRORS OCCUR WITH NO DO LOOP	12 M	Jan 79
FORTRAN "ACCEPT" STATEMENT	13 R	Jan 79

FORTRAN IV/RT-11 V2.1

FORTRAN IV V2.1 MAINTENANCE RELEASE	01 N	Dec 78
COMPILER		
PATCH 1	02 M	Feb 79
PATCH 2	03 M	Feb 79
PATCH 3	04 M	Feb 79
REGISTER ALLOCATION - PATCH 8	05 M	May 79
CARRIAGECONTROL OPTION - PATCH 5	06 M	May 79
OTS		
PATCH 4	05 M	Feb 79
OPEN FAILURE WITH TYPE='OLD' - PATCH 6	07 M	May 79
FORTRAN LIBRARY FUNCTION ERRST - PATCH 7	08 M	May 79
SMALLER EXECUTION-TIME PROGRAMS	09 N	May 79

FORTRAN GRAPHICS PACKAGE, V1.1

DECGRAPHIC NMBR SUBROUTINE IN DECgraphic	01 R	JAN 79
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FORTRAN/RT-11 EXTENSIONS V1

RUNNING PROGRAM WITH "SETR"	01 M	Oct 78
IBEF NOT PROPERLY DECREMENTED	02 R	Oct 78
LPS DEVICE CONFLICT CAUSED BY CALL SETR AFTER CALL RTS	03 R	Oct 78

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
IADC AFTER RTS DOES NOT WORK	04 M	Oct 78
SUBROUTINE NAMING CONFLICT	05 N	Oct 78
PLOT55 DESCRIPTION	06 N	Oct 78
ILLEGAL MEMORY REFERENCE ERROR	07 M	Oct 78
uDEVICE CONFLICT ERROR	08 R	Oct 78
TWO PROBLEMS WITH THE RT-11/FORTRAN GRAPHICS EXTENSIONS	09 M	Oct 78

FORTRAN/RT-11 EXTENSIONS V1B

FORTRAN CRASHES AFTER RUNNING PROGRAM WITH "SETR"	01 M	Oct 78
TWO PROBLEMS WITH THE RT-11/FORTRAN GRAPHICS EXTENSIONS	02 M	Oct 78
NEGATIVE INTENSITY	03 N	Nov 78
PROGRAM TERMINATION ERROR USING RT-11 F/B	04 R	Apr 79

FORTRAN/RT-11 EXTENSIONS V2.1

FORTRAN CRASHES AFTER RUNNING PROGRAM WITH "SETR"	01 M	Mar 79
TWO PROBLEMS WITH THE RT-11/FORTRAN GRAPHICS EXTENSIONS	02 M	Mar 79
NEGATIVE INTENSITY	03 N	Mar 79

GAMMA-11 F/B V2

DATA ANALYSIS PROGRAM	01 M	Feb 77
STUDY TRANSFER PROGRAM DISPLAYS TOO MANY INDEX LINES PER PAGE	02 M	Feb 77
BASIC AND FOCAL	03 M	Feb 77
BACKGROUND PROGRAM CAN HANG THE FOREGROUND TERMINAL	04 M	Feb 77
CNTL/C UNDER SINGLE JOB MONITOR	05 M	Feb 77
CROSSHAIRS FAIL TO APPEAR IN SLICE	06 M	Feb 77
UNDOCUMENTED PROGRAMS	07 N	Mar 77
FORTRAN SUPPORT INCORRECTLY CONVERTS DATA AND TIME OF INQUISITION	08 M	May 77
"RS" COMMAND IS INCORRECTLY	09 N	Jun 77

GAMMA-11 F/B V2C

GATED LIST MODE IMAGES	01 O	Sep 78
TU16 SUPPORT	02 M	Sep 78
PROBLEMS WITH PLAYBACK BUFFER COMMENTS AND FLOOD CORRECTIONS	03 M	Oct 78
STATIC FOREGROUND ACQUISITION FAILS ON RK06 OR RL01 SYSTEMS	04 M	Oct 78
DYNAMIC CURVE CALCULATIONS MAY FAIL	05 M	Dec 79
RK06, 7 AND RL01 FOREGROUND ACQUISITIONS PROBLEMS	06 M	Dec 78
PROBLEMS WITH FLOOD CORRECTIONS	07 M	Dec 78
PROBLEMS WITH REGION OF INTEREST	08 M	Dec 78
KW11-P REAL-TIME CLOCK INCORRECTLY INITIALIZED	09 M	Dec 78
GAMMA-11 V2C NCV11 REAL-TIME CLOCK CAN BE DISABLED	10 M	Dec 78
KW11-P REAL-TIME CLOCK RUNS TOO FAST DURING GSA STUDIES	11 M	Dec 78
BUILDING AN RL01 GAMMA-11 V2C SYSTEM	12 M	Dec 78
PREDEFINED GATED LIST MODE STUDIES	13 M	Dec 78
GATED LIST MODE DATA ACQUISITION SET-UP	14 M	Dec 78
PROBLEMS WITH MAGTAPE DISTRIBUTION	15 N	Dec 78
SUBROUTINE 'GMXG' GENERATES ILLEGAL ADDRESS MESSAGE	16 O	Feb 79
FGAMMA/BGAMMA RACE CONDITION	17 M	Feb 79
DELAYED START LIST MODE STUDIES	18 M	Feb 79
FORMATTING GATED LIST MODE STUDIES	19 M	Feb 79
SLICE PROBLEMS	20 M	Feb 79
DOUBLE INTERPOLATION OF 64 X 64 MATRIX DATA	21 M	Feb 79
GAMMA-11 AND RT-11 DATE ROLLOVER	22 M	Feb 79
PROBLEMS WITH PATIENT MONITOR AND GSA ADMIN BLOCKS	23 M	Feb 79
FOREGROUND GATED LIST MODE STUDIES FAIL	24 M	Feb 79
NCV11 JOYSTICK AND LIST MODE PROBLEMS	25 M	May 79
SYSTEM SUMMARY FOR RK07 DISKS	26 O	May 79
MORE PROBLEMS WITH FLOOD CORRECTION	27 M	May 79
TWO MINOR PROBLEMS WITH PLAYBACK BUFFERS	28 M	May 79
TRANSFER STUDY CAN CORRUPT A DISK DIRECTORY	29 M	May 79
FOUR FRAME MINIMUM FOR GSA STUDIES	30 M	May 79
GAMMA-11/BASIC PATCHES	31 M	May 79
CONTINUE ANALYSIS CA) OCCASIONALLY FAILS	32 M	May 79

