File created: 15-Jun-90 14:17:57 **{DSK}<usr>local>lde>lispcore>internal>library>FLOAT-ARRAY-SUPPORT.;2**

changes to: (VARS FLOAT-ARRAY-SUPPORTCOMS)

previous date: 5-Dec-86 18:23:44 {DSK}<usr>local>lde>lispcore>internal>library>FLOAT-ARRAY-SUPPORT.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

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;;
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(RPAQQ FLOAT-ARRAY-SUPPORTCOMS
       ((FILES (SYSLOAD FROM VALUEOF DIRECTORIES)
               UNBOXEDOPS)
        (FUNCTIONS %%BLKEXPONENT %%BLKFABSMAX %%BLKFABSMIN %%BLKFMAX %%BLKFMIN %%BLKFPLUS %%BLKFDIFF %%BLKFTIMES
               %%BLKPERM %%BLKSMALLP2FLOAT %%FLOATTOBYTE %%GET-FLOAT-ARRAY-BASE %%INSURE-ARRAY %%MATMULT-133
               %%MATMULT-144 %%MATMULT-331 %%MATMULT-333 %%MATMULT-441 %%MATMULT-444 %%MUL2 %%POLY-EVAL
               %%TEST-ARRAY MAKE-FLOAT-ARRAY MAKE-FLOAT-VECTOR SINGLE-FLOAT-ARRAY-P SINGLE-FLOAT-VECTOR-P)
        (OPTIMIZERS %%POLY-EVAL %%MATMULT-133 %%MATMULT-144 %%MATMULT-331 %%MATMULT-333 %%MATMULT-441
               %%MATMULT-444)
        (PROP DOPVAL %%BLKEXPONENT %%BLKFABSMAX %%BLKFABSMIN %%BLKFDIFF %%BLKFMAX %%BLKFMIN %%BLKFPLUS
              %%BLKFTIMES %%BLKPERM %%BLKSMALLP2FLOAT %%FLOATTOBYTE)
        (PROP FILETYPE FLOAT-ARRAY-SUPPORT)
        (DECLARE%: DONTCOPY DOEVAL@COMPILE DONTEVAL@LOAD (LOCALVARS . T))))

(FILESLOAD (SYSLOAD FROM VALUEOF DIRECTORIES)
       UNBOXEDOPS)


(CL:DEFUN %%BLKEXPONENT (SOURCE DEST SIZE)
   (\MISC3.UFN SOURCE DEST SIZE 0))


(CL:DEFUN %%BLKFABSMAX (BASE ZERO SIZE)
   (\MISC3.UFN BASE ZERO SIZE 6))


(CL:DEFUN %%BLKFABSMIN (BASE ZERO SIZE)
   (\MISC3.UFN BASE ZERO SIZE 7))


(CL:DEFUN %%BLKFMAX (BASE ZERO SIZE)
   (\MISC3.UFN BASE ZERO SIZE 4))


(CL:DEFUN %%BLKFMIN (BASE ZERO SIZE)
   (\MISC3.UFN BASE ZERO SIZE 5))


(CL:DEFUN %%BLKFPLUS (SOURCE1 SOURCE2 DEST SIZE)
   (\MISC4.UFN SOURCE1 SOURCE2 DEST SIZE 2))


(CL:DEFUN %%BLKFDIFF (SOURCE1 SOURCE2 DEST SIZE)
   (\MISC4.UFN SOURCE1 SOURCE2 DEST SIZE 3))


(CL:DEFUN %%BLKFTIMES (SOURCE1 SOURCE2 DEST SIZE)
   (\MISC4.UFN SOURCE1 SOURCE2 DEST SIZE 0))


(CL:DEFUN %%BLKPERM (SOURCE PERMUTATION DEST SIZE)
   (\MISC4.UFN SOURCE PERMUTATION DEST SIZE 1))


(CL:DEFUN %%BLKSMALLP2FLOAT (SOURCE DEST SIZE)
   (\MISC3.UFN SOURCE DEST SIZE 2))


(CL:DEFUN %%FLOATTOBYTE (SOURCE DEST SIZE)
   (\MISC3.UFN SOURCE DEST SIZE 8))


(DEFMACRO %%GET-FLOAT-ARRAY-BASE (FLOAT-ARRAY)
   `(\ADDBASE (%%ARRAY-BASE ,FLOAT-ARRAY)
            (LLSH (%%ARRAY-OFFSET ,FLOAT-ARRAY)
                  1)))


(DEFMACRO %%INSURE-ARRAY (RESULT TEST-DIMS &OPTIONAL (MAKE-DIMS (LIST 'QUOTE TEST-DIMS)))
   `(CL:IF ,RESULT
        (%%TEST-ARRAY ,RESULT ,TEST-DIMS)
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        (CL:MAKE-ARRAY ,MAKE-DIMS :ELEMENT-TYPE 'CL:SINGLE-FLOAT)))

(CL:DEFUN %%MATMULT-133 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
   (\UNBOXFLOAT3 MATRIXABASE MATRIXBBASE MATRIXCBASE 3))

(CL:DEFUN %%MATMULT-144 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
   (\UNBOXFLOAT3 MATRIXABASE MATRIXBBASE MATRIXCBASE 5))

(CL:DEFUN %%MATMULT-331 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
   (\UNBOXFLOAT3 MATRIXABASE MATRIXBBASE MATRIXCBASE 4))

(CL:DEFUN %%MATMULT-333 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
   (\UNBOXFLOAT3 MATRIXABASE MATRIXBBASE MATRIXCBASE 1))

