RT-11

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THE SOFTWARE DISPATCH

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RT-11 SOFTWARE DISPATCH

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

PRODUCTS SUPPORTED in the RT-11 SOFTWARE DISPATCH

APL-11 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
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RT-11 (CTS-300) /LSI-11 2780 V2
RT-11/2780 (CTS-300/ 2780) V2
SSP-11/RT-11 V1

DISTRIBUTION

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

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

Eleanor F. Hunter, Editor
Ann Owens, Associate Editor

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SPR USER LETTER

Submitted by Sheila Hatchell, 8/11 SPR Administration

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

How to Make the Best Use of the SPR Form

What We Can Do For You:

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

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

3. STATUS FOR SUBMITTED SPRs IS PROVIDED UPON REQUEST.

4. SPRs marked PROBLEM/Error will have a response for supported Category A and B products. These SPRs should refer to suspected deficiencies in the software.

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

What You Can Do For Us:

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

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

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

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

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

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

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

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

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!

Unassigned articles are indicated: UNASSIGNED.

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

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

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

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

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

Component	Sequence	Item #
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OVERLAYING THE ERROR MESSAGE MODULE - SPECIAL PATCH WW1	37 M	Jul 79
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HOW TO CHANGE INIT.B00's DEVICE AFTER INSTALLING SPECIAL PATCH YY1	39 M	Jul 79
INTEGERS IN DOUBLE PRECISION MU BASIC-11	40 M	Jul 79
STRING MANIPULATION IN ASSEMBLY LANGUAGE ROUTINES	41 N	Aug 79
SIZING MU BASIC-11	42 N	Aug 79
ERROR IN TABLE 4-1 OF THE USER'S GUIDE	43 N	Aug 79
RESTRICTION OF USR RESIDENCY WHEN RUNNING IN FOREGROUND	44 N	Aug 79
NOTES ON PERFORMANCE PATCHES NO. 4a, NO. 4b, NO. 4c	45 N	Aug 79
MAXIMUM ARRAY SUBSCRIPT SIZE	46 N	Aug 79

Component	Sequence	Mon/Yr
ASSEMBLING SOURCE FILES (SOURCE LICENSE HOLDERS ONLY)	47 M	Sep 79
USE OF SYS (1,n) FUNCTION WHEN ',n' IS OMITTED	48 M	Sep 79
DISABLING CR/LF USING TTYSET - PATCH P	49 M	Dec 79
HANDLER FETCH ERROR MAY LEAD TO MONITOR FAULT - PATCH Q	50 M	Jan 80
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		
"MREPRT" AND "REPRT" GET CONFUSED	01 M	Aug 78
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
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
UANSSIGNED	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 RTS1M 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

Component	Sequence	Mon/Yr
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
ODD RING BUFFER SIZES CAUSE ASSEMBLY ERRORS	04 R	Jun 79
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
INPUT FILE LOST WHEN USING CSIGEN	24 M	Jun 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
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 CUASE 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 VT11 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