LABORATORY APPLICATIONS-11 V3

A NEW MODULE TO ENHANCE DATA FLOW WITHIN LA-11	01 N	Oct 76
HISTO.MAC ACQUIRING AND PROCESSING HISTOGRAM DATA	01 M	Sep 76
LABMAC.SML ERRONEOUS MACRO INCLUDING LABMAC.SML IN SYSMAC.SML	01 M 02 M	Sep 77 Mar 79
PEAK.MAC WIDE PEAKS PEAK PROBLEMS AND CORRECTIONS ARITHMETIC CORRECTION FOR PEAK AREA MISSING PATCH IN RELEASE NOTES	01 M 02 M 03 M 04 M	Mar 76 Jul 76 Dec 76 Oct 77
SPARTA LPS AND AR-11 VECTOR AND STATUS REGISTER USING SPARTA AND FLOATING POINT BUFFERS AR-11 TIMING PROBLEMS WITH ADSAM AND SPARTA FFT SCALING CORRECTION SCALE FACTOR CORRECTION FOR SPARTA COMMANDS FAC AND FCC DATA DISPLAYS USING LA-11 DATA PREPARATION FOR SPARTA COMMANDS FAC AND FCC SPARTA CORRECTIONS FOR POINT-PLOT DISPLAY ADDING COMMANDS TO SPARTA CORRECTION FOR THE DPV COMMAND WITH POINT PLOT DISPLAY GENERAL SUBROUTINE MODULE FOR EAE INCORRECT PHASE ANGLE CALCULATION "MOU" AND "MIN" COMMANDS CAN BE READ OUT AND IN CORRECTLY MULTIPLE SYNCH PULSES AUTO AND CROSS CORRELATION ALLOCATING MORE THAN 16K BUFFERS IN SPARTA A/D SAMPLING: FAST MODE A/D SAMPLING: FAST MODE EXIT SCALE FACTOR PRINT FOR THE FFT	01 N 02 N 03 O 04 M 05 M 06 N 07 N 08 M 09 M 10 M 11 O 12 M 13 N 14 M 15 M 16 M 17 M 19 M 20 M	Dec 75 Feb 76 Feb 76 Feb 76 Mar 76 Mar 76 Apr 76 Apr 76 May 76 Jun 76 Jun 76 Oct 76 Jan 77 Jan 77 Jan 77 Feb 77 Jul 77 Mar 78 Jan 79
SWEEP.MAC SWEEP SAMPLING: FAST MODE	01 M	Aug 77
THRU HOW TO START DATA ACQUISITION WHEN CSTART EQUALS ZERO MULTICHANNEL SINGLE RATE SCHMIT TRIGGER SWITCH BOUNCE CONTINUOUS SAMPLING: CONDITIONAL ASSEMBLY ERRORS CONTINUOUS SAMPLING: DMA WITH DUAL SAMPLE + HOLD DOCUMENTATION CORRECTIONS	01 N 02 M 03 M 04 M 05 M	Jun 76 Dec 76 Jul 77 Jul 77 Nov 77
LV11/RT-11 PLOTTING PACKAGE V2		
SUBROUTINE PLOT DOES NOT CORRECTLY REPRODUCE VT11 PICTURE	01 M	Apr 78
MU BASIC/RT-11 V1		
BUILDING MU BASIC/RT-11 UNDER RT-11 V2C REMOTE TERMINAL SUPPORT ON MODEMS OVERLAY... LINE WORKS INCORRECTLY USING IMMEDIATE MODE "GOSUBs" CLOCK LOSES TIME ON RT-11 WHEN RUNNING MU BASIC REM STATEMENTS ADDITIONAL FILES ON RELEASE KIT (MUB*.*)	01 02 03 04 05 06 07 N	Feb 76 May 76 May 76 Dec 76 Jul 77 Feb 78 May 78
MU BASIC/RT-11 SYSTEM INSTALLATION GUIDE REPLACEMENT PAGES REPLACEMENT PAGES REPLACEMENT PAGES	01 02 N 03 N	Jan 77 Jan 78 Jan 78
MU BASIC-11/RT-11 V2		
MU BASIC-11/RT-11 V2 CONVERSION PROGRAM OPERATION OF CTRL/C, RCTRLC AND SYS (6) FUNCTIONS AND THE	01 R	Nov 78

