

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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(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)
```

(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

,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))

FUNCTION INDEX

%%BLKEXPONENT1	%%BLKFMAX1	%%BLKPERM1	%%MATMULT-1442	%%MATMULT-4442
%%BLKFABSMAX1	%%BLKFMIN1	%%BLKSMALLP2FLOAT .1	%%MATMULT-3312	%%POLY-EVAL2
%%BLKFABSMIN1	%%BLKFPLUS1	%%FLOATTOBYTE1	%%MATMULT-3332	
%%BLKFDIFF1	%%BLKF TIMES1	%%MATMULT-1332	%%MATMULT-4412	

PROPERTY INDEX

%%BLKEXPONENT3	%%BLKFDIFF3	%%BLKFPLUS3	%%BLKSMALLP2FLOAT3
%%BLKFABSMAX3	%%BLKFMAX3	%%BLKF TIMES3	%%FLOATTOBYTE3
%%BLKFABSMIN3	%%BLKFMIN3	%%BLKPERM3	FLOAT-ARRAY-SUPPORT3

MACRO INDEX

%%GET-FLOAT-ARRAY-BASE ..1	%%MUL22	MAKE-FLOAT-ARRAY2	SINGLE-FLOAT-ARRAY-P2
%%INSURE-ARRAY1	%%TEST-ARRAY2	MAKE-FLOAT-VECTOR2	SINGLE-FLOAT-VECTOR-P2

OPTIMIZER INDEX

%%MATMULT-1332	%%MATMULT-3312	%%MATMULT-4413	%%POLY-EVAL2
%%MATMULT-1442	%%MATMULT-3333	%%MATMULT-4443	
