

# SHARE PROGRAM LIBRARY AGENCY



PROGRAM NUMBER

*051026*

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## University of Miami

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# SHARE PROGRAM LIBRARY SUBMITTAL FORM



SHARE PROGRAM LIBRARY AGENCY  
Triangle Universities Computation Center  
Post Office Box 12076  
Research Triangle Park, North Carolina USA 27709

SPLA

CONTROL NUMBER: 238

This form should be completed and submitted with the program package to the SHARE Program Library Agency at the address shown above. Standards and instructions for submitting programs are in the SHARE Reference Manual, Section 6.

(1) Program Number (to be filled by SPLA) . . . . . 370D - 05.1.026

(2) Title of Program . . . . . REAL-TIME MONITOR / VIRTUAL STORAGE (RTM/VS)

(3) System Type(s) (Machine) . . . . . IBM 370/168 UP

(4) Search Key(s) . . . . . REAL-TIME MONITOR ALLOWS  
TIME-CRITICAL TASKS UNDER  
OS/VS1 AND OS/VS2

(5) Programming Systems/Languages . . . . . OS ASSEMBLER

(6) Primary Subject Code . . . . . 05.1

(7) Minimum System Requirements ANY IBM 370/168

(8) New (N) or Revision (R) (if revision, show prior Program Number in Item 1) N

(9) Date of Submittal . . . . . \_\_\_\_\_

(10) Documentation (number of original pages submitted) . . . . . 6

(11) Author's Name and Address . . . . . E.C. FINKELSTEIN, R.J. WHATMOUGH  
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(12) Direct Technical Inquiries to Name & Address  
(if different than Author) \_\_\_\_\_

(13) Submitter's Installation Membership Code . . . . . WA

(14) Abstract (should contain sufficient information for a reader to determine the value of the program). Listed on the reverse side of this form are subjects which may serve as a guide for a descriptive abstract.

## SHARE PROGRAM LIBRARY SUBMITTAL FORM

Subject Guide:

- a. Purpose
- b. Programming Language used
- c. Version and modification level or release number
- d. Field of application
- e. Type of routine (main program, subroutine, etc.)
- f. Specific description of machine requirements

RTM/VS IS A MONITOR WHICH SETS UP AN ENVIRONMENT IN WHICH SPECIFIED USER TASKS CAN RESPOND RAPIDLY TO REQUESTS FOR SERVICE, WHILE THE GENERAL-PURPOSE OPERATING SYSTEM OS/VS1, OS/VS2 (SVS) OR OS/VS2(MVS) PROVIDES NORMAL SERVICES TO BATCH, TELEPROCESSING AND TIME-SHARING USERS.

FORTRAN-CALLABLE ROUTINES ARE PROVIDED TO INVOKE RTM/VS SERVICES.

RTM/VS COULD BE APPLIED TO FIELDS SUCH AS HYBRID COMPUTING, WHERE THE DIGITAL COMPUTER WOULD BE INTERFACED TO AN ANALOGUE COMPUTER AND WOULD PERFORM SOME CALCULATIONS ON REQUEST.

RTM/VS HAS BEEN TESTED WITH MVS ON A 370/168. IT WOULD NEED MODIFYING TO RUN WITH OPERATING SYSTEMS THAT USE EXTENDED INSTRUCTION SETS (SUCH AS MVS/SE).

(Please attach additional pages if necessary) . . . . . Total pages attached \_\_\_\_\_

An "Acknowledgement of Assistance" statement must be attached to this Submittal Form.

Permission to Publish

"I hereby give the SHARE Program Library Agency permission to reprint, reproduce, and distribute this program"

(15) Signature of Submitter and Date J. F. Johnson 15/11/79

(15) Signature of Installation Addressee 15W Collier

## DISCLAIMER

Although each program has been tested by its contributor, no warranty, expressed or implied, is made by the contributor or SHARE, as to the accuracy and functioning of the program and related program material, nor shall the fact of distribution constitute any such warranty, and no responsibility is assumed by the contributor or SHARE in connection therewith.

## PURPOSE

RTM/VS is a monitor which sets up an environment in which specified user tasks can respond rapidly to requests for service, while the general-purpose operating system OS/VS1, OS/VS2(SVS) or OS/VS2(MVS) provides normal services to batch, teleprocessing and time-sharing users.

FORTRAN-callable routines are provided to invoke RTM/VS services.

RTM/VS could be applied to fields such as hybrid computing, where the digital computer would be interfaced to an analogue computer and would perform some calculations on request.

RTM/VS has been tested with MVS on a 370/168. It would need modifying to run with operating systems that use extended instruction sets (such as MVS/SE).

