## **RT-11**

**August 1978** 

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## THE SOFTWARE DISPATCH



**OPERATIONS GROUP** 

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#### **RT-11 SOFTWARE DISPATCH**

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The RT-11 Software Dispatch complements the RT-11 V3B Software Dispatch Review. It publishes new and revised Software Product Descriptions, programming notes, software problems and solutions and documentation corrections. Much of the material is developed from answers to customer Software Performance Reports (SPRs) significant to the general audience.

The material is formatted to establish a reference notebook for the customer's software interests. The following products are supported in the RT-11 Software Dispatch:

APL-11 V1	FORTRAN/RT-11 Extensions V1B	MU BASIC/RT-11 V1
BASIC/RT-11 V1B, V2	FORTRAN/RT-11 LSI Extensions V1	PDL/RT-11 V1
BASIC/RT-11 Extensions	FORTRAN IV/RT-11 V1C, V2	PEAK-11 V2
CTS-300 V3, V4	GAMMA-11 F/B V2	PLOT-11/RT-11 V1
CTS-300 DICAM V1	INDUSTRIAL BASIC/RT-11 V1	REMOTE/RT-11 V1
CTS-300/DIS V1	LA-11 V3	RT-11 V3, V3B
DECnet/RT V1	LV11/RT-11 Plotting Package V2	RT-11/2780 V2
FOCAL/RT-11 V1B		SSP-11/RT-11 V1

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Address changes and requests for information about maintenance service after the first year should be sent to the nearest DIGITAL Field Office. For address changes, include the new address and mailing label from the most recently received publication.

#### Eleanor F.Hunter, Editor Roxanne Alexander, Associate Editor

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COMTEX	INDAC	TYPESET-8
DDT	LAB-8	TYPESET-11
	DECCOMM	

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## USER LETTER Jan Fair, SPR Administration

Customers (and others) have brought to our attention the need for additional information regarding SPR service, particularly as it involves SPR Administration. The following represents our attempt to fulfill this need. Your comments and suggestions are most welcome.

#### HOW TO MAKE THE BEST USE OF SPR FORM

#### What WE Can Do for YOU

- 1. Blank SPR forms are available upon request in the desired quantities through SPR Administration (P.O.Box F) and your local office/SPR Center.
- Copies of the SPR acknowledgment and answer are sent to the appropriate DIGITAL Office/SPR Center for their information.
- 3. SPRs marked SOFTWARE ERROR or INQUIRY will have a response for supported Category A and B products. These SPRs should refer to suspected deficiencies in the software.
- 4. SPRs marked FYI or SUGGESTION are forwarded to the pertinent software group for information purposes, and are responded to at their discretion.
- 5. SPRs marked *DOCUMENTATION ERROR* should report those problems dealing with software manuals or newsletters, and will be forwarded to the pertinent software group.

#### What YOU Can Do For US

- 1. Customer Name and Address and Problem Statement should always be typed or printed clearly.
- 2. SPRs should not be used for problems concerning software policy, software distribution, or hardware. Your local office should be contacted in these cases.
- 3. It would be most helpful to all concerned, if problems with patches are reported as soon as possible.
- 4. For security SPRs, it is imperative that the DO NOT PUBLISH box be marked.
- 5. It would be helpful if tapes submitted with SPRs are labeled (track and density), and have a directory attached.
- 6. Should you ever receive an unacceptable SPR response, please contact us or the appropriate SPR Center so that the response may be readdressed.

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FOCAL/RT-11 V1B
FOCAL-11 USER'S MANUAL DEC-11-LFOCA-F-D

Seq 9 N 1 of 1

LIBRARIES FROM FOCAL SOURCE DISK MUST BE REFORMATTED (SPR 11-17917 TB)

RT-11 libraries not being reformatted before trying to link FOCAL.

This confusion is due to the fact that FOCAL is a vintage product. The libraries from the FOCAL source disk must be reformatted with the Version of the Library in your new system. The following command should do this:

.R LIBR \*FOCAL.LIB = FORLIB.EIS

Then, link FOCAL as in the example below using the library file name and omitting the "F".

.R LINK
\*FOCALD,LP: = PUBLIC, FOCAL1, LABFNS,FOCAL2,FMATDP,FOCAL.LIB

The error message "?LINK-F- Old Library format in FORLIB" is because the library called by the /F is in the old format. The reason why there were no error messages when the /F was omitted is because the modules are all found in the SYSLIB.OBJ file on your disk. These modules, however, may not be tailored to your needs. See the RT-11 System User's Guide for more detail especially the sections of the Linker (P.11-18) and the LIBRARIAN.

#### RT-11 SOFTWARE DISPATCH CUMULATIVE INDEX AUGUST 1978

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.

#### 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.
- $O = \frac{Optional\ patch}{Occurred\ at\ the}$  These articles are applicable only if the reported problems have occurred at the customer site or if they are unique to his operation.
- $\label{eq:Restriction} R = \underbrace{\text{Restriction.}}_{\text{are reviewed}} \text{ These problems are not patchable in released software.} \text{ Restrictions}$
- N = NOTE. This information may be helpful to the user.