Component	Sequence	Mon/Yr
LIBR BLOCK BOUNDARY PROBLEM	19 M	Dec 78
LINK CAN CAUSE TRAP TO 4	20 M	Feb 79
CORRECTIONS TO FILEX	21 M	May 79
DIR CORRECTIONS	22 M	Nov 79
BAD BLOCK REPLACEMENT ON RK06s	23 N	Oct 79
WILD CARD MAGTAPE COPY ERROR PROCESSING CORRECTION	24 M	Oct 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
NEW DEVICE RELEASE DOCUMENTATION, RT-11 V03B	06 N	Jun 79
.FORK AND .SYNCH BLOCK DOCUMENTATION	07 N	Jul 79
THE DEVICE TIME-OUT FEATURE	08 N	Sep 79
CORRECTION OF ERROR RETURNS IN .SYNCH CALL	09 M	Aug 79
EXAMPLE CODE IN .FORK DOCUMENTATION IS INCORRECT	10 N	Aug 79
EXTENDED MEMORY RESTRICTIONS	11 N	Dec 79
MISCELLANEOUS		
ERRORS IN THE SYSGEN CONDITIONAL FILE	01 M	Jul 78
ERRORS IN MTATCH ROUTINE	02 M	Nov 78
ODD RING BUFFER SIZES CAUSE ASSEMBLY ERRORS	03 R	Jun 79
INCORRECT NULL HANDLER DEVICE IDENTIFIER	04 M	Jun 79
GENERATING A SINGLE JOB MONITOR MAY CAUSE AN UNDEFINED GLOBAL	05 M	Aug 79
INCORRECT DEVICE IDENTIFIER FOR PC11	06 M	Sep 79
ERROR IN MTIN AND MTOUT ROUTINES	07 M	Sep 79
HIGH SPEED RING BUFFER PROBLEM ON SYSTEMS WITH ONE DL11	08 M	Jan 80
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 PERFORMANCE ON PDP-11/03 AND PDT SYSTEMS FOR DD AND PD FB MONITORS	23 O	May 79
INPUT FILE LOST WHEN USING CSIGEN	24 M	Jun 79
NON-STANDARD VECTOR ADDRESSES FOR RX01 AND RX02 SECOND CONTROLLER	25 M	Nov 79
ABORT DURING COMPLETION CAUSES SYSTEM FAILURES	26 M	Nov 79
.ELRG CAN CAUSE THE SYSTEM TO CRASH	27 M	Sep 79
CORRECTION TO BOOTSTRAP TO RECOGNIZE LSI-11/23 PROCESSOR	28 M	Oct 79
FPU SAVE AREA IN XM MONITOR	29 M	Dec 79
BACKGROUND JOB MAY TRAP WHEN FOREGROUND ISSUES .SYNCH FROM INTERRUPT ROUTINE	30 M	Dec 79
PROBLEM WHEN FOREGROUND AND BACKGROUND JOB USE CSI AT SAME TIME	31 M	Jan 80
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

Component	Sequence	Mon/Yr
DL QUEUE ELEMENT AND XM ZERO FILL CORRECTIONS	05 M	Apr 79
MAGTAPE XM AND FSM CORRECTIONS	06 M	May 79
DL HANDLER SEEK AND UNIT CORRECTIONS	07 M	Aug 79
MAGTAPE ABORT ENTRY CORRECTION	08 M	Sep 79
MAGTAPE ABORT ENTRY CORRECTION IN XM	09 M	Dec 79
DL HANDLER SEEK CORRECTION	10 M	Jan 80
FILE SEQUENCE NUMBER SEARCH CORRECTION	11 M	Feb 80
SYSTEM HANDLERS		
RL01 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
RL01 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
RESORC DISPLAYS STATUS OF FIRST 14 TERMINALS	15 M	Jun 79
LIBR /U SWITCH PROBLEM	16 M	Aug 79
IMPORTANT RESTRICTIONS FOR SQUEEZE OPERATIONS	17 M	Aug 79
DIR PROBLEMS	18 M	Oct 79
BAD BLOCK REPLACEMENT ON RK06s	19 N	Oct 79
WILD CARD MAGTAPE COPY ERROR PROCESSING CORRECTION	20 M	Oct 79
PROBLEM WITH PSECTS MOVED TO ROOT DURING LIBRARY PASS	21 M	Jan 80
PIP PROBLEMS	22 M	Feb 80
DIR PROBLEM	23 M	Feb 80

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

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Software Product Description

PRODUCT NAME: FORTRAN/RT-11 Extensions, Version 2.1 **SPD 12.12.6**

DESCRIPTION:

The FORTRAN/RT-11 Extensions consist of:

- FORTRAN IV/RT-11, Version 2.1
- 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 that 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.

The FORTRAN debugger enables users at the console terminal to debug the programs at the FORTRAN level.

MINIMUM HARDWARE REQUIRED:

Any valid RT-11 configuration with at least 32K bytes of memory. 48K bytes 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 2.1.

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 03B (with the exception of the XM feature under the Foreground/Background monitor).

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

FORTRAN/RT-11 Extensions is a DIGITAL Supported Software Product.

SOFTWARE INSTALLATION:

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

SOFTWARE PRODUCT SUPPORT:

FORTRAN/RT-11 Extensions includes Standard Services as defined in the Software Support Categories Addendum of this SPD.

ORDERING INFORMATION:

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

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

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 (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 800 BPI Magtape (NRZI).

D = 9-track 800 BPI Magtape (NRZI)
E = RK05 Disk Cartridge
Q = RL01 Disk Cartridge
R = Microfiche
T = RK06 Disk Cartridge
Y = RX01 Floppy Diskette
Z = No hardware dependency

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

QJ980 -C— Single-use license, binaries, documentation, no support services (media: 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 1.0 or 1B, 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.