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
CTRL/C COMMAND	02 N	Nov 78
MEMORY REQUIREMENTS OF OPTIONAL FUNCTIONS ETC.	03 O	Nov 78
MU BASIC-11/RT-11 V2 RELEASE NOTES AND INSTALLATION GUIDE CHANGES	04 N	Dec 78
ORDER OF COMMON STATEMENTS AT START OF MUCNFG.B00, MUCNF1.B00, MUCNF2.B00	05 M	Dec 78
OPERATION OF OLD, RUN, CHAIN AND OVERLAY WHEN THE SPECIFIED FILE IS NOT FOUND	06 N	Feb 79
CREATING AND ACCESSING VIRTUAL ARRAY FILES	07 N	Feb 79
STORAGE OF THE NULL CHARACTER IN STRING VARIABLES AND VIRTUAL STRING ARRAYS	08 N	Feb 79
USE OF COMPILE COMMAND	09 N	Feb 79
MU BASIC-11/RT-11 V2 CONFIGURATION PROGRAM PATCH 1	10 O	Feb 79
CHAINING WITH COMMON -PATCH A	11 M	Feb 79
VIRTUAL FILE I/O - PATCH B	12 M	Feb 79
SYS (1,n) FUNCTION - PATCH C	13 M	Feb 79
RESEQ - PATCH D	14 M	Feb 79
VALUES IN PATCHES A, B, C	15 N	Feb 79
LISTNH / OLD - PATCH E	16 M	Mar 79
CALL - PATCH F	17 M	Mar 79
MU BASIC-11 DEVICE INDEPENDENCE FOR INIT.B00 - SPECIAL PATCH YY1	18 M	May 79
DOUBLE PRECISION INTEGER VARIABLES - PATCH G	19 M	May 79
INPUT #/PRINT # - PATCH H	20 M	May 79
OLD OF A ZERO BLOCK FILE - PATCH I	21 M	May 79
ADDITION TO PATCH B - PATCH J	22 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 1	23 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 2	24 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 3	25 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 4a	26 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 4b	27 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 4c	28 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 5	29 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 6	30 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 7	31 M	May 79
MU BASIC-11/RT-11 V2 PERFORMANCE IMPROVEMENT PATCH NO. 8	32 M	May 79

PDL/RT-11 V1B

CLARIFICATION OF SEARCH FAILURE IN SUBROUTINE FIND	01 N	Jul 78
FIND SUBROUTINE	02 R	Jul 78
PATCHES TO PDL	03 M	Jul 78
SUBROUTINE QKGT	04 M	Jul 78
PDL SUBROUTINE 'RDAA'	05 M	Sep 78
PDL PEAK ALGORITHM WILL NOT RECOGNIZE VALID PEAKS	06 M	Sep 78

PEAK-11 V1

"MREPR" AND "REPR" GET CONFUSED	01 M	Aug 78
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REMOTE/RT-11 V1

SCHEDULER DOES NOT PROPERLY SET PROCESSOR PRIORITY	01 M	May 76
NOEDIT- 0 HALTS	02 M	May 76
NUSERS=1 STAYS IN A FILE MESSAGE LOOP	03 M	May 76
INCORRECT SWAP AREA ALLOCATION FOR FOUR OR MORE USERS	04 M	May 76
REBOOT FROM SATELLITE DURING EDIT HANGS HOST	05 M	Jun 76
HARD ERROR ON LOOKUP IS FATAL	06 M	Jun 76
SECONDARY MODE PROGRAM LOAD FEATURE NOT COMPLETELY FUNCTIONAL	07 M	Jun 76
ONE SECOND TIMER FOR LINE TIMEOUTS IS SET INCORRECTLY	08 M	Aug 76
LINE FEEDS MAY CAUSE SYSTEM ERRORS--ASSEMBLY ERROR WITH DIAL AND NODDC	09 M	Aug 76
PROPER GENERATION OF REMOTE IS DEPENDENT ON MODULE ORDER	10 M	Aug 76
ASCII CODES 173 AND 174 DO NOT PRINT	11 M	Aug 76
IMPROPER FILLER HANDLING FOR VT05	12 O	Aug 76
SYSTEM CRASHES IF RUN IN FOREGROUND WITHOUT /N	13 O	Aug 76
"UNSAVE" COMMAND CAUSES SYSTEM ERRORS	14 M	Dec 76
FLET WILL REMOVE MORE THAN ONE USER FROM THE WAIT QUEUE	15 M	Dec 76
STACK FOR USER THREE IMPROPERLY SET	16 O	Dec 76
SECONDARY MODE LOADS DO NOT OPERATE PROPERLY	17 M	Jan 77
@START COMMAND GIVEN ON TERMINAL WITHOUT SATELLITE CAUSES CRASH	18 O	Jan 77
"RTSIM" DOES NOT SUPPORT 50 Hz LINE CLOCK	19 O	Jan 77
CHANNEL ACTIVE ERROR	20 M	Mar 77

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
THREE WORDS LOST ON DOWNLINE LOAD	21 M	Mar 77
CSISPC NOT PROPERLY SIMULATED	22 M	May 77
EXCEEDING CHARACTERS PER LINE LIMIT	23 M	Oct 77
UNASSIGNED	24	XXX XX
@RE IN THE SATELLITE DOES NOT WORK	25 R	Mar 78
"HANG" CONDITIONS	26 R	Apr 78
UANSIGNED	27	XXX XX
USING KG-11 CRC CALCULATOR	28 M	Aug 78
PASTE CAUSES LINE DUPLICATION	29 M	Aug 78
"DAISY CHAIN" ARRANGEMENT IN RTSIM.MAC	30 M	Aug 78
OPTIONAL RMON IS OMITTED FROM RTSIM BY DEFINING NORMON=0	31 M	Oct 78
DL-11 ERROR AND CRC ERROR IN HOST	32 M	Oct 78