Component	Sequence	Mon/Yr
APL-11 V1		
APL.SAV PROGRAM PATCHES ERRONEOUS "DEFINITION ERROR" DURING FUNCTION EDITING LOSS OF LOWER-CASE ON RE-ENTRY TO APL-11 APL WORKSPACE "SYSTEM ERROR"S GENERATED BY NULL LINE ELEMENTS INTERNAL MEMORY ALLOCATION PROBLEMS ERROR FOR SCALAR RESULT OF DECODE OR INNER PRODUCT OPERATION SYSTEM ERROR ON PARAMETER RETURN	01 M 02 M 03 R 04 05 M 06 M 07 M	Nov 77 Nov 77 Nov 77 Dec 77 Dec 77 Feb 78 May 78
BASIC-11/RT-11 V2		
RESEQUENCE PRODUCES AN INCORRECT PROGRAM UNDER CERTAIN CONDITIONS PRINT USING MAX SIZE OF LINE ENTERED TO BASIC-11 REM STATEMENT CONTAINING LEFT PARENTHESIS CAUSES SUBSEQUENT SPACES AND PERIODS TO BE REMOVED RUN (NH) COMMAND MAY GIVE AN ERROR MESSAGE TERMINAL MAY HANG DATA FILES SAVE DEV: AND REPLACE DEV: SINGLE PRECISION HANG AND NUMERIC CONVERSION PROBLEM (PATCH F)	01 M 02 M 03 M 04 R 05 M 06 M 07 M 08 M	Aug 78 Jun 78 Jun 78 Jun 78 Jul 78 Jul 78 Jul 78 Jul 78 Jul 78
BASIC/RT-11 EXTENSIONS VI		
"IPK" SUBROUTINE SAMPLING A/D CHANNEL NO. 15 SAMPLING AR11 "CLRD" AND "PUTD" ROUTINES "SETR" AND "WAIT" COMBINATION MAY FAIL	01 M 02 R 03 M 04 M 05	Aug 77 Aug 77 Sep 77 Nov 77 Apr 78
CTS-300 V3		
CTS-300 V03 RELEASE NOTES USE OF RSTAT WITH ISAM FILES PATCH NUMBERS AND TITLES	Ø1 Ø2 R Ø3	Apr 77 Aug 77 Nov 77

Component	Sequence	Mon/Yr
DECFORM DECFORM ERRORS REPLACEMENT PAGES SEARCHMODE AND RENAM PROBLEM - NEW VERSION NUMBER EXTRA CHARACTERS AT STATEMENT END FOCOMP INCORRECTLY ALLOCATES AN EXTRA CHARACTER REPLACEMENT PAGES DECFORM RESTRICTIONS CONDITIONAL GOTO AND CONDITIONAL SKIP DECFORM PROBLEMS AND RESTRICTIONS HANG ON EXIT TWO PROBLEMS IN FOCOMP EOF AFTER CHANGED RECORD LOST RECORD ON DUPLICATE KEY MESSAGE FOR SPEED READERS EXCITING DECFORM VIA FIVE-PART QUESTION	01 02 03 04 05 06 07 08 09 R 10 11 M 12 M 13 M 14 M	Apr 77 Apr 77 Jun 77 Jun 77 Nov 77 Aug 77 Sep 77 Oct 77 Nov 77 Jan 78 Feb 78 Mar 78 Apr 78 Apr 78 May 78
DOCUMENTATION MULTIVOLUME FILES ON MAGTAPE PAGE CORRECTION DOCUMENT ERROR	Ø1 N Ø2 Ø3	Feb 78 Apr 78 Apr 78
DICOMP IMPROPER GLOBAL INFORMATION COMMENT CAUSES ERROR	01 02	Jul 77 Aug 77
FILEX RESTRICTION ON FILEX FILEX INFORMATION AND RESTRICTION OUT ERR WITH 128-CHARACTERS RECORDS	01 02 R 03 M	Sep 77 Mar 78 Jul 78
ISMUTL INDEXING PROBLEM WRONG RECORD COUNT CTS-300 SYSTEM REFERENCE MANUAL INCORRECT APPEND CALCULATION ERR 16 IN REORG THREE PROBLEMS IN ISMUTL REPLACEMENT PAGES WRONG FILE SPACE ALLOCATION ERRONEOUS ERROR MESSAGE ERROR 28 LEGAL CHARACTERS IN ISAM RECORDS DUPLICATE KEYS IN THE INPUT FILE MORE INPUT RECORDS THAN SPECIFIED	01 02 03 04 05 06 M 07 N 08 M 09 M 10 M 11 R 12 M	Jul 77 Jul 77 Oct 77 Sep 77 Oct 77 Jan 78 Feb 78 Apr 78 Apr 78 Apr 78 Apr 78 Jun 78 Jun 78
LPTSPL NO CONTINUE AFTER PROGRAM ABORT	Ø1 M	May 78
SINGLE USER DIBOL SPURIOUS I/O ERRORS DURING ISAM STORE CHANGE READS STATEMENT TO ACCEPT 8-BIT ASCII LOCASE CONVERTS UNDERLINE TO RUBOUT ISAM RECORDS CROSSING BLOCK BOUNDARIES PROBLEM WITH 32KB OR LESS REPLACEMENT PAGES "NOT ENOUGH MEMORY" CONDITION RECORDS BEING LOST RUNNING V3 ON LSI	01 02 03 04 05 06 07 M 08 M 09 M	Jun 77 Apr 77 Jun 77 Aug 77 Sep 77 Oct 77 Jan 78 Feb 78 Apr 78
SORTG TAGSORTS NOT ALLOWED ON ISAM FILES CORRECTION TO VERSION "A" PATCH	Ø1 Ø2	May 77 Oct 77
SORTM I/O ERROR INTERPRETED AS AN INPUT END OF FILE NEGATIVE NUMBERS IN SORT/MERGE SORTING CARETS INCORRECT RECORD COUNT FIRST RECORD OUT OF ORDER ERR 16 IN TSD	01 02 03 M 04 M 05 M 06 M	Apr 77 Oct 77 Jan 78 Feb 78 Mar 78 Jul 78