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

QJ980 -H— Right to copy for single-use (under existing license), no binaries, no documentation, no support services (media: Z)

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

Users of FORTRAN/RT-11 Extensions, Version 1.0 or 1B, 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.

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

ADDITIONAL SERVICES:

The following additional service is available:

- Binary Program Update Service

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Software Product Description

PRODUCT NAME: DAP/CTS-300, Version 1.0, DIGITAL Agency Partner **SPD 15.31.0**

DESCRIPTION:

DAP is an application software package that provides a base of the functions required by property and casualty insurance agents. It is an application package tool around which a turnkey package can be developed. The product consists of a series of DIBOL programs which gather data, perform activities, accumulate files, and produce reports. Using this system many of the accounting, management and marketing requirements of a property and casualty insurance agency can be performed as outlined below:

Recordkeeping System:

These programs provide the user with a means of entering and maintaining master files of information as follows:

Customer File
Contains pertinent information about any entity which may be billed by the agency whether customer, broker, mortgagee, or other.

Policy File
A representation of the major information contained on the declaration page of the policies for customers of the agency.

Company File
The header record for the companies represented by the agency with summary data on premium and commission amounts for the company.

Producer File
The header record for the producers representing the agency with summary data on premium and commission amounts for the producer.

Class of Business File
Contains the line of insurance codes, and names used by the agency.

Transaction File
Contains the codes and names of the activity with general ledger reference for billings other than premium amounts.

General Ledger Chart of Accounts
Contains the name and account number including the financial code, which positions the account on the P & L or balance sheet.

This information is used to assist in the entry and processing of data and to provide a base for inquiry and analysis.

Daily Activity Systems:

These programs are used by the operator to gather the data required to invoice, record cash receipts and cash disbursements, and complete adjusting entries. Data is entered through the following sequence:

1. Screen prompts for information
2. Entry validated where possible
3. Option to change at end of screen
4. Transaction moved to "in process" file
5. Printing of edit list possible
6. Change or delete if necessary

By printing an edit list and auditing the transaction an operator can validate the accuracy of the data before it enters the system. Printed output provides the beginning of an audit trail as well as the required documents. Data gathered through the daily activity system is used to update the main data files (Accounts Receivable, Company/Producer, & General Ledger) on an "as requested" basis.

Accounts Receivable System:
The accounts receivable system is equipped with the following features:

Open Item Accounting
Each transaction is matched and aged by invoice number allowing detail to be displayed on statements, aged listings and at time of inquiry.

Application of Cash
By account only, if necessary, and the ability to assign the invoice reference when available.

Late Charge Generation
The ability to selectively generate late charges based on the number of late days assigned to an account.

Statements
Can be generated on a daily, weekly, or monthly basis, detailed, with aging.

Inquiry
Any account can be viewed on the CRT or printed out upon request with the latest transaction detail.

Adjustments
Cash can be applied or reapplied to an invoice within individual accounts without effecting the overall balance. Adjustments can also be made between accounts and between the A/R and General Ledger without allowing an "out of balance" condition to occur.

Dual Date Recognition
Both the date of the transaction and the effective date are maintained allowing future billings to be recognized at any time.

Company and Producer System

This system is based on a file containing all of the premium transactions generated by the invoicing activity. Each transaction contains pertinent information about those particular premium dollars. Produced from the file is the company account current (payables) report, the producer commision report and other reports of premiums by line of business, transaction code, company producer and either the effective date or the transaction date. Information from this file is available for production reports or historical summaries.

General Ledger System

The general ledger is fully integrated with all other Agency Partner systems. It receives transactions from the daily Activity System and maintains an item-by-item recording of entries until purged. All information contained in the general ledger is source referenced to allow complete audit beginning with point of entry. Reports can be produced at any time during the accounting period without corrupting the integrity of the system or normal period endings reports. The chart of accounts and the report formats are variable and are determined at the time the system is initialized.

The balance sheet, profit and loss statement, and trial balance are available in either detail or summary format. Individual account detail within accounts payable and commission income and expense are used to itemize the detail in these areas. Transaction codes can be used to identify what account is updated when non-premium amounts are invoiced. Journal entries are only accepted in balance to assure the integrity of the system.

One week of product training will be provided with the initial license of the software by the Commercial Group.