RT-11 V3

DOCUMENTATION		
TYPOGRAPHICAL ERRORS	01 N	Mar 78
ERROR IN FOREGROUND/BACKGROUND DEMONSTRATION	02 M	Aug 78
THE /LIST OPTION FOR THE DIBOL, FORTRAN, AND MACRO KEYBOARD MONITOR COMMANDS	03 M	Nov 78
EDIT		
EDIT DOES NOT OPERATE CORRECTLY UNDER XM MONITOR	01 M	Mar 78
MACRO		
.NARG FAILS WHEN AUTOMATIC LABEL GENERATION IS USED	01 M	Apr 78
MISCELLANEOUS		
GETSTR AND PUTSTR ROUTINES FOR IN-LINE CODE	01 M	Jun 78
ERROR IN THE CONCAT ROUTINE	02 M	Jun 78
ERROR IN MTATCH ROUTINE	03 M	Nov 78
MONITOR		
INCORRECT IDENTIFIER IN .TWAIT REQUEST CAUSES PROBLEMS	01 M	Mar 78
.CHAIN, .EXIT FROM VIRTUAL JOB; USR MOVING INTO PAR1 AREA	02 M	Apr 78
PATCH TO INTERRUPT EXIT ROUTINE	03 M	Apr 78
IMPROPER HANDLING OF THE KW11-P CLOCK	04 M	May 78
SPECIFYING 50-CYCLE CLOCK SUPPORT DURING SYSGEN OPERATIONS	05 M	Jun 78
EDITORS AND V3B MONITORS	06 M	Jun 78
TYPING NON-ASCII FILES TO CONSOLE AFTER ISSUING A GTON HANGS THE SYSTEM	07 M	Jun 78
LINK/FRUN FAILS WHEN PROGRAM IS OVERLAYED AND USES LIBRARIES	08 M	Jul 78
MULTITERMINAL CORRECTIONS	09 M	Aug 78
PATCH TO XM ADDRESS CHECKING	10 M	Aug 78
FIXES FOR TWO FB/XM PROBLEMS	11 M	Aug 78
TERMINATING CONSOLE OUTPUT	12 M	Aug 78
ISSUING SEEKS TO DX HANDLER IN XM CAUSES RANDOM SYSTEM FAILURES	13 M	Oct 78
CERTAIN EXTENDED MEMORY REQUESTS CANNOT BE ISSUED FROM BOTH MAINLINE CODE AND COMPLETION ROUTINES	14 M	Oct 78
THE "RUN" AND "GET" MONITOR COMMANDS DO NOT CORRECTLY LOAD THE PORTION OF A PROGRAM THAT OVERLAYS KMON	15 M	Oct 78
DX SJ MONITOR BOOTSTRAP CORRECTIONS	16 O	Oct 78
TYPING CTRL/O TO THE CONSOLE TERMINAL SOMETIMES CRASHES	17 M	Nov 78
LINK CAUSES ODD MONITOR ADDRESS TRAP	18 M	Nov 78
CHAINING FROM A VIRTUAL JOB AND RELATED PROBLEMS	19 M	Dec 78
DIRECTORY CORRUPTION	20 M	Dec 78
FIXES FOR FB/XM PROBLEM IN V03.02	21 M	Apr 79
CORRECTION TO "DIRECTORY CORRUPTION" PATCH	22 M	May 79
FLOPPY SYSGEN WITH KW11-P CLOCK	23 M	May 79
SOURCES		
UNRESOLVED DIFFERENCES IN DEMOX1.MAC	01 M	Aug 78
DISTRIBUTED MAGTAPE HANDLER CORRECTIONS	02 M	Sep 78
MAGTAPE XM AND FSM CORRECTIONS	03 M	May 79
SYSTEM HANDLERS		
DM HANDLER CORRECTIONS	01 M	Oct 78
DM SYSTEM HANDLERS CORRECTIONS	02 M	Dec 78
DM HANDLER ERROR HANDLING CORRECTIONS	03 M	Jan 79
DM CTO AND SPFUN 376 CORRECTIONS	04 M	May 79