Component	Sequence	Mon/Yr
CHANGE READS STATEMENT TO ACCEPT 8-BIT ASCII REPLACEMENT PAGES PROGRAM SIZE CALCULATIONS FOR TSD I/O RACE CONDITION GARBLED OUTPUT DUE TO ALPHA OR DECIMAL DISPLAYS RENAM FEATURE OF DIBOL LOCASE CONVERTS UNDERLINE TO RUBOUT ISAM FILE SHARING PROBLEM IMPOSSIBLE TRAP ON OVERLAYING ISAM RECORDS CROSSING BLOCK BOUNDARIES RECORDS BEING LOST PERMANENTLY LOCKED GROUP RUNNING V3 ON LSI CLOSING ISAM FROM AN EXTERNAL SUBROUTINE PROBLEM WITH ISAM INPUT	01 02 03 04 05 06 07 08 09 10 11 M 12 M 13 M 14 M	Apr 77 Apr 77 May 77 Jun 77 Jun 77 Jun 77 Jun 77 Jun 77 Aug 77 Feb 78 Mar 78 Apr 78 Apr 78
CTS-300 V3 AND CTS-300/DIS V3.5		
ISAM REPAIR PROGRAM	Ø1 O	Mar 78
CTS-300/DIS V3.5		
USE OF RSTAT WITH ISAM FILES	Ø1 R	NOV 77
DECFORM  SEARCHMODE AND RENAM PROBLEM - NEW VERSION NUMBER MICRO CODE CAUSES TRAP TO 10 DECFORM RESTRICTIONS EXTRA CHARACTERS AT STATEMENT END FOCOMP INCORRECTLY ALLOCATES AN EXTRA CHARACTER CONDITIONAL GOTO AND CONDITIONAL SKIP DECFORM PROBLEMS AND RESTRICTION HANG ONE EXIT TWO PROBLEMS IN FOCOMP EOF AFTER CHANGED RECORD NEGATIVE NUMBER ENDING IN ZERO LOST RECORD ON DUPLICATE KEY MESSAGE FOR SPEED READERS EXITING DECFORM VIA FIVE-PART QUESTION	01 02 03 04 05 06 07 08 M 09 M 10 M 11 M 12 M 13 M	Oct 77 Oct 77 Nov 77 Nov 77 Nov 77 Nov 77 Nov 77 Jan 78 Feb 78 Mar 78 Apr 78 Apr 78 Apr 78
DICOMP IMPROPER GLOBAL INFORMATION COMMON CAUSES ERROR	Ø1 Ø2	Nov 77 Nov 77
DOCUMENTATION MULTIVOLUME FILES ON MAGTAPE PAGE CORRECTION DOCUMENT ERROR	01 N 02 N 03 N	Feb 78 Apr 78 Apr 78
FILEX RESTRICTION ON FILEX FILEX INFORMATION AND RESTRICTION OUT ERR WITH 128-CHARACTERS RECORDS	01 R 02 R 03 M	Nov 77 Mar 78 Jul 78
ISMUTL INDEXING PROBLEM INCORRECT APPEND CALCULATION ERR 16 IN REORG WRONG RECORD COUNT THREE PROBLEMS IN ISMUTL REPLACEMENT PAGES WRONG FILE SPACE ALLOCATION ERRONEOUS ERROR MESSAGE ERROR 28 LEGAL CHARACTERS IN ISAM RECORDS DUPLICATE KEYS IN THE INPUT FILE MORE INPUT RECORDS THAN SPECIFIED	01 02 03 04 05 06 N 07 M 08 M 09 M 10 R 11 M 12 M	Nov 77 Nov 77 Nov 77 Jan 78 Feb 78 Apr 78 Apr 78 Apr 78 May 78 Jun 78 Jul 78
NO CONTINUE AFTER PROGRAM ABORT	Ø1 M	May 78

Component	Sequence	Mon/Yr
SINGLE USER DIBOL LOCASE CONVERTS UNDERLINE TO RUBOUT ISAM RECORDS CROSSING BLOCK BOUNDARIES PROBLEM IN 32K OR LESS "NOT ENOUGH MEMORY" CONDITION SPURIOUS I/O ERRORS CURING ISAM STORE RECORDS BEING LOST	Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 M	Oct 77 Nov 77 NOV 77 JAN 78 JAN 78 Feb 78
SORTG TAGSORTS NOT ALLOWED ON ISAM FILES CORRECTION TO VERSION "A" PATCH	Ø1 Ø2	Oct 77 Nov 77
SORTM NEGATIVE NUMBERS IN SORT/MERGE SORTING CARETS INCORRECT RECORD COUNT FIRST RECORD OUT OF ORDER ERR 16 IN TSD	01 02 N 03 M 04 M 05 M	Nov 77 Jan 78 Feb 78 Mar 78 Jul 78
I/O RACE CONDITION  ERRONEOUS PATCH TO TSD  INCORRECT JOB NUMBER AT STARTUP TIME  PROBLEM WITH RENAM  LOCASE CONVERTS UNDERLINE TO RUBOUT  ISAM FILE SHARING PROBLEM  IMPOSSIBLE TRAP ON OVERLAYING  ISAM RECORDS CROSSING BLOCK BOUNDARIES  RECORDS BEING LOST  PERMANENTLY LOCKED GROUP  CLOSING ISAM FROM AN EXTERNAL SUBROUTINE  PROBLEM WITH ISAM INPUT	01 01a 02 03 04 05 06 07 08 M 09 M 10 M	Sep 77 Nov 77 Sep 77 Sep 77 Oct 77 Nov 77 Nov 77 Nov 77 Feb 78 Mar 78 Apr 78 Apr 78
CTS-300 V4		
DECFORM ADDITONAL INFORMATION ON MATH OPTION UNDEFINED GLOBALS WITH DECFORM TWO PROBLEMS IN FOCOMP EOF AFTER CHANGED RECORD LOST RECORD ON DUPLICATE KEY MESSAGE FOR SPEED READERS EXITING DECFORM VIA FIVE-PART QUESTION TOO FEW DATA FIELDS RETURNED USR NOSWAP CAUSES TRAP TO 4	01 N 02 03 M 04 M 05 M 06 M 07 M 08 M 09 M	Dec 77 Jan 78 Feb 78 Mar 78 Apr 78 Apr 78 Jun 78 Jun 78 Aug 78
DICOMP TRAP TO 4 UNDER XM TRAP TO 10 UNDER FB DON'T WASTE PAPER ERR 16 IN TSD	01 M 02 M 03 M 04 M	Feb 78 Feb 78 Jul 78 Jul 78
DOCUMENTATION REPLACEMENT PAGES DOCUMENTATION CHANGES TO CTS-300 SYSTEM USER'S GUIDE DOCUMENTATION CHANGES TO DECFORM USER'S GUIDE	01 N 02 N 03 N	Dec 77 Jun 78 Jun 78
ISMUTL THREE PROBLEMS IN ISMUTL WRONG FILE SPACE ALLOCATION ERRONEOUS ERROR MESSAGE ERROR 28 LEGAL CHARACTERS IN ISAM RECORDS DUPLICATE KEYS IN THE INPUT FILE MORE INPUT RECORDS THAN SPECIFIED	01 M 02 M 03 M 04 M 05 R 06 M 07 M	Dec 77 Apr 78 Apr 78 Apr 78 May 78 Jun 78 Jul 78
LPTSPL JOB MISHANDLING	Ø1 M	Jan 78
REDUCE MULTIPLE FILE PROBLEM	Ø1 M	Jan 78