MINIMUM HARDWARE REQUIRED:

Any CTS-300, Version 5.0 or later configuration with:

- A minimum of 56K bytes of memory
- A VT100 Console Terminal
- A line printer
- Two hard disk drives

OPTIONAL HARDWARE:

Supports any unit record, terminal or mass storage device supported by the prerequisite software.

PREREQUISITE SOFTWARE:

CTS-300, Version 5.0 Commercial Operating System

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

DAP/CTS-300 is provided on an "as is" basis without warranty expressed or implied. Any software services, if available, will be provided at the then current charges.

ORDERING INFORMATION:

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

The following key (E, Q, T, V) represents the distribution media for the product and must be specified at the end of the order number, e. g., QJA07-CE = RK05 Disk.

E = RK05 Disk Cartridge
Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
V = RK07 Disk Cartridge

QJA07 -C— DAP/CTS-300 complete package, single-use license, binaries, documentation; also includes single-use license for a support kit subject to the binary licensing conditions of DIGITAL's Standard Terms and Conditions of Sale. (media: E, Q, T, V)

QJA07 -D— DAP/CTS-300 complete package single-use license only (for both binaries and support kit) no code, no documentation no support services. (media: Z)

ADDITIONAL SERVICES:

None

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Software Product Description

PRODUCT NAME: GAMMA-11 F/B, Version 3.0 **SPD 15.60.5**

DESCRIPTION:

GAMMA-11 F/B is a hardware/software system for nuclear medicine. GAMMA-11 F/B is designed to acquire, store, display, and manipulate images from the gamma camera in order to supply quantitative, meaningful clinical information.

In the foreground/background configuration, gamma camera data acquisition can take place independently of another process. This configuration includes two terminals. One terminal is designated the foreground acquisition terminal for the gamma camera and controls the setup and initiation of data collection. The other terminal, designated the background terminal, can be used simultaneously with the foreground terminal for data analysis by GAMMA-11 F/B programs, for program development in BASIC or FORTRAN, or for running any other programs that do not need immediate access to the disks for successful completion.

Only one terminal is included in the single-job configuration. This configuration has all the capabilities of the foreground/background system, except that data acquisition and processing can not be carried out simultaneously.

A transportable configuration (MDA11) also exists which provides data acquisition capabilities only.

Data Acquisition

GAMMA-11 F/B programs allow data acquired to be stored in seven different size matrices for static studies and four different size matrices for dynamic studies. Thus a user can choose the proper size and resolution for the job at hand. List mode acquisition (i.e., unstructured data) is also available. Static studies can be collected and terminated by a preset time, preset count, or matrix element overflow. Static studies can be linked to provide easy collection of and access to sequential static views. Dynamic studies are collected at a specified frame rate. List mode studies can be acquired with an effective frame rate of 100 frames per second.

An external synchronizing time marker can be included when acquiring either dynamic or list mode studies. When acquired with the time marker, these modes are called Gate Synchronized Acquisition (GSA) and Physiological List Mode (PLM), respectively, and are used primarily for cardiac studies.

GSA data is stored in 32 x 32, 64 x 64, or 128 x 128 matrices. The maximum number of images per study is determined by the amount of memory. During GSA acquisition (background) images are displayed 'line' on the video display.

The heart cycle time (or time between external synchronized events) is continuously monitored and displayed. During GSA acquisition (foreground) there is no line display of images, however, heart cycle time is monitored and displayed.

For GSA data acquisition, the operator can either choose fixed time intervals for each image or allow the program to divide the heart cycle time (averaged over 30 seconds) by the number of images chosen. A heart cycle time window can be selected so that if a given cycle time falls outside of this window, then the following cycle is rejected.

Acquisition in 128 x 128 word and 256 x 256 byte require the NCV11 interface. 256 x 256 byte acquisition requires a minimum of 64KW of memory. For display of 256 x 256 images, two additional M7068 bit maps are required (four total).

NOTE: List mode studies and 256 x 256 byte acquisition are not possible on the MDA11.

Physiological List Mode studies are acquired with one millisecond time intervals.

Data is reframed by creating a number of images based on the interval between successive external time markers.

With dual isotope collection, two separate images (one for each isotope) can be collected simultaneously. This capability does not apply to GSA or PLM.

NOTE: This gamma camera must also have the dual isotope option.

Once collection parameters and procedures are established, they can be set up as protocols or predefined studies. Up to 20 predefined studies can be used to speed setup, minimize error, and standardize collection procedures.