<u>Component</u>	<u>Sequence</u>	<u>Mon/Yr</u>
UTILITIES		
DUP DEFAULT FILE SIZE AND NULL FILE TYPES ARE INCORRECT	01 M	Mar 78
DIR MAY INCORRECTLY LIST DIRECTORIES OF MAGTAPES	02 M	Mar 78
/L OPTION TO PIP MAY CAUSE SYSTEM CRASH	03 M	Mar 78
LINK OUTPUT INVALID IF OBJ HAS AN EMPTY GSD RECORD	04 M	Mar 78
PAT GIVES FATAL ERROR IF OBJ HAS AN EMPTY RECORD	05 M	Apr 78
UNASSIGNED	06	XXX XX
EDIT VI11 DISPLAY FUNCTIONS WILL NOT OPERATE UNDER XM MONITOR	07 M/R	Apr 78
TRANSFERS IN INTERCHANGE FORMAT WHEN NO SYSTEM DATE IS GIVEN	08 M	Jun 78
DUP SCAN RATE FOR FLOPPY	09 M	Jun 78
DUP /I AND /W SWITCHES DO NOT WORK PROPERLY	10 M	Jun 78
LINK/FRUN FAILS WHEN PROGRAM IS OVERLAYED AND USES LIBRARIES	11 M	Jul 78
DUP DOES NOT DIFFERENTIATE BETWEEN DELETED .BAD FILES AND PERMANENT ONES	12 M	Jul 78
ERRORS IN FILEX INTERCHANGE FORMAT	13 M	Jul 78
LINK PRODUCES INCORRECT .LDA FILES	14 M	Sep 78
DUP DOES NOT DETECT END OF SEGMENT IF IT IS FIRST ENTRY IN A DIRECTORY SEGMENT DURING A SQUEEZE OPERATION	15 M	Oct 78
LIBR CLEARING OF LOCATION ZERO	16 M	Oct 78
LINK ERROR IN PSECTS MOVED TO ROOT	17 M	Oct 78
PIP ERRONEOUSLY DELETES FILES	18 M	Oct 78
LIBR BLOCK BOUNDARY PROBLEM	19 M	Dec 78
LINK CAN CAUSE TRAP TO 4	20 M	Feb 79
FIXES FOR FB/XM PROBLEM IN V03-02	21 M	Apr 79
CORRECTIONS TO FILEX	22 M	May 79
RT-11 V3B		
DOCUMENTATION		
ERROR IN FOREGROUND/BACKGROUND DEMONSTRATION	01 M	Aug 78
THE /LIST OPTION FOR THE DIBOL, FORTRAN, AND MACRO KEYBOARD MONITOR COMMANDS	02 M	Nov 78
UPDATE PAGES	03 N	Dec 78
RT-11 SOFTWARE SUPPORT DOCUMENTATION	04 M	Feb 79
SUMMARY OF UPDATES FOR RT-11 V03B DOCUMENTATION	05 M	Feb 79
MISCELLANEOUS		
ERRORS IN THE SYSGEN CONDITIONAL FILE	01 M	Jul 78
ERROS IN MTATCH ROUTINE	02 M	Nov 78
MONITOR		
SOURCE PATCHING PROCEDURES FOR V3B	01 M	Aug 78
MULTITERMINAL CORRECTIONS	02 M	Aug 78
SINGLE JOB TIMER SUPPORT CORRECTIONS	03 M	Aug 78
FIXES FOR TWO FB/XM PROBLEMS IN VP3B	04 M	Aug 78
TERMINATING CONSOLE OUTPUT	05 M	Aug 78
EDITORS AND V03B MONITORS	06 O	Aug 78
SEEK IN RK DRIVER	07 M	Aug 78
RL01 CONTROLLER VECTOR AT 160	08 M	Aug 78
FPU EXCEPTION HANDLING IN XM MONITOR	09 M	Sep 78
TWO EXTENDED MEMORY MONITOR PROBLEMS	10 M	Oct 78
TYPING CTRL/O TO THE CONSOLE TERMINAL SOMETIMES CRASHES RT-11	11 M	Oct 78
DX SJ MONITOR BOOTSTRAP CORRECTIONS	12 O	Oct 78
THE EDIT AND HELP MONITOR COMMANDS FAIL AFTER A VIRTUAL JOB HAS RUN	13 M	Nov 78
DIRECTORY CORRUPTION AND .UNPROTECT CORRECTIONS	14 M	Jan 79
FB AND XM MONITOR CLOCK SUPPORT	15 M	Apr 79
CHANGING CLOCK RATE ON GENERATED MONITORS	16 M	Apr 79
MULTI-TERMINAL CORRECTIONS TO DECREASE INTERRUPT LATENCY	17 M	Apr 79
FIXES FOR FB/XM PROBLEM IN V03B.00	18 M	Apr 79
FLOPPY SYSGEN WITH KW11-P CLOCK	19 M	May 79
DISTRIBUTED FB MONITOR CLOCK SUPPORT	20 M	May 79
OPTIONAL PATCH TO IMPROVE PERFORMANCE ON PDP-11/03 SYSTEMS	21 O	May 79
DISTRIBUTED PD AND DD FB MONITORS CLOCK SUPPORT	22 M	May 79
OPTIONAL PATCH TO IMPROVE PERRFORMANCE ON PDP-11/03 AND PDT SYSTEMS FOR DD AND PD FB MONITORS	23 O	May 79
SOURCES		
UNRESOLVED DIFFERENCES IN DEMOX1.MAC	01 M	Jul 78
ISSUING SEEKS TO DX HANDLER IN XM CAUSES RANDOM SYSTEM FAILURES	02 M	Sep 78
DISTRIBUTED MAGTAPE HANDLER CORRECTIONS	03 M	Sep 78
DY HANDLER DOUBLE DENSITY ONLY SUPPORT	04 M	Apr 79
DL QUEUE ELEMENT AND XM ZERO FILL CORRECTIONS	05 M	Apr 79
MAGTAPE XM AND FSM CORRECTIONS	06 M	May 79

SYSTEM HANDLERS

RLO1 HANDLER CORRECTIONS	01 M	Sep 78
ISSUING A SEEK TO THE DY HANDLER CAUSES THE SYSTEM TO CRASH	02 M	Oct 78
DM HANDLER CORRECTIONS	03 M	Oct 78
DM SYSTEM HANDLERS CORRECTIONS	04 M	Dec 78
DY HANDLER SPFUN CORRECTION	05 M	Dec 78
DM HANDLER ERROR HANDLING CORRECTIONS	06 M	Jan 79
RLO1 PATCH CLARIFICATION	07 N	Jan 79
DM CTO AND SPFUN 376 CORRECTIONS	08 M	May 79

UTILITIES

ERRORS IN FILEX INTERCHANGE FORMAT	01 M	Jul 78
LINK PRODUCES INCORRECT .LDA FILES	02 M	Sep 78
LIBR CLEARING OF LOCATION ZERO	03 M	Oct 78
LINK ERROR IN PSECTS MOVED TO ROOT	04 M	Oct 78
DUP DOES NOT DETECT END OF SEGMENT	05 M	Oct 78
COPY/DEVICE FAILS ON DISK TO MAGTAPE	06 M	Oct 78
LINK CAUSES MONITOR ODD ADDRESS TRAP	07 M	Nov 78
LIBR BLOCK BOUNDARY PROBLEM	08 M	Jan 79
EDIT ESCAPE CODE CORRECTION	09 O	Dec 78
ERROR IN ODT	10 M	Feb 79
ERROR IN EDIT	11 M	Feb 79
LINK CAN CAUSE TRAP TO 4	12 M	Feb 79
CORRECTIONS AND ADDITIONS TO FILEX	13 M	May 79

RT-11/2780 V2

CORRECTIONS TO 2780 PACKAGE	01	Sep 77
RUNNING 2780 ON RT-11 V3	02	Nov 77
PATCHING THE 2780 IN RT-11 V3	03 M	Jan 79
CHECK FOR ZERO LENGTH RECORD	04 M	Jan 79
RESTRICTION OF THE CONSOLE AS AN INPUT/OUTPUT DEVICE	05 R	Jan 79

Software Product Description

PRODUCT NAME: BASIC/RT-11 Extensions, Version 1.0
Lab and Graphics Extensions

SPD 12.6.1

DESCRIPTION:

BASIC is a high-level conversational programming language developed at Dartmouth College that uses simple English-like statements and familiar mathematical notations to perform an operation. BASIC/RT-11 is an exceptionally fast incremental compiler which gives access to the RT-11 file structure using the BASIC language. BASIC/RT-11 Extensions (the product includes BASIC/RT-11 Version 1B) provides:

- Extensive support for one Laboratory Peripheral System for the PDP-11 (LPS11) including the A/D's with programmable gain, DMA and dual sample and hold operations, real-time clock, Schmitt trigger, relay, digital I/O, and display.
- Extensive support for one real-time analog subsystem for the PDP-11 (AR11) including the A/D's with unipolar and bipolar gain, real-time clock, external input and display control. The AR11 is a subset of the LPS11 system.
- Complete support of multiple (up to a maximum of 16) digital input/output subsystems for the PDP-11 (DR11-K).
- Extensive support for the display processor in graphics systems (VT11).
- Complete support for the alphanumeric and graphic terminal (VT55) with the hard copy option.