(CL:DEFUN %%MATMULT-441 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
   (\UNBOXFLOAT3 MATRIXABASE MATRIXBBASE MATRIXCBASE 6))

(CL:DEFUN %%MATMULT-444 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
   (\UNBOXFLOAT3 MATRIXABASE MATRIXBBASE MATRIXCBASE 2))

(DEFMACRO %%MUL2 (X)
   `(LLSH ,X 1))

(CL:DEFUN %%POLY-EVAL (X BASE SIZE)
   (\FLOATBOX (\UNBOXFLOAT3 (\FLOATUNBOX X)
                    BASE SIZE 0)))

(DEFMACRO %%TEST-ARRAY (ARRAY DIMS)
   `(CL:IF [TYPEP ,ARRAY '(CL:ARRAY CL:SINGLE-FLOAT ,DIMS]
        ,ARRAY
        (CL:ERROR "Array of incorrect type: ~S" ,ARRAY)))

(DEFMACRO MAKE-FLOAT-ARRAY (DIMS &KEY INITIAL-ELEMENT)
   (CL:IF INITIAL-ELEMENT
       `(CL:MAKE-ARRAY ,DIMS :ELEMENT-TYPE 'CL:SINGLE-FLOAT :INITIAL-ELEMENT ,INITIAL-ELEMENT)
       `(CL:MAKE-ARRAY ,DIMS :ELEMENT-TYPE 'CL:SINGLE-FLOAT)))

(DEFMACRO MAKE-FLOAT-VECTOR (SIZE &KEY INITIAL-ELEMENT)
   (CL:IF INITIAL-ELEMENT
       `(MAKE-VECTOR ,SIZE :ELEMENT-TYPE 'CL:SINGLE-FLOAT :INITIAL-ELEMENT ,INITIAL-ELEMENT)
       `(MAKE-VECTOR ,SIZE :ELEMENT-TYPE 'CL:SINGLE-FLOAT)))

(DEFMACRO SINGLE-FLOAT-ARRAY-P (ARRAY)
   `(TYPEP ,ARRAY '(CL:ARRAY CL:SINGLE-FLOAT)))

(DEFMACRO SINGLE-FLOAT-VECTOR-P (ARRAY)
   `[TYPEP ,ARRAY '(CL:ARRAY CL:SINGLE-FLOAT (CL:*])

(DEFOPTIMIZER %%POLY-EVAL (X BASE SIZE)
                          `(\FLOATBOX ((OPCODES UBFLOAT3 0)
                                       (\FLOATUNBOX ,X)
                                       ,BASE
                                       ,SIZE)))

(DEFOPTIMIZER %%MATMULT-133 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
                            `((OPCODES UBFLOAT3 3)
                              ,MATRIXABASE
                              ,MATRIXBBASE
                              ,MATRIXCBASE))

(DEFOPTIMIZER %%MATMULT-144 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
                            `((OPCODES UBFLOAT3 5)
                              ,MATRIXABASE
                              ,MATRIXBBASE
                              ,MATRIXCBASE))

(DEFOPTIMIZER %%MATMULT-331 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
                            `((OPCODES UBFLOAT3 4)
                              ,MATRIXABASE
                              ,MATRIXBBASE
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                                    ,MATRIXCBASE))

(DEFOPTIMIZER %%MATMULT-333 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
                                    `((OPCODES UBFLOAT3 1)
                                      ,MATRIXABASE
                                      ,MATRIXBBASE
                                      ,MATRIXCBASE))

(DEFOPTIMIZER %%MATMULT-441 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
                                    `((OPCODES UBFLOAT3 6)
                                      ,MATRIXABASE
                                      ,MATRIXBBASE
                                      ,MATRIXCBASE))

(DEFOPTIMIZER %%MATMULT-444 (MATRIXABASE MATRIXBBASE MATRIXCBASE)
                                    `((OPCODES UBFLOAT3 2)
                                      ,MATRIXABASE
                                      ,MATRIXBBASE
                                      ,MATRIXCBASE))

(PUTPROPS %%BLKEXPONENT DOPVAL (3 MISC3 0))

(PUTPROPS %%BLKFABSMAX DOPVAL (3 MISC3 6))

(PUTPROPS %%BLKFABSMIN DOPVAL (3 MISC3 7))

(PUTPROPS %%BLKFDIFF DOPVAL (4 MISC4 3))

(PUTPROPS %%BLKFMAX DOPVAL (3 MISC3 4))

(PUTPROPS %%BLKFMIN DOPVAL (3 MISC3 5))

(PUTPROPS %%BLKFPLUS DOPVAL (4 MISC4 2))

(PUTPROPS %%BLKFTIMES DOPVAL (4 MISC4 0))

(PUTPROPS %%BLKPERM DOPVAL (4 MISC4 1))

(PUTPROPS %%BLKSMALLP2FLOAT DOPVAL (3 MISC3 2))

(PUTPROPS %%FLOATTOBYTE DOPVAL (3 MISC3 8))

(PUTPROPS FLOAT-ARRAY-SUPPORT FILETYPE CL:COMPILE-FILE)

(DECLARE%: DONTCOPY DOEVAL@COMPILE DONTEVAL@LOAD

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(LOCALVARS . T)
)
)

(PUTPROPS FLOAT-ARRAY-SUPPORT COPYRIGHT ("Venue & Xerox Corporation" 1986 1990))
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FUNCTION INDEX

PROPERTY INDEX

MACRO INDEX

OPTIMIZER INDEX