Component	Sequence	Mon/Yr
SINGLE USER DIBOL		
PROBLEM WITH CLOSING A FILE	Ø1 M	Dec 77
RANDOM ACCESS PROBLEM MINUS ZERO	02 M 03 M	Jan 78 Jan 78
LPQUE DOES NOT WORK	04 M	Jan 78
CHANNEL 1	Ø5. M	Jan 78
FIELD EDITING	Ø6 M	Jan 78
WRONG ERROR MESSAGE	07 M	Feb 78
MINUS ZERO S.U. DIBOL WORKS ONLY UNDER XM	Ø8 M Ø9 M	Feb 78 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 ABORT ON SECOND LPQUE STATEMENT	13 M 14 M	Apr 78 Jun 78
XCALL VERSN BEGETS TRAP TO 4	15 M	Jun 78
LPNUM CAUSES FILE NOT FOUND	16 M	Jun 78
BAD OPEN	17 M	Jul 78
MONITOR TRAP WITH DIVIDE RECORD NUMBERS GREATER THAN 65,535	18 M 19 M	Jul 78 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
CODMO		
SORTG KDTYP MISSING	Ø1 M	Feb 78
KDIII MIBBING	OI H	100 70
SORTM		
SORTING CARETS	01 N	Dec 77
TAGSORTS WITH MULTIPLE KEYS FIRST RECORD OUT OF ORDER	02 M 03 M	Jan 78 Mar 78
ERR 16 IN TSD	04 M	Jul 78
SORTP		
NO PROTECTION FROM MIXING DATA MODES	Ø1 M	Jun 78
STATUS.TSD		
WRONG JX INFORMATION	Øl M	Dec 77
PENDING MESSAGES	. Ø2 M	Jan 78
PROBLEM DURING JOB STARTUP	Ø3 M	Mar 78
TSD		
TNMBR TRAPS TO 4	Ø1 M	Jan 78
RANDOM ACCESS PROBLEM	Ø2 M	Jan 78
MINUS ZERO	Ø3 M Ø4 M	Jan 78 Jan 78
DELETE CAUSES STACK OVERFLOW FIELD EDITING	04 M	Jan 78
PROBLEM WTIH ISAM INPUT	Ø6 M	Jan 78
SEND CAUSES STACK OVERFLOW	07 M	Feb 78
STATUS GIVES FALSE REPORT	Ø8 M	Feb 78
FILE SHARING CHANNEL IN USE PROBLEM	09 M 10 M	Feb 78 Feb 78
PROGRAMS CREATED IN REGION Ø	11 M	Feb 78
IMPLICIT JOB STARTUP PROBLEM	12 M	Feb 78
PENDING MESSAGES DESTROY SYMBOL TABLE	13 M	Feb 78
TERMINALS IGNORED TROUBLE WITH TSD UNDER FB	14 M 15 M	Feb 78 Feb 78
MEMORY FAULT WITH SEND/RECV	15 M 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 20 M	Mar 78 Mar 78
INCORRECT CHECK FOR FREE SPACE SYSGEN/TSDGEN PROBLEM	20 M 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 DISPLAY FROM DETACHED PROGRAM TO DETACHED TERMINAL	25 M 26 M	Apr 78 Apr 78
NO MAGTAPE IN V4	20 M 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 LOWER CASE CONVERTS TO UPPER CASE	31 M 32 M	Jun 78 Jun 78
till to the till to the		Jan 75