Since BASIC is a higher-level language, even the novice programmer can solve complex data acquisition and processing problems with a minimum amount of effort.

BASIC/RT-11 Extensions also runs in a fully interactive desk calculator mode that can aid program development and perform one-time-only calculations in response to console commands without the need for a conventional stored program.

All commands in this software package are initiated by the BASIC CALL statement. The Laboratory Peripheral System (LPS11) and the Real Time Analog Subsystem (AR11) are fully supported by the system via modules supplied with the BASIC/RT-11 Extensions. The real-time extensions enable the user to sample and display, in real-time, a variety of data.

Sampling is controlled by crystal clocks and/or Schmitt Triggers (for LPS11 only) or external input (for AR11 only) in which the user may specify such parameters as sampling rate and response time. The LPS11/AR11 software contains 24 commands, divid-

ed into 5 categories according to function. Each category is supplied as a separate module allowing the user to include only the modules necessary for a given experiment. The five modules are:

- Module 0: Interface to BASIC/RT-11 - always required
- Module 1: Analog to Digital conversion
- Module 2: Real-Time Clock
- Module 3: Digital I/O
- Module 4: Display

The display processor support routines allow the user to fully use the hardware features of the display processor such as vectors, alphanumeric, points, multi-intensities, blinks, etc. Additional commands perform tasks such as creating and tagging subpictures (graphic subroutines) and displaying figures and arrays in one dimension and two dimensions. The graphic software provides dynamic interaction with the system via routines for light pen interaction, dynamic allocation/deallocation of display buffers and saving and restoring display images as files on the systems device. Through a total of 29 commands the software provides an uncomplicated, flexible and complete interface between the user and the BASIC/RT-11 system.

The alphanumeric and graphic display terminal (VT55) software permits the user to fully use the hardware features of the display terminals. Lines, graphs, cursors, histogramming, text and hard copy are enabled. This software enables the user to fully utilize the graphic and text capabilities of the console terminal through nine simple commands.

MINIMUM HARDWARE REQUIRED:

Any valid RT-11 Version 02 operating system configuration with at least 32 Kb of memory

OPTIONAL HARDWARE SUPPORTED:

- Any RT-11 supported peripheral
- Additional memory to a system total of 56 Kb
- KE11-A Extended Arithmetic Element
- KE11-E Extended Instruction Set
- KE11-F Floating Instruction Set
- FP11 Floating Point Processor

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VT11-A Graphics Display Processor
LPS11 Laboratory Peripheral System
AR11 Analog Real Time Subsystem
DR11-K Digital I/O System
VT55 Graphics Display Terminal

PREREQUISITE SOFTWARE:

RT-11 Operating System, Version 2B or 2C

OPTIONAL SOFTWARE SUPPORTED:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

C — Software Support will be provided as stated in the Software Support Categories Addendum to this SPD.

UPDATE POLICY:

None

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- C = DEctape
- D = 9-track Magnetic Tape
- E = RK05 Disk Cartridge
- Y = RX01 Floppy Diskette

QJ830 -C— Single-use license, binaries, documentation, no support services (media: C, D, E, Y) includes BASIC/RT-11, Version 1B

QJ830 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

ADDITIONAL SERVICES:

None



Software Product Description

PRODUCT NAME: PROM/RT-11, Version 1.0, Programmable Read Only Memory

SPD 12.21.0

DESCRIPTION:

PROM/RT-11 is a software utility designed to control and operate a universal PROM programming hardware device. The programmer hardware connects to a 11/03 or 11/34 RT-11 development system over an RS-232C serial line. This is distinct from the console interface on the system.

The package allows the user to directly create PROM or EPROM-based applications using RT-11 by taking the completed application program and creating the appropriate chips for PROM or EPROM option boards.

PROM/RT-11 operates under the RT-11 Version 03B Operating System. The utility program will run in either the background or the foreground of the RT-11 system; when used in the foreground, it will allow concurrent program development and PROM programmer operations.

The following user commands are supported by this product:

COPY	Copies an existing PROM chip by reading its contents and replicating in another chip.
DIAGNOSE	Runs extended PROM programmer and interface diagnostics to analyze/isolate a hardware problem.
HELP	Prints a list of all valid commands on the terminal.
INTERFACE	Alters Command Status Register (CSR) and vector addresses for serial interface to PROM programmer hardware.
LIST	Prints a listing of the contents of a PROM and EPROM chip.
MODIFY	Modifies the contents of one or more existing PROM or EPROM chips.
PROGRAM	Programs a set of PROM or EPROM chips from an RT-11 file; automatic verify is included.
SEQUENTIAL	Redefines PROGRAM, MODIFY and VERIFY commands to be used to prepare PROMs which are not intended for use with a PDP-11.
VERIFY	Verifies that existing PROM or EPROM chips match the contents of a master PROM or program file.

MINIMUM HARDWARE REQUIRED:

Any valid 11/03 or 11/34 RT-11 (V03B) based systems with a minimum of 32K bytes of memory for background operation or 56K bytes of memory for foreground operation. In addition, the system must include an RS-232C serial line interface with a cable which is dedicated to the PROM programmer, and a PB11K PROM adapter kit, for the type of PROM chips being blasted.