## T A P E K E Y

Volume serial number... RTM101 (40 physical tape marks, IBM standard labels)

The tape contains 7 unloaded PDS-s and 6 sequential data sets as follows:

JCL library (DSNAME=RTM.CNTL)

LABEL=1

DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=4000)

SPACE=(TRK,(5,5,5))

IEBCOPY unloaded PDS

TSU command procedure library (DSNAME=RTM.CLIST)

LABEL=2

DCB=(DSORG=PO,RECFM=VB,LRECL=255,BLKSIZE=3120)

SPACE=(TRK,(1,1,5))

IEBCOPY unloaded PDS

Documentation text library (DSNAME=RTM.TEXT)

LABEL=3

DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=4000)

SPACE=(TRK,(300,20,40))

IEBCOPY unloaded PDS

Source module library (DSNAME=RTM.ASM)

LABEL=4

DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=4000)

SPACE=(TRK,(320,20,40))

IEBCOPY unloaded PDS

Object module library (DSNAME=RTM.OBJECT)

LABEL=5  
DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120)  
SPACE=(TRK,(50,20,20))

IEBCOPY unloaded PDS

Load library (DSNAME=RTM.LOAD)  
LABEL=6  
DCB=(DSORG=PO,RECFM=U,BLKSIZE=13030)  
SPACE=(TRK,(10,10,10))

IEBCOPY unloaded PDS

Assembly listing library (DSNAME=RTM.ASM.LISTINGS)  
LABEL=7  
DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=4000)  
SPACE=(CYL,(20,5,40))

IEBCOPY unloaded PDS

Application Programmer's Manual (DSNAME=RTM.APM)  
LABEL=8  
DCB=(DSORG=PS,RECFM=FBA,LRECL=121,BLKSIZE=12947)  
SPACE=(TRK,(5,5))

IEBGENER sequential dataset. Print using TN train.

System Programmer's Manual (DSNAME=RTM.SPM)  
LABEL=9  
DCB=(DSORG=PS,RECFM=FBA,LRECL=121,BLKSIZE=12947)  
SPACE=(TRK,(5,5))

IEBGENER sequential dataset. Print using TN train.

Control Blocks Manual (DSNAME=RTM.CBLKM)  
LABEL=10  
DCB=(DSORG=PS,RECFM=VA,LRECL=121,BLKSIZE=125)  
SPACE=(TRK,(5,5))

IEBGENER sequential dataset. Print using TN train.

Program Logic Manual Vol. 1 (DSNAME=RTM.PLM1)

LABEL=11

DCB=(DSORG=PS,RECFM=FBA,LRECL=121,BLKSIZE=12947)

SPACE=(TRK,(5,5))

IEBGENER sequential dataset. Print using TN train.

Program Logic Manual Vol. 2 (DSNAME=RTM.PLM2)

LABEL=12

DCB=(DSORG=PS,RECFM=FBA,LRECL=121,BLKSIZE=12947)

SPACE=(TRK,(5,5))

IEBGENER sequential dataset. Print using TN train.

Program Logic Manual Vol. 3 (DSNAME=RTM.PLM3)

LABEL=13

DCB=(DSORG=PS,RECFM=FBA,LRECL=121,BLKSIZE=12947)

SPACE=(TRK,(5,5))

IEBGENER sequential dataset. Print using TN train.

Approximate space requirements are given for IBM 3330  
direct access storage disks.



Each unloaded PDS can be read as follows:

```
// EXEC PGM=IEDCOPY
//SYSPRINT DD SYSOUT=A
//TAPEDS DD DSN=RTM.name,DISP=OLD,
//          UNIT=unit,DCB=DEB=den,
//          VOL=SER=RTM101,LABEL=n
//DISKDS DD DSN=RTM.name,DISP=(NEW,KEEP),
//          UNIT=3330,VOL=SER=ser,
//          SPACE=(TRK,(n,n,n)),
//          DCB=(...)
//SYSIN DD *
COPY INDD=TAPEDS,OUTDD=DISKDS
/*
```

Each sequential data set can be read as follows:

```
// EXEC PGM=IEDGENER
//SYSPRINT DD SYSOUT=A
//SYSUT1 DD DSN=RTM.name,DISP=OLD,
//          UNIT=unit,DCB=DEB=den,
//          VOL=SER=RTM101,LABEL=n
//SYSUT2 DD DSN=RTM.name,DISP=(NEW,KEEP),
//          UNIT=3330,VOL=SER=ser,
//          SPACE=(TRK,(n,n,n)),
//          DCB=(...)
//SYSIN DD DUMMY
```