Component	Sequence	Mon/Yr
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SLAVE REFUSES TO WORK	34 M 35 M	Jun 78 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 NO ROOM FOR BUFFER CAUSES TRAP TO 4/10	39 M	Jun 78
MAGTAPE READ DOES NOT WORK	40 M 41 M	Jun 78 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 SKIPPED TERMINALS CAUSE FORCED JOB STARTUP PROBLEM	45 M	Aug 78
	46 M 47 M	Aug 78 Aug 78
	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
DECnet-RT V1		
DDCMP DDCMP LINE COUNTERS OVERFLOW TO ZERO	<b>41</b> 0	71 70
DOCHE BINE COUNTERS OVERFLOW TO ZERO	Ø1 O	Jul 78
DMC		
DMC LINE COUNTERS OVERFLOW TO ZERO	<b>Ø1</b> O	Jul 78
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IMPLEMENTATIONS	01 N	Jul 78
	<b>01</b> N	001 70
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70037 (Pm 11 v12		
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@START NOT WORKING WHEN DOWN-LINE LOADING	07 M 08 M	Aug 77 Mar 78
LIBRARIES FROM FOCAL SOURCE DISK MUST BE REFORMATTED	09 N	Aug 78
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COMPILER		
KNOWN FORTRAN IV V2 BUGS	01 N	Feb 78
USE OF THE FIND STATEMENT	Ø2 M	Feb 78
RAISING COMPLEX NUMBERS	03 M	Feb 78
EXTRA CHARACTERS MAY RESULT IN COMPILER TRAPPING	Ø4 M	Feb 78
SIMRT SIMRT CONTINUED	05 M	Feb 78
TRANSMITTING ASCII DATA	Ø6 M Ø7 R	Feb 78 Mar 78
IN-LINE CODE	Ø8 N	Mar 78
DOSPOSE= 'KEEP' OPTIN	Ø9 R	Apr 78
CRASH DUMPS	10 N	Apr 78
SYNTAX ERRORS IN SOURCE PROGRAM MAY CAUSE COMPILER		
TO ABORT ERRORS OCCUR WITH NO DO LOOP	11 M 12 M	May 78 Jun 78
	n	Juli /0
GAMMA-11 F/B V2		
DATA ANALYSIS PROGRAM	01 M	Fob 77
STUDY TRANSFER PROGRAM DISPLAYS TOO MANY INDEX LINES	DT LI	Feb 77
PER PAGE	02 M	Feb 77
BASIC AND FOCAL	Ø3 M	Feb 77
BACKGROUND PROGRAM CAN HANG THE FOREGROUND TERMINAL	04 M	Feb 77

Component	Sec	quence	Mon/	Yr
CNTL/C UNDER SINGLE JOB MONITOR CROSSHAIRS FAIL TO APPEAR IN SLICE		M M N	Feb Feb Mar	77
UNDOCUMENTED PROGRAMS FORTRAN SUPPORT INCORRECTLY CONVERTS DATA AND TIME OF INQUISITION "RS" COMMAND IS INCORRECTLY	Ø8		May Jun	77
LABORATORY APPLICATIONS-11 V3			0 - 1	7.0
A NEW MODULE TO ENHANCE DATA FLOW WITHIN LA-11	Øl	N	0ct	/6
HISTO.MAC ACQUIRING AND PROCESSING HISTOGRAM DATA	<b>Ø</b> 1	M	Sep	76
LABMAC.SML ERRONEOUS MACRO	Ø1	м	Sep	77
PEAK.MAC	<b>Ø</b> 1	M	MAR	76
WIDE PEAKS PEAK PROBLEMS AND CORRECTIONS		M	Jul	
ARITHMETIC CORRECTION FOR PEAK AREA MISSING PATCH IN RELEASE NOTES		M M	Dec Oct	
SPARTA LPS AND AR-11 VECTOR AND STATUS REGISTER	Ø1	N	Dec	
USING SPARTA AND FLOATING POINT BUFFERS		N	Feb	
AR-11 TIMING PROBLEMS WITH ADSAM AND SPARTA FFT SCALING CORRECTION		O M	Feb Feb	
SCALE FACTOR CORRECTION FOR SPARTA COMMANDS FAC AND FCC	Ø5	M	Mar	
DATA DISPLAYS USING LA-11		N	Mar Apr	
DATA PREPARATION FOR SPARTA COMMANDS FAC AND FCC SPARTA CORRECTIONS FOR POINT-PLOT DISPLAY		N M	Apr	
ADDING COMMANDS TO SPARTA		M	May	
CORRECTION FOR THE DPV COMMAND WITH POINT PLOT DISPLAY		M	Jun Jun	
GENERAL SUBROUTINE MODULE FOR EAE INCORRECT PHASE ANGLE CALCULATION "MOU" AND "MIN" COMMANDS CAN BE READ OUT AND IN		O M	Oct	
CORRECTLY	13	N	Jan	
MULTIPLE SYNCH PULSES		M	Jan Jan	
AUTO AND CROSS CORRELATION		M M	Feb	
ALLOCATING MORE THAN 16K BUFFERS IN SPARTA A/D SAMPLING: FAST MODE		M	Jul	77
A/D SAMPLING: FAST MODE EXIT	19	M	Mar	78
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# Software Product Description

PRODUCT NAME: FORTRAN/RT-11 Extensions, Version 1B

SPD 12.12.4

#### **DESCRIPTION:**

The FORTRAN/RT-11 Extensions consist of:

- FORTRAN IV/RT-11
- A library of graphics subroutines supporting the VT11 and VS60 display processors
- A library of laboratory subroutines supporting the LPS11 Laboratory Peripheral System, the AR11 Analog Real Time Subsystem, and the AD11-K, KW11-K, and DR11-K laboratory I/O modules
- A FORTRAN debugger

The FORTRAN/RT-11 graphics library is a comprehensive set of FORTRAN-callable subroutines which enable the user to create and interact with graphic output on the VT11 and VS60 display processors. The subroutines enable the programmer to use many of the features of the VS60. If the library is configured for the VT11, the subroutines emulate the VS60 features whenever possible. Programs can thus be written for either device. The user need only link the program with the appropriate library. For additional flexibility, most subroutines are written in FORTRAN to facilitate maintenance and modification.