SUPPORTED INTERFACES: DLV11-E, DLV11-F, DLV11-J (1 port), DL11-W and DL11-E

OPTIONAL HARDWARE:

None

PREREQUISITE SOFTWARE:

RT-11, Version 03B.

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

C — Software Support will be provided as stated in the Software Support Categories Addendum to this SPD.

UPDATE POLICY:

No updates are planned for this product.

ORDERING INFORMATION:

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The following key (Q, Y) represents the distribution media for the product and must be specified at the end of the order number, e.g., PB11-AY = binaries on floppy disk.

Q = RL01 Disk Cartridge
Y = RX01 Floppy Diskette

PB11 -A— PROM programmer hardware, single use license, binaries and documentation (media: Q, Y)

ADDITIONAL SERVICES:

None

Software Product Description

PRODUCT NAME: PDL/RT-11, Version 2.0, Programmable Data Logger

SPD 15.71.4

DESCRIPTION:

Programmable Data Logger (PDL) is a hardware/software package based upon the PDP-11 that provides a unique solution to the data acquisition needs of medical laboratories. Data acquisition from common laboratory instruments is accomplished by software modules that provide a link to a multiuser version of BASIC. With this link, programs can be prepared in BASIC to calculate and report the data collected from the instruments.

PDL/RT-11 data acquisition software can service up to 15 instruments. The instruments can be analog peak sensing devices, such as auto analyzers, analog plateau sensing devices, such as SMAs, or digital instruments like the Coulter Model "S."

In addition, the acquisition modules can collect data from instruments with serial ASCII output such as radioimmunoassay devices. The modules provided also collect data in an on-demand mode from both analog and digital instruments to handle a wide variety of semiautomatic devices. The parameters to be used with each instrument channel are specified in a BASIC program and can readily be changed. Feedback to the instrument operator is provided by the Local Operator's Console (LOC) Box located beside each instrument. The LOC Box reports the status of buffers to the operator by a set of lights. The LOC Box allows the operator to start Data Acquisition and Mark Samples from the instrument.

A multiuser version of BASIC is included with PDL/RT-11. It allows programs to be written, stored, loaded, and executed concurrently with data acquisition. The main BASIC features are:

- User identification and file protection scheme to control system access and utilization (optional); public and group libraries for file sharing; privileged user capability.
- Resource sharing: All supported peripheral devices can be used by any user at any terminal; ASSIGN and DEASSIGN commands available to restrict usage of non-public devices.
- Sequential data storage using the RT-11 file system. The maximum number of simultaneously open files is limited only by available memory.
- Virtual arrays (numeric 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.
- Immediate mode execution for "desk calculator" operation and program debugging.

Through the use of this facility for multiple users, laboratories can use PDL to develop programs, to maintain monthly quality control logs, statistics, routine laboratory calculations, instrument reports, patient reports, worklists, and patient identification.

System Features:

- On-line data acquisition for up to 15 instruments
- Simultaneous data logger and calculator
- Programmed by user in easy-to-learn BASIC
- Up to 6 simultaneous users on the RK05-based system
- Up to 4 simultaneous users on the RX01-based system
- Data acquisition by initialized program control.
- Instrument descriptions entered and modified by user
- Continual status reporting by the H321 switch box (LOC Box)
- Fast access to BASIC file structure

MINIMUM HARDWARE REQUIRED:

One of the following PDL configurations:

PDL11-DA, -DB floppy based system which consists of:

- PDP-11 with 64K bytes of memory
- RX11 dual floppy disk system
- AR11-KT analog kit
- DR11-KT kit for first five LOC Box channels

PDL11-EA, EB RK05 based system which consists of:

- PDP-11 with 64K bytes of memory
- RK11 disk cartridge controller (includes one RK05 drive) with an additional RK05 drive
- AR11-KT analog kit
- DR11-KT kit for first five LOC Boxes

-2-

which meets the following additional requirements:

For each analog channel:

- One H321 LOC Box (includes 75 feet of cable)
- One XL01 Retransmitting Potentiometer or CC55C/D if the instrument already has a printer

For each parallel digital channel:

- One H321 LOC Box for DR11-K
- One DR11-K Digital I/O interface

For each Coulter "S" interface:

- One DR11-K Digital I/O interface
- One BC11-MA cable (standard 100 feet)
- One H321 LOC Box for DR11-K

When adding the sixth and eleventh channel (LOC Box):

- One DR11-K Digital I/O interface
- One H322 distribution panel
- Two BC08R-06 cables

For each ASCII channel:

- One H321 LOC Box (includes 75 feet of cable)
- DL11-A, -B, -C, -D, or -W serial line
- Corresponding interface cable

OPTIONAL HARDWARE:

Supports any mass storage, terminal, or unit record device supported by RT-11, 03B.

PREREQUISITE SOFTWARE:

RT-11 operating system, Version 03B

OPTIONAL SOFTWARE SUPPORTED:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

C — Software Support will be provided as stated in the Software Support Categories Addendum to this SPD.

UPDATE POLICY:

Software Updates, if any, released by DIGITAL during the one (1) year period following installation, will be provided to the customer for a media charge (includes no installation). After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

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.

A single-use license only option is a license to copy the software previously obtained under license, and use such software in accordance with DIGITAL's Standard Terms and Conditions of Sale. The category of support applicable to such copied software is Category C.

Source and/or listing 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 (A, B) represents the form of power source for the product and must be specified at the end of the order number, e.g., PDL11-DA = system power provided in the United States.

A = United States (60 Hz)

B = Europe (50 Hz)

The following key (E, Y) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ191-EY = sources on floppy diskette.

E = RK05 Disk Cartridge

Y = RX01 Floppy Diskette

Z = No hardware dependency

PDL11 -D— RK01-based PDL system, single-use license, binaries, documentation, no support services (power: A, B)

PDL11 -E— RK05-based PDL system, single-use license, binaries, documentation, no support services (power: A, B)

QJ191 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

Source/Listing Options

QJ191 -E— All sources (media: E, Y)

Update Options

Note: RT-11 updates must be ordered separately. See SPD 12.1.X.