Patient Study Index

Once collected, patient studies are identified by a system-generated index file. Each study is identified by patient name, number, organ, study type, and

acquisition date. Studies are selected for analysis by index number; the user need not be concerned with the physical location of disk data.

Patient Monitor

Patient Monitor (background) displays line camera data prior to acquisition. It allows for patient positioning and validation of external trigger input for GSA or PLM. MDA11 and foreground patient monitors have a pseudo display. The display is made up of 4-5 ASCII characters.

Data Analysis and Display

Data is displayed on the VSV01 color video monitor. The VSV01 color display includes a hardware character generator permitting display, along with the image, of patient identification and image counting statistics. All photographs taken from the display are thus positively identified.

NOTE: No data analysis or display is possible on the MDA11 system.

Display Features:

- Color or monochrome display
- 64 colors; 16 colors displayed simultaneously
- Up to 31 color spectra defined
- Intensity or isometric display
- 4- or 8-image display (16 with optional VSV01 bit maps)
- Normal or magnified display
- Lower and upper thresholding with or without contrast enhancement
- Dual/full size image display (split screen or overlayed)
- Negative image display
- Display 256 x 256 byte data

Data Manipulation Features:

- Skip frames (forward or backward)
- Sequential frame add
- Image rotation (90-degree steps)
- Image translation (horizontal and vertical)
- Non-uniformity correction
- Frame algebra — add, subtract, multiply, divide or merge frames; add, subtract, or multiply frames by a constant
- 9-point smoothing
- 9 save areas for temporary storage of images or ROI curves
- Up to 55 optional save areas for temporary storage of images
- Slice profiles (vertical or horizontal)
- Isocontour generation
- Interpolation of images (optional VSV01 bit maps required for 256 x 256 byte interpolation)
- Select quarter of image

Region of Interest Features:

- Regular (keyboard controlled)
- Irregular (joystick controlled)
- Circumference or fill mode definition (irregular)
- Pertinent count rate information for each region displayed with image
- Up to 12 regions displayed
- Simultaneous display of curves and images with ROIs outlined
- Select regions by thresholding (irregular)
- Select regions in magnified mode (irregular)
- Time/activity curves displayed normally, averaged, or overlayed
- Ability to expand selected portions of ROI curves

Dynamic Playback:

- Sequences of preprocessed images can be displayed in cine mode.
- 2 to 4 playback buffers can be combined into one and displayed synchronously.
- Speed and direction of playback can be controlled via the joystick or keyboard.

Predefined Analysis Features:

- Multiple commands can be entered on a single line
- Predefined analysis procedures (macros) can be created, edited, saved, and executed from the system disk
- Predefined analysis can be linked with predefined study acquisition to semiautomate the system.
- Macros can call FORTRAN or BASIC programs; special calls allow macro reentry.

Miscellaneous Features:

- Dual isotope display and processing
- Additional disk space not required for reconstructed images in list mode analysis
- Comment editor

Utility Programs

Study Deletion — This function requires user verification to prevent accidental deletion of important data.

Study Transfer — This function transfers patient studies betwen any two RT-11 file-structured devices (disks, magnetic tape, floppy disks, etc.)

Application Programs

Included with GAMMA-11 F/B is the GAMMA-11 Applications package that provides the user with a series of application programs for nuclear medicine written in BASIC or FORTRAN. This application software is provided on an "as is" basis.

MINIMUM HARDWARE REQUIRED:

Any UNIBUS PDP-11 (except PDP 11/70) with line frequency clock that meets the following main memory requirements:

- 32K bytes for single-job operation with RK05 as system disk
- 64K bytes for foreground/background operation with RK05 as system disk
- 64K bytes for single job operation with RL01, RK06, or RK07 as system disks
- 96K bytes for foreground/background operation with RL01, RK06, or RK07 disks

and includes,

Mass Storage (one of the following):

- One RK05, RL01, or RK06 disk with a second disk or RT-11 supported magnetic tape unit
- One RK07 disk and an RT-11 supported magnetic tape unit (except TS-11)
- Two RK05, RL01, or RK06 disks

Terminals:

- Any console terminal supported by the prerequisite software. (Two terminals are required for foreground/background operation. The foreground terminal must operate at 1200 baud or greater.) Foreground terminal requires a DL11 and must be VT52 or VT100.