The FORTRAN/RT-11 VT55 subroutine provides access to all of the graphics features of the VT55 graphics terminal. In addition, single subroutine calls can be used to plot lines or complete data curves.

The laboratory subroutine library provides the capability of acquiring data in all of the modes provided by the LPS11 and AR11 hardware and to operate a CRT display through the digital-to-analog converters provided in these units. A completion routine capability allows the user to write subroutines which are activated asynchronously upon completion of many actions, such as the filling of a data buffer. DR11-K support allows up to eight of these interfaces to be operated simultaneously. The AD11-K (with optional AM11-K), AA11-K, and KW11-K are supported in a fashion compatible with the LPS11 support. The library is easily configured for the particular set of hardware on the user's machine.

#### MINIMUM HARDWARE REQUIRED:

Any valid RT-11 configuration with at least 16K words of memory. 24K words of memory are recommended for large graphics display files such as may be encountered with the VS60.

#### **OPTIONAL HARDWARE:**

Any optional devices supported by the operating system and FORTRAN IV/RT-11, Version 2.0.

VT11A Graphics Display Processor VS60 Graphics Display Processor VT55 Graphics Terminal LPS-11 Laboratory Peripheral System AR11 Analog Real Time Subsystem

DR11-K Digital I/O System (up to 8)

AD11-K Analog-to-digital converter

KW11-K Real-time clock

AM11-K Multiplexer

AA11-K Digital-to-analog converter

#### PREREQUISITE SOFTWARE:

RT-11 Operating System, Version 3 (with the exception of the XM feature under the fore-ground/background monitor) or later.

#### **OPTIONAL SOFTWARE:**

None

#### **TRAINING CREDITS:**

None

#### SUPPORT CATEGORY:

B — 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.

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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

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Software Program Sources Agreement between Purchaser and DIGITAL.

Standard options with no support services are only available after the purchase of one supported license. When a software license is ordered without support services, the category of support applicable to such software is Category C.

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 (C, D, E, Q, R, T, Y, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ980-AD = binaries on 9-track magnetic tape.

C = DECtape

D = 9-track Magnetic Tape

E = RK05 Disk Cartridge

Q = RL01 Disk Cartridge

R = Microfiche

T = RK06 Disk Cartridge

Y = RX01 Floppy Diskette

Z = No hardware dependency

#### Standard Options

QJ980 -A— Single-use license, binaries, documentation, support services (media: C, D, E, Q, T, Y)

QJ980 -C— Single-use license, binaries, documentation, no support services (media: C, D, E, Q, T, Y)

QJ980 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

Source/Listing Options

QJ980 -E- All sources (media: D, E, Q, T)

QJ980 -F- Listings (media: R)

#### **Update Options**

Users of FORTRAN/RT-11 Extensions, 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 otherwise.

QJ980 -H— Binaries, documentation (media: C, D, E, T, Y)

QJ980 -N- Sources update (media: D, E, T)

Users of FORTRAN/RT-11 Extensions, 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 otherwise.

QJ980 -W— Binaries, documentation (media: C, D, E, T, Y)

#### **ADDITIONAL SERVICES:**

None

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#### ADDENDUM SOFTWARE SUPPORT CATEGORIES

Each software product (hereinafter 'SOFTWARE') with a designated Support Category A or B in the applicable Software Product Description (SPD) existing at the time of order will be the current release at the time of delivery and will conform to the SPD. DIGITAL's sole obligation shall be to correct defects (nonconformance of the SOFTWARE to the SPD) as described below. Any SOFTWARE with a designated Support Category C will be furnished on an 'as is' basis.

For SOFTWARE with a designated Support Category A or B, DIGITAL will provide the services set forth below without additional

#### CATEGORY A

- 1. Upon notification by customer to the nearest DIGITAL office that the computer system, including all required prerequisite hardware and software, is ready for the installation of the SOFTWARE, DIGITAL will install such SOFTWARE in any location within the contiguous forty-eight (48) United States, the District of Columbia, or a country in which DIGITAL or a subsidiary of DIGITAL has a software service facility. The notification must be received by DIGITAL and the system must be ready for installation within thirty (30) days after the delivery of the SOFTWARE to customer or DIGITAL will have no obligation to install. Installation will consist of: (1) verification that all components of the SOFTWARE have been received by customer, (2) loading the SOFTWARE, and (3) executing a DIGITAL sample procedure.
- 2. During the ninety (90) day period after installation, if the customer encounters a problem with the current unaltered release of the SOFTWARE which DIGITAL determines to be a defect in the SOFTWARE, DIGITAL will provide the following remedial service (on site where necessary): (1) if the SOFTWARE is inoperable, apply a temporary correction (TC) or make a reasonable attempt to develop an emergency by-pass, and (2) assist the customer to prepare a Software Performance Report (SPR) and submit it to DIGITAL.
- 3. During the one (1) year period following installation, if the customer encounters a problem with the SOFTWARE which his diagnosis indicates is caused by a SOFTWARE defect, the customer may submit an SPR to DIGITAL. DIGITAL will respond to problems reported in SPRs which are caused by defects in the current unaltered release of the SOFTWARE via the Maintenance Periodical for the SOFTWARE, which reports SPRs received, code corrections, temporary corrections, generally useful emergency by-passes and/or notice of the availability of corrected code. Software Updates, if any, released by DIGITAL during the one (1) year period, will be provided to the customer on DIGITAL's standard distribution media as specified in the applicable SPD. The customer will be charged only for the media on which such updates are provided, unless otherwise stated in the applicable SPD, at DIGITAL's then current media prices.

#### CATEGORY B

During the one (1) year period following delivery, the services provided to the customer will be the same as set forth in 3 above.

#### CATEGORY C

SOFTWARE is provided on an 'as is' basis. Any software services, if available, will be provided at the then current charges.