Users of PDL/RT-11, Version 1, whose specified Support Category warranty has expired may order under license the following software update at the then current charge for such update. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated.

QJ191 -H— PDL Binaries, documentation (media:E, Y)

Users of PDT/RT-11, Version 1, whose specified Support Category warranty has not expired may order under license the following software update for the then current media charge. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated.

QJ191 -W— PDL Binaries, documentation (media:E, Y)

ADDITIONAL SERVICES:

None

The Digital Equipment Computer Users Society



DECUS, the Digital Equipment Computer Users Society, was established in March of 1961 to advance the effective use of DIGITAL computers. It is a voluntary, not-for-profit users group, supported in part by Digital Equipment Corporation.

OBJECTIVES

The objectives of the Society 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 and 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.

ACTIVITIES

1. SYMPOSIA

Symposia are held throughout the year in each of the DECUS Chapters. These meetings provide a forum for users of DIGITAL computers to meet with other users and with DIGITAL management, engineers, and Software Services and Field Service representatives. They are an opportunity for users to participate in DIGITAL Product Workshops and Product Planning feedback sessions. The technical papers and presentations from each symposium are published as DECUS Proceedings after each meeting and provide a permanent record of the meetings activities.

2. SPECIAL USER GROUPS

DECUS encourages subgrouping of users with common interests and/or geographical proximity.

Special Interest Groups (SIGs) promote the interchange of specialized information and have no geographical limitations. Specializations may be for application areas, subject areas (such as languages), or specific operating systems. A group of users must petition the Chapter Executive Board for recognition as a Special Interest Group. The group must have a chairman, and its organization must meet the guidelines of the Chapter Executive Board.

Examples of active SIGs are users of RSX-11, RSTS, RT-11 users, business system users, etc. For additional information, contact your Chapter Executive Secretary.

One of the most successful subgroupings are Local Users Groups (LUGs). There are numerous active LUGs in Australia, Canada, Europe, and the U.S. Local User Groups are basically geographic in nature; however, they may be geographic and specific as well.

The largest Special User Group is composed of users of the DECsystem-10 and DECsystem-20.

3. STANDARDS

DECUS promotes user activity in reviewing DIGITAL standards. Users are given the opportunity to comment on DIGITAL standards prior to their finalization.

4. PROGRAM LIBRARY

One of the major activities of the users group is the DECUS Program Library. The Library contains programs written and submitted by users and is maintained and operated separate from the Digital Software Distribution Center. A wide range of software is available, including languages, editors, numerical functions, utilities, display routines, and various other types of application software.

Library catalogs, updated periodically, contain descriptive abstracts and ordering information.

Information and forms for submitting programs to the Library may be obtained from local DECUS offices.

Programs are available to all members on a request basis. Orders for programs are made on DECUS Library Order Forms and directed to the local DECUS Chapter office. Information on the nominal service charge applied to most programs is published in the Library Catalogs.

As of January 1979, the Library contained approximately 1500 active software packages.

MEMBERSHIP

Membership in DECUS is voluntary and is not subject to a membership fee. Members are invited to take an active interest in the Society by contributing to the Program Library, to DECUSCOPE, and by participating in its Special User Groups and symposia. There are two types of membership: Installation Membership and Associate Membership.

INSTALLATION

An organization, institution, or individual that has purchased, leased, or has on order a computer manufactured by Digital Equipment Corporation is eligible for Installation Membership in DECUS. Membership status is acquired by submitting a written application to the appropriate Chapter Executive Secretary for approval by the Chapter Executive Board.

On acceptance of the application for membership, literature covering numerous DECUS services is sent to the Installation Delegate for reference and aid in maintaining active participation in the Society.

ASSOCIATE

Any person, who is not an appointed Installation Delegate, who has a bona fide interest in DECUS is eligible for Associate Membership.

Like Installation Members, Associate Members receive DECUSCOPE, the Society's quarterly newsletter, automatically. They may receive other DECUS material on request. Written application indicating desire to join must be submitted to the appropriate Chapter Executive Secretary for approval by the Chapter Executive Board.

On acceptance of the application for membership, literature covering the numerous DECUS services is sent to the member for reference and to enable active participation in the Society.

To obtain a membership form for DECUS, please return this form to the appropriate Chapter office listed below.

NAME: _____

COMPANY: _____

ADDRESS: _____

CITY: _____

STATE/COUNTRY: _____ ZIP: _____

Membership form Requested (check one):

Installation Associate

February 1979

I obtained this form from _____

DECUS OFFICES

DECUS Australia
P.O. Box 491
Crows Nest, New South
Wales 2065
Australia

DECUS Canada
P.O. Box 11500
Ottawa, Ontario K2H 8K8
Canada

DECUS Europe
C.P. 510
12, avenue des Morgines
CH-1213 Petit-Lancy 1,
Geneva, Switzerland

DECUS U.S. and
Office of the Executive Director
One Iron Way
Marlboro, Massachusetts 01752
USA

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).

<u>AREAS COVERED</u>	<u>SPR CENTER</u>	<u>AREAS COVERED</u>	<u>SPR CENTER</u>
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Austria, Poland, Hungary, Rumania, East Germany, West Germany, Russia, Czechoslovakia, Bulgaria	DIGITAL EQUIPMENT CORP., Gmbh Wallensteinplatz 2 8 MUNICH 40 / Germany	Canada	Digital Equipment Canada P.O. Box 11500 Kanata Canada K2H 8K8 Ontario
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Norway	DIGITAL EQUIPMENT CORP. A/S Pottenmakerveien 8 OSLO 5 / Norway	New Zealand	Digital Equipment Corp., LTD Challenge House - 3 Wolfe Street P.O. Box 2471 Auckland New Zealand 10010
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