Display:

- VSV01 Video Display

Interface: (one of the following)

- NC11 gamma camera interface with KW11-P (AR11 needed for foreground/background operation and/or GSA or PLM), or
- NCV11 gamma camera interface (includes KWV11; AR11 not needed)

OPTIONAL HARDWARE:

- Any RT-11 supported mass storage device for off-line data storage except TA11 cassette
- A system total of 256K bytes main memory
- MDA11 acquisition system
- MDA11 software for the MDA11 system is distributed with the GAMMA-11 F/B software. Each MDA11 system includes a DZ license to copy this MDA software for use on that MDA11 system. RX02 drive is required on the host system for communication.

PREREQUISITE SOFTWARE:

None

OPTIONAL SOFTWARE:

FORTRAN IV/RT-11, Version 2.1

TRAINING CREDITS:

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

SUPPORT CATEGORY:

GAMMA-11 F/B is a DIGITAL Supported Software Product.

SOFTWARE INSTALLATION:

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

SOFTWARE PRODUCT SUPPORT:

GAMMA-11 F/B includes Standard Services as defined in the Software Support Categories Addendum of this SPD.

The GAMMA-11 Applications package is offered on an "as is " basis. The above DIGITAL INSTALLED does not apply to the GAMMA-11 Applications package.

ORDERING INFORMATION:

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, D) represents the form of power source for the product and must be specified at the end of the number, i.e., GMA11-AA = system using 115 volt/60 Hertz power.

A = 115 volt/60 Hertz
D = 230 volt/50 Hertz

The following key (D, E, Q, T, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ723-AD = binaries on 9-track 800 BPI Magtape (NRZI).

D = 9-track 800 BPI Magtape (NRZI)
E = RK05 Disk Cartridge
Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
Z = No hardware dependency

GMA11 -C— GAMMA-11 single job system includes hardware, single-use license for GAMMA-11, RT-11, BASIC-11/RT-11, binaries on RL01 disk, documentation, support services (power: A, D)

Source/Listing Options

QJ721 -E— All GAMMA-11 sources (media: D, E, Q, T)

Upgrade Options

The following option is available as an upgrade kit from GAMMA-11, Version 7.0, for use on the same single CPU on which GAMMA-11, Version 7.0, is licensed. The license previously granted for GAMMA-11, Version 7.0 shall be extended to cover this upgrade.

QJ723 -A— Single-use license for GAMMA-11 F/B, RT-11, BASIC-11/RT-11, binaries, documentation, support services (media: D, E)

Update Options

Users of GAMMA-11 F/B, Version 2.0, whose specified Support Category warranty has expired may order under license the following software update at the then current media 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.

QJ721 -H— Binaries, documentation (media: D, E, Q, T)

QJ721 -H— Right to copy for single-use (under existing license), no binaries, no documentation (media: Z)

Users of GAMMA-11 F/B, Version 2.0, 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.

NOTE: RT-11 and BASIC Updates and Upgrades are not included in GAMMA-11.

Miscellaneous

QJ721 -G— Documentation only kit(media: Z)

ADDITIONAL SERVICES:

The following additional service is available:

- Binary Program Update Service

DIGITAL EQUIPMENT COMPUTER USERS SOCIETY

INTRODUCTION

DECUS, the Digital Equipment Computer Users Society, was established in March of 1961 to advance the effective use of DIGITAL computers. It is a 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.

ORGANIZATION

The Digital Equipment Computer Users Society is a federation of chapters, whose membership is determined by geographic location. The membership is organized to meet the specific needs of members in its area such as Symposia and Special User Group activities. The DECUS chapters are:

- *AUSTRALIAN CHAPTER (Australia, Indonesia, Malaysia, New Zealand, PNG, Singapore,)*
- *EUROPEAN CHAPTER (Europe, Middle East, North Africa, Russia)*
- *CANADIAN CHAPTER (Canada)*
- *U.S. CHAPTER (U.S. and All Others)*

ACTIVITIES

1. SYMPOSIA

Symposia are sponsored throughout the year by each of the DECUS Chapters and Regional/National User Groups. These meetings provide an opportunity for users of DIGITAL computers to meet with other users and with DIGITAL management, engineers, and customer service representatives. They provide a forum for users to exchange information on technique and approaches to issues of common interest and to provide feedback to DIGITAL on existing and future products and services. Sessions at the symposia include user-driven workshops, tutorials, product panels, as well as application/system-specific presentations.