DIGITAL shall have the right to make additional charges for any additional effort required to provide services resulting from customer use of other than current unaltered release of the SOFTWARE operated in accordance with the SPD.

# **Gigital**Software Product Description

PRODUCT NAME: LSP-11, Version 1, Laboratory Subroutine Package

SPD 15.44.1

#### **DESCRIPTION:**

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

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

- peak-processing
- envelope processing
- · interval histogramming with reference points
- Fast Fourier transform
- phase angle and amplitude spectra
- power spectrum
- correlation function

#### MINIMUM HARDWARE REQUIRED:

One of the following:

- Any valid RT-11 operating system configuration supporting FORTRAN-IV/RT-11.
- Any valid RSX-11M operating system configuration supporting either FORTRAN IV/IAS-RSX or FORTRAN IV-PLUS.

#### **OPTIONAL HARDWARE:**

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

#### PREREQUISITE SOFTWARE:

One of the following:

- RSX-11M, Version 3.1 and either FORTRAN IV/IAS-RSX, Version 2 or FORTRAN IV-PLUS, Version 2.5.
- RT-11, Version 3 and FORTRAN IV/RT-11, Version 2.

#### **OPTIONAL SOFTWARE:**

None

#### TRAINING CREDITS:

None

June 1978

#### SUPPORT CATEGORY:

B — 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 Agreement between Purchaser and DIGITAL.

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

D = 9-track Magnetic Tape

E = RK05 Disk Cartridge

Q = RL01 Disk Cartridge

T = RK06 Disk Cartridge

Y = RX01 Floppy Diskette

#### Standard Options

For RT-11 Systems:

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

For RSX-11M Systems:

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

#### **ADDITIONAL SERVICES:**

None

AE-D607B-TC

### ADDENDUM SOFTWARE SUPPORT CATEGORIES

Each software product (hereinafter 'SOFTWARE') with a designated Support Category A or B in the applicable Software Product Description (SPD) existing at the time of order will be the current release at the time of delivery and will conform to the SPD. DIGITAL's sole obligation shall be to correct defects (nonconformance of the SOFTWARE to the SPD) as described below. Any SOFTWARE with a designated Support Category C will be furnished on an 'as is' basis.

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#### CATEGORY A

- 1. Upon notification by customer to the nearest DIGITAL office that the computer system, including all required prerequisite hardware and software, is ready for the installation of the SOFTWARE, DIGITAL will install such SOFTWARE in any location within the contiguous forty-eight (48) United States, the District of Columbia, or a country in which DIGITAL or a subsidiary of DIGITAL has a software service facility. The notification must be received by DIGITAL and the system must be ready for installation within thirty (30) days after the delivery of the SOFTWARE to customer or DIGITAL will have no obligation to install. Installation will consist of: (1) verification that all components of the SOFTWARE have been received by customer, (2) loading the SOFTWARE, and (3) executing a DIGITAL sample procedure.
- 2. During the ninety (90) day period after installation, if the customer encounters a problem with the current unaltered release of the SOFTWARE which DIGITAL determines to be a defect in the SOFTWARE, DIGITAL will provide the following remedial service (on site where necessary): (1) if the SOFTWARE is inoperable, apply a temporary correction (TC) or make a reasonable attempt to develop an emergency by-pass, and (2) assist the customer to prepare a Software Performance Report (SPR) and submit it to DIGITAL.
- 3. During the one (1) year period following installation, if the customer encounters a problem with the SOFTWARE which his diagnosis indicates is caused by a SOFTWARE defect, the customer may submit an SPR to DIGITAL. DIGITAL will respond to problems reported in SPRs which are caused by defects in the current unaltered release of the SOFTWARE via the Maintenance Periodical for the SOFTWARE, which reports SPRs received, code corrections, temporary corrections, generally useful emergency by-passes and/or notice of the availability of corrected code. Software Updates, if any, released by DIGITAL during the one (1) year period, will be provided to the customer on DIGITAL's standard distribution media as specified in the applicable SPD. The customer will be charged only for the media on which such updates are provided, unless otherwise stated in the applicable SPD, at DIGITAL's then current media prices.

#### CATEGORY B

During the one (1) year period following delivery, the services provided to the customer will be the same as set forth in 3 above. CATEGORY C

SOFTWARE is provided on an 'as is' basis. Any software services, if available, will be provided at the then current charges.

DIGITAL shall have the right to make additional charges for any additional effort required to provide services resulting from customer use of other than current unaltered release of the SOFTWARE operated in accordance with the SPD.



#### **DECUS SPECIAL INTEREST GROUPS**

A DECUS Special Interest Group (SIG) is an activity whereby members of the DIGITAL Equipment Computer Users Society who share common interests in a particular field, join together to promote the interchange of information. Specialization may be in application areas such as education or industry, specific software systems such as OS/8 and RSX-11, or a specific main-frame such as the DECsystem-10/20.

SIG members derive numerous benefits from communicating with others who share specialized interests and who may wish to share their experiences. SIG s sponsor business meetings, tutorials, and workshops at the various chapter symposia which fulfill the two-fold purpose of fostering communication among users and between users and DIGITAL. Channeled communication provides DIGITAL and the users with insight into the direction of future developments. SIG s provide direct feedback to DIGITAL's in-house activities and have thereby made substantial contributions to OS/8, RSX-11, RSTS and TOPS-10.

User submitted articles, minutes of local meetings, and letters comprise the major portion of the individual SIG newsletters. Suggestions, hints, bug fixes, program plans, or questions of a non-commercial nature are suitable material for SIG newsletters.

SIG members are encouraged to make presentations at the SIG sessions held during DECUS Symposia.

