SHARE PROGRAM LIBRARY AGENCY

PROGRAM NUMBER

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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:

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) 360D-40.4.003

(2) Title of Program . . . . . MULTIPLE-PRECISION FLOATING-POINT ARITHMETIC PACKAGE (VERSION 2)

(3) System Type(s) (Machine) SYSTEM/360-370

(4) Search Key(s) . . . . . MULTIPLE PRECISION FLOATING POINT ARITHMETIC

(5) Programming Systems/Languages . . . . (SEE DESCRIPTION

(6) Primary Subject Code . . . . .

(7) Minimum System Requirements (SEE DESCRIPTION)

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

(9) Date of Submittal . . . . . FEB. 16, 1982

(10) Documentation (number of original pages submitted) 3

(11) Author's Name and Address . . . . . JOHN R. EITRMAN
SLAC COMPUTING SERVICES
MAIL BIN 97
P.O. BOX 4349
STANFORD, CA 94305

(12) Direct Technical Inquiries to Name & Address (if different than Author)

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

(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.

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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

These routines provide facilities for arbitrary precision floating-point arithmetic, plus routines for conversions, data movement, testing, and other operations. All routines are written in Assembler Language, and (while designed with a Fortran environment in mind) may be called from any language or program obeying standard linkage and parameter-passing conventions. The data format used is compatible with normal System/370 floating-point format.

The package includes (1) installation and test instructions, (2) four simple Fortran sample programs, (3) an exhaustive Fortran test program, (4) a program writeup in upper and lower case, and (5) the same writeup in upper case.

(Please attach additional pages if necessary) . . . . . Total pages attached 1

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 [signature] Feb. 12, 1982

(15) Signature of Installation Addressee [signature] Feb 16, 1982

SPLA 1001 (R) Revised 11-76

September 9, 1982

Multiple Precision Arithmetic Routines (Version 2.1)

The distribution tape for version 2.1 of these MPA routines contains three copies of the same data set, on the first three files of an unlabeled tape. The data set is in IEBUPDTE input format, and can be installed using a job step like the following:

```
// JOB etc.
//MPAPDS EXEC  PGM=IEBUPDTE,PARM=NEW
//SYSPRINT DD  SYSOUT=A
//SYSUT2   DD  DSN=MPA.SOURCE,UNIT=DISK,VOL=SER=MPADSK,
//             DISP=(,KEEP),SPACE=(80,(5000,500,10),RLSE),
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=6400)
//SYSIN    DD  UNIT=TAPE,VOL=SER=MPAV2,DISP=(,PASS),
//             LABEL=(1,NL,,IN),DCB=(RECFM=FB,LRECL=80,
//             BLKSIZE=8000)
```

There are 4837 card images in each file. The member INSTALL of the card-image PDS thus created gives instructions on assembling and installing the MPA routines. Members WRITEUP and WRITEUPP (in mixed and upper case, respectively) describe the routines and their calling sequences.

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TAPE KEY

File 1	IEBUPDTE input file EBCDIC 4837 card images blocked 100:1 Tape Mark
File 2	IEBUPDTE input file EBCDIC 4837 card images blocked 100:1 Tape Mark
File 3	IEBUPDTE input file EBCDIC 4837 card images blocked 100:1 Tape Mark
File 4	Tape Mark (indicating End-of-Tape)