The technical papers and presentations from each symposium are published as DECUS Proceedings.

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 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, a DIGITAL representative, and its organization must meet the guidelines of the Chapter Executive Board.

Geographic subgroupings are formed to service the DECUS members within a specific area although they may also be based on interests as in SIGs. There are four types of geographic subgroupings:

1. *LUGs — Local User Groups*
2. *NUGs — National User Groups*
3. *RUGS — Regional User Groups*
4. *SLUGs — Student Local User Groups*

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.

MEMBERSHIP

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

INSTALLATION MEMBERSHIP

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.

An Installation should appoint a person immediately concerned with the use of the computer to act as delegate to the Society. A delegate receives all official communications and has a vote on DECUS policies and elections. An organization or company is eligible for as many voting delegates as it has DIGITAL computers. Each delegate must file an application for Installation Membership.

ASSOCIATE MEMBERSHIP

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

Membership status is acquired by submitting the enclosed application to the appropriate Chapter Executive Secretary for approval by the Chapter Executive Board.

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

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

COMPANY: (INSTALLATION): _____

ADDRESS 1: _____

2: _____

3: _____

4: _____

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

COUNTRY: _____

TELEPHONE: _____ TELEX _____

I obtained this form from _____

DECUS OFFICES

DECUS Australia
P.O. Box 384
Chatswood
NSW 2067
Australia

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

DECUS Europe
P.O. Box 510
12, avenue des Morgines
CH-1213 Petit-Lancy 1/GE
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).*

Areas Covered	SPR Center
United States; remainder of Far East, Middle East, Africa Latin America	Administrative Services Group, SWS P.O. Box F Maynard, Ma 01754
Canada	Digital Equipment Canada P.O. Box 11500 Ottawa, Ontario Canada K2H 8K8
United Kingdom, Bahraine, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Qatar, Oman, Saudi Arabia, Syria, United Arab Emirates, Yemen, Arab Republic.	Digital Equipment Corp. LTD Fountain House Butts Centre GB - Reading RG17QN England
Australia-Melbourne	Digital Equipment Aust. PTY. LTD 60 Park Street So. Melbourne Victoria Australia 3205
Australia-Sydney	Digital Equipment Aust. PTY. LTD 123 125 Willoughby Rd. P. O. Box 491 Crows Nest NSW Australia 2065
Brazil	Digital Equipment Comercio Ind. Rua Batatais 429 Esq AL Campin 01423 Jardim Paulista Sao Paulo 0100 Brazil
Caribbean	De Latin America P. O. Box 11038 Fernando Juncos Sta. Santurce PR 00910
France	Digital Equipment France 18, rue Saarinen France Silic 225 F - 94528 Rungis - Cedex France
Italy	Digital Equipment S.P.A. Viale Fulvio Testi 117 I-20092 Cinisillo Balsamo Milan, Italy

Areas Covered	SPR Center
Japan	Digital Equipment Corp. INTL 3rd Floor Kowa Bldg. 8-7 Sanban Cho Chiyoda Ku Tokyo 102 Japan
New Zealand	Digital Equipment N.Z. LTD P.O. Box 17093 Greenlane, Auckland 5, New Zealand
Belgium, Holland, Luxemburg	Digital Equipment B.V. KAAP Horndreef 38 NL - Utrecht/Overvecht Holland
Sweden	Digital Equipment Corp. AB Englundavägen 7 S-171 24 Solna, Sweden
Denmark	Digital Equipment Corp. APS Kristineberg 3 DK-2100 Copenhagen Ø Denmark
Finland	Digital Equipment Corp. OY PL16 SF - 02201 ESPOO 20 Finland
Norway	Digital Equipment Corp. A/S Pottenmakerveien 8 N - Oslo 5 Norway
Austria, East Germany, West Germany, Poland, Hungary, Rumania, Czechoslovakia, Russia, Bulgaria	Digital Equipment Corp. GMBH Wallsteinplatz 2 D - 8 Munich 40 West Germany
Israël	DECSYS Computers LTD. 4, Yirmiyahou Str. P.O. Box 6359 IL - Tel-Aviv 63505 Israël

Areas Covered	SPR Center
Greece, Portugal, Spain, Switzerland, Yugoslavia & Sina (Morocco, Algeria, Tunisia, Cyprus, Turkey, Malta)	Digital Equipment Corp. SA 9, route des Jeunes 1211 Geneva 26 Switzerland

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