The semi-annual U.S. Symposia sessions are organized by special interest areas. Submissions received from the user community are reviewed by symposia committee members from the special interest groups for appropriate placement on the agenda.

Special Interest Group participation in the review of programs submitted to the DECUS Program Library provides an opportunity to improve the quality and utility of programs available to you and to fellow users.

DIGITAL standards are issued to DECUS members for review and on the theory and philosophy of the standards. DECUS is a voting member of ANSI X3. Users are encouraged to register their areas of expertise with DECUS and assist with reviewing standards. SIG s often play a role in this process.

Below is a list of U.S. based Special Interest Groups within DECUS.

If you would like information regarding membership in any of the Special Interest Groups, contact DECUS U.S. Chapter, 129 Parker Street, PK3-1/E55, Maynard, Massachusetts 01754 or one of the other DECUS Chapter offices in Kanata, Sidney or Geneva.

NETSIG-Networks Special Interest Group RSTS SIG-RSTS and RSTS/E Special Interest Group SIGIG-Special Interest Group on Interactive Graphics ESIG-Engineering Applications Special Interest Group SIG-18-18-Bit Users Special Interest Group 12-Bit SIG-12-Bit User Special Interest Group RSX-11/IAS SIG RT-11 SIG EDUSIG-Educational Users Special Interest Group DEBUG-Digital Equipment Business Users Group MUSIG-Mumps Special Interest Group PASCAL SIG **DBMS SIG TECO SIG** LSI-11 SIG **FOCAL SIG** STANDARDS SIG



#### DIGITAL EQUIPMENT COMPUTER USERS SOCIETY

#### RT-11 SPECIAL INTEREST GROUP

A Special Interest Group has been formed to serve users of RT-11. The organization of the SIG consists of a SIG Chairman and working committees for standards, documentation, library submissions, newsletters, and help for new users. Submissions to the newsletter should be directed to:

John T. Rasted JTR Associates 58 Rasted Lane Meriden, CT 06450 (203) 634-1632

or

Other communications can be sent to:

Thomas J. Provost P.O. Box 95 Middleton, MA 01949 (617) 774-2370 (617) 245-6600 (Boston tie line) John T. Rasted c/o DECUS

One Iron Way - MR2-3/E55

Marlboro, MA 01752

SIG's activities encompass the following:

- Preparation of a SIG newsletter (user submissions are strongly encouraged).
- 2. Exchange of user-written programs. This exchange could include TASKS representing user-written extensions to RT-11 RT-11 (including, but not limited to device drivers) as well as utility and applications programs, etc.
- Establishment of communications with the DECUS staff to obtain for SIG members early information on RT-11
  related additions to the DECUS Library. These communications will also serve to provide prompt testing of such
  submissions.
- Establishment of user input to appropriate groups within DEC, so that they will receive user feedback on any additions or needed changes to RT-11. Additionally, SIG members may receive early warning from DEC about RT-11 changes.
- Establishment of SIG-maintained files of RT-11 errors and error solutions, where they exist, independent of DEC publications.
- 6. Establishment of RT-11 "Welcome Wagon" type services to aid new users.

	put to standards and documentation				
		t the form below and return it to the DECUS Office.			
NAME		*DECUS MEMBERSHIP NO			
AFFILIATION					
ADDRESS					
CITY	STATE	ZIP CODE			
Are you registered with DEC	as an RT-11 user?	Version Number			
Fortran?	Rasi	c?			

\*Please note one must be a member of DECUS prior to requesting RT-11 SIG involvement. For general membership information, contact the DECUS Office, One Iron Way - MR2-3/E55, Marlboro, MA 01752

#### SOFTWARE PROBLEMS OR ENHANCEMENTS

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

AREAS COVERED United States, remainder of Far East, Middle East, Africa Latin America	SPR CENTER  Administrative Services Group, SWS P.O.Box F  Maynard MA 01754	AREAS COVERED Italy	SPR CENTER  Digital Equipment SPA  Viale Fulvio Testi 117  20092 Cinisillo Balsamo  Italy
Canada	Digital Equipment Canada P.O.Box 11500 Kanata Canada K2H 8K8 Ontario	Japan	Digital Equipment Corp., INTL 3rd Floor Kowa Building 8-7 Sanban Cho Chiyoda Ku Tokyo 102 Japan
United Kingdom	Digital Equipment Corp., LTD Fountain House Butts Centre RG1 7QN Reading England	New Zealand	Digital Equipment Corp., LTD Challenge House 3 Wolfe Street P.O.Box 2471 Auckland New Zealand 10010
Australia-Melbourne	Digital Equipment Aust. Pty., LTD 60 Park Street South Melbourne Victoria Australia 3205	Belgium, Holland	Digital Equipment BV Kaap Horndreef 38 3563 AV Utrecht Netherlands
Australia-Sydney	Digital Equipment Aust. Pty., LTD 123 125 Willoughby Road P.O.Box 491 Crows Nest NSW Australia 2065	Denmark, Finland, Norway, Sweden	Digital Equipment Corp., AB Englundavaegen 73 TR 171 41 Solna Sweden
Brazil	Digital Equipment Comercio Ind Rua Batatais 429 Esq AL Campin 01423 Jardim Paulista Sao Paulo 0100 Brazil	Switzerland, Spain, Greece, Romania, Portugal, Bulgaria Yugoslavia	Digital Equipment Corp., SA 20 Quai Ernest Ansermet Boite Postale 23 CH 1211 Geneva Switzerland
Caribbean	De Latin America P.O.Box 11038 Fernando Juncos Sta. Santurce PR 00910	Austria, Poland Hungary, Rumania East Germany, West Germany, Russia, Czechslovakia	Digital Equipment Corp., GMBH Wallsteinplatz 2 8000 Munchen 40 Germany